

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

**FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

Repare Therapeutics Inc.

(Exact name of registrant as specified in its charter)

Canada (Federal)
(State or other jurisdiction of
incorporation or organization)

2834
(Primary Standard Industrial
Classification Code Number)

Not applicable
(I.R.S. Employer
Identification Number)

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Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer
Non-accelerated filer

Accelerated filer
Smaller reporting company
Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Proposed maximum aggregate offering price(1)	Amount of registration fee(2)
Common shares, no par value per share		
(1) Estimated solely for the purpose of computing the amount of registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended. Includes the offering price of additional common shares that the underwriters have the option to purchase.		
(2) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price.		

The registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and we are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED _____, 2020
PRELIMINARY PROSPECTUS



Common Shares

We are offering _____ common shares. This is our initial public offering and no public market currently exists for our common shares. We expect the initial public offering price to be between \$ _____ and \$ _____ per common share. We intend to apply to list our common shares on the Nasdaq Global Market under the symbol "RPTX."

We are an "emerging growth company" under the federal securities laws and will be subject to reduced public company reporting requirements for this prospectus and future filings.

Investing in our common shares involves a high degree of risk. See "[Risk Factors](#)" beginning on page 14 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	<u>PER SHARE</u>	<u>TOTAL</u>
Initial public offering price	\$	\$
Underwriting discounts and commissions ⁽¹⁾	\$	\$
Proceeds, before expenses, to us	\$	\$

(1) We refer you to "Underwriting" beginning on page 199 for additional information regarding underwriter compensation.

We have granted the underwriters an option for a period of 30 days to purchase up to _____ additional common shares.

The underwriters expect to deliver the shares of common against payment in New York, New York on or about _____, 2020.

Joint Book-Running Managers

Morgan Stanley

Goldman Sachs & Co. LLC

Cowen

Piper Sandler

Prospectus dated _____, 2020

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“Repare Therapeutics” and the Repare logo appearing in this prospectus are unregistered trademarks and SNIPRx is a registered trademark of Repare Therapeutics Inc. All other trademarks, trade names and service marks appearing in this prospectus are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus may be referred to without the ® and ™ symbols, but such references should not be construed as any indicator that their respective owners will not assert their rights thereto.

Neither we nor the underwriters have authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus or in any applicable free writing prospectus is current only as of its date, regardless of its time of delivery or any sale of common shares. Our business, financial condition, results of operations and prospects may have changed since that date.

Neither we nor the underwriters have done anything that would permit this offering or possession or distribution of this prospectus or any free writing prospectus we may provide to you in connection with this offering in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus and any such free writing prospectus outside of the United States.

PROSPECTUS SUMMARY

This summary highlights, and is qualified in its entirety by, the more detailed information contained elsewhere in this prospectus. This summary is not complete and does not contain all of the information you should consider in making your investment decision. Before investing in our common shares, you should carefully read this entire prospectus, especially the sections titled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the related notes included elsewhere in this prospectus. Unless the context otherwise requires, the terms “Repare,” “Repare Therapeutics,” “the company,” “we,” “us,” “our” and similar references in this prospectus refer to Repare Therapeutics Inc. and its consolidated subsidiary.

Overview

We are a leading precision oncology company enabled by our proprietary synthetic lethality approach to the discovery and development of novel therapeutics. Synthetic lethality, or SL, represents a clinically validated approach to drug development. We use our proprietary, genome-wide, CRISPR-enabled SNIPRx platform to systematically discover and develop highly targeted cancer therapies focused on genomic instability, including DNA damage repair. SL arises when a deficiency in either of two genes is tolerated in cells, but simultaneous deficiencies in both genes cause cell death. Cancer cells that contain a mutation in one gene of a SL pair are susceptible to therapeutic intervention targeting the other gene pair. Using our SNIPRx platform, we are developing our pipeline of SL product candidates, including our lead product candidate, RP-3500, an oral small molecule inhibitor for the treatment of solid tumors with specific DNA damage repair-related genomic alterations. We anticipate filing an investigational new drug, or IND, application and initiating an open-label Phase 1/2 clinical trial of RP-3500 in

We believe our powerful SL-based approach to the development of new precision oncology therapeutics has multiple potential benefits:

- **Ability to address previously untargetable tumor biology**, including, for example, loss of function mutations;
- **Enhanced benefit-risk profile**, by precisely targeting tumor cells with the defined mutation while sparing normal, non-cancerous cells;
- **Genetic stratification of patients**, potentially enabling higher response rates; and
- **Tumor-agnostic approach**, focusing on specific genetics and enabling the application to multiple tumor types.

A cornerstone of our company is our SNIPRx platform, which enables us to accurately identify SL gene pairs and the corresponding patients who are most likely to benefit from our therapies based on the genetic profile of their tumors. These differentiated patient selection insights have driven the development of our lead product candidate, RP-3500, which is designed as a selective inhibitor of the DNA repair protein ataxia telangiectasia and Rad3-related protein, or ATR, a kinase that is activated by DNA replication stress. Tumors containing alterations in genes encoding other DNA repair proteins, such as ataxia-telangiectasia mutated kinase, or ATM, are SL with ATR inhibition and were observed to be hypersensitive to RP-3500 in our preclinical models. We believe that the preclinical selectivity and pharmacokinetic properties of RP-3500 support the profile of a differentiated therapy with the potential to enhance anti-tumor activity as compared to third party ATR inhibitors currently in development. Based on our preclinical studies, we believe RP-3500 has the potential to provide therapeutic benefit to identified patient populations both as a monotherapy and in combination with other therapies such as poly (ADP-ribose) polymerase, or PARP, inhibitors.

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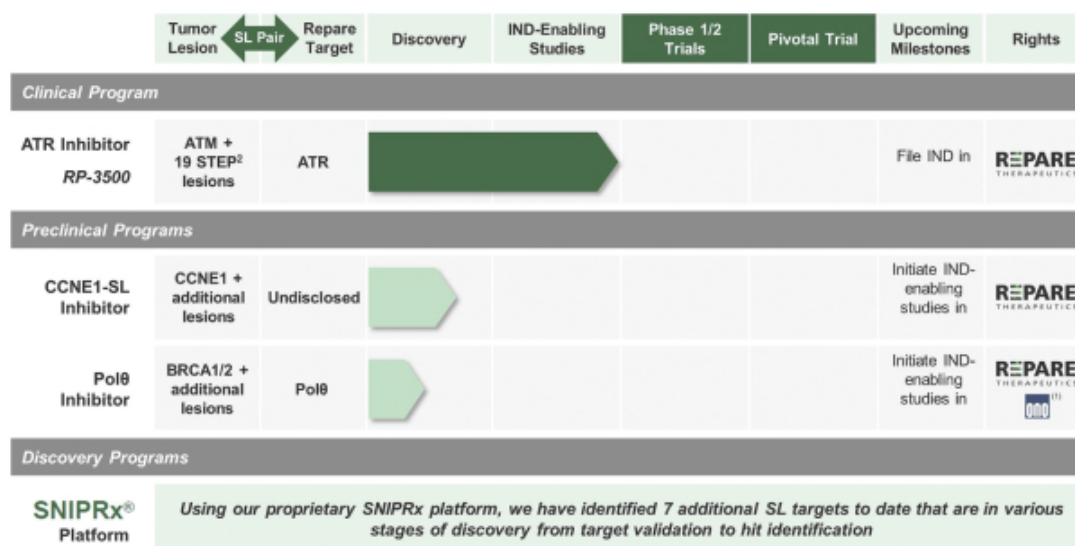
In addition to RP-3500, we are developing a portfolio of product candidates based on targets identified using our SNIPRx platform to treat cancers with a high unmet medical need. We have a preclinical program that is focused on a novel target we discovered to be SL with amplification of cyclin E1, or CCNE1, in tumors such as gynecological and upper gastrointestinal malignancies. We anticipate advancing a clinical candidate for this potential first-in-class program into IND-enabling studies in . We are also developing an inhibitor of the gene polymerase theta, or Polθ, which is SL with multiple gene deficiencies found in tumors, including BRCA1 or BRCA2. We anticipate advancing a clinical candidate and initiating IND-enabling studies for this program in .

The core of our SNIPRx platform is the ability to identify both known and novel SL targets. We have built our SNIPRx platform based on three primary pillars:

1. **Identify** novel SL targets using our proprietary, genome-wide, CRISPR-enabled screening technology against clinically relevant genomic alterations in tumors with high unmet medical need;
2. **Design and synthesize** potent and selective small molecule inhibitors of these targets; and
3. **Expand** beyond the initial target patient population based on the additional genomic alterations identified by our proprietary SNIPRx Targeted Expansion of Patient Populations, or STEP2, screens that are SL with our inhibitors.

Our Pipeline

We are leveraging our proprietary SNIPRx platform to discover, validate and build a robust pipeline of SL-based therapeutics. Our current pipeline is represented in the diagram below.



(1) Ono Pharmaceutical has development and commercialization rights in Japan, South Korea, Taiwan, Hong Kong, Macau and certain other Southeast Asian countries. We retained all other rights outside of those countries. See “Business—Research Services, License and Collaboration Agreement with Ono Pharmaceutical Co.” for additional information.

Background on Targeted Oncology Therapeutics

A new generation of targeted oncology therapeutics has recently emerged that transcends single tumor, organ or histology-targeted cancers. These new therapies are tumor agnostic and are instead targeted at specific genomic alterations that underlie more complex tumor cell vulnerabilities. This has led to the approval of therapies that address specific genomic features of tumors, such as nTRK kinase inhibitors, including larotrectinib, for the treatment of tumors with nTRK gene fusions, and PD1 inhibitors, including pembrolizumab, for the treatment of tumors with microsatellite instability. This emerging trend for tumor-agnostic indications represents a breakthrough in drug development, clinical trial designs, drug approval patterns and speed to market.

Oncology drug development has been primarily focused on genes with readily druggable alterations that confer new or enhanced protein activity, known as gain of function targets, such as EGFR, which represent only 29% of targets in oncology. The remaining 71% of targets have historically been considered undruggable. These include both gain of function alterations (approximately 17%), such as CCNE1, as well as loss of function alterations (approximately 54%), such as BRCA1.

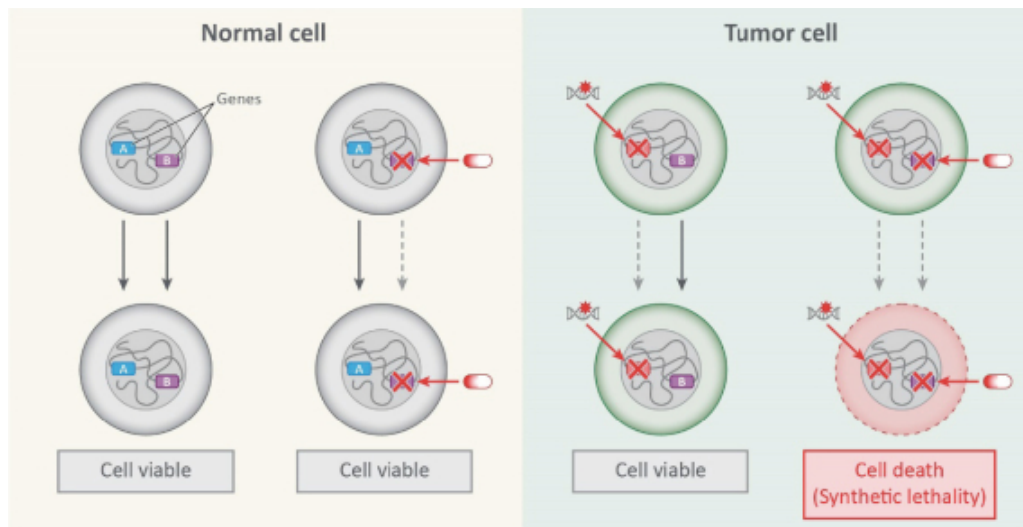
The more recent ability to identify a tumor's genetic vulnerabilities and networks of genes responsible for more complex gene functions underlying many cancers has been enabled through new and disruptive technical breakthroughs in the field including:

- **Clinically-relevant tumor genomic data:** the increasing adoption and regulatory acceptance of molecular tumor testing, enabling the accurate profiling of patient tumors;
- **Consolidated and annotated databases:** the availability of multiple new and publicly accessible databases that consolidate, analyze and synthesize new genetic data on tens of thousands of tumors; and
- **Tools to apply emerging genetic knowledge:** the emergence of new tools and methodologies, including CRISPR/Cas9, enabling large-scale studies of genetic networks underlying cancer biology.

The Synthetic Lethality Opportunity and Challenge

Synthetic lethality is a powerful approach and opportunity in oncology drug development that combines two key principles in treating patients with cancer through precision oncology: (1) identifying and selecting patient subgroups with specific genomic alterations in tumors that are most likely to benefit from these therapies and (2) improving tolerability and reducing toxicity by not affecting normal, non-cancerous cells.

SL arises when deficiencies in a pair of genes occur simultaneously to result in cell death, but if that deficiency exists in only one gene, the cell will survive. As depicted below, cancer cells that contain an alteration in one gene of a SL pair are susceptible to therapeutic intervention targeting the other gene pair, resulting in cell death, whereas normal cells are not affected by the inhibition of the targeted gene and remain viable.



The first clinically-validated SL gene pair was PARP-BRCA1/2, and based on the efficacy of PARP inhibitors, the SL approach to treating cancer has achieved substantial commercial validation. Multiple PARP inhibitors, including olaparib (AstraZeneca), niraparib (GlaxoSmithKline), talazoparib (Pfizer) and rucaparib (Clovis), have been approved for the treatment of tumors with BRCA and other DNA damage repair alterations, including ovarian, breast and pancreatic cancers. These four drugs generated over \$1.6 billion in worldwide sales in 2019 and are expected to reach over \$6.1 billion in worldwide sales by 2024.

While SL offers a new route to uncover important gene targets for the treatment of cancers, identifying these SL gene pairs has been a challenge due to the lack of systematic, prospective and large-scale methods to capture and exploit these gene-gene relationships for new drug discovery and development.

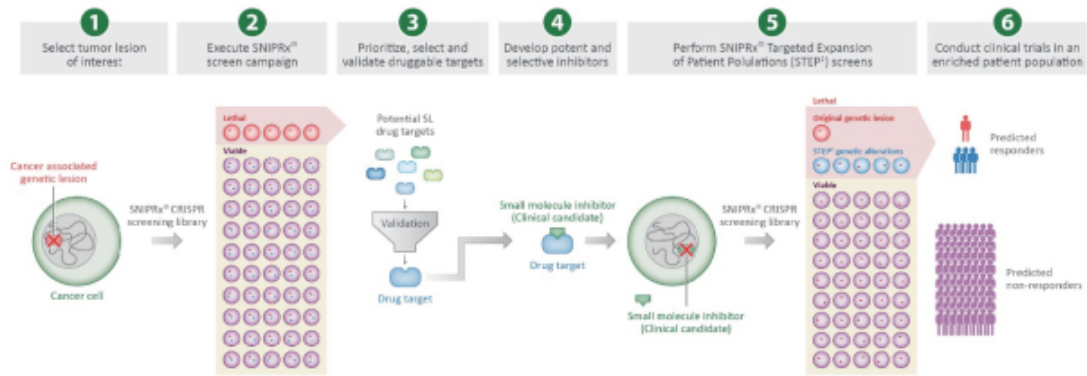
Our Approach: An Overview of Our Drug Discovery and Development Platform

Our SNIPRx platform begins with a genome-wide CRISPR-based screening approach that utilizes our proprietary isogenic cell lines, which are cell lines that are identical with the exception of a single genomic alteration, to identify SL gene pairs. Our systematic and comprehensive screening approach has been optimized to significantly reduce false negatives, providing the opportunity to identify a larger and more accurate set of SL interactions as compared to what others have reported with CRISPR-based screening technologies.

We have systematically analyzed genomic data from approximately 60,000 tumor samples and identified an initial set of 16 clinically relevant tumor genomic alterations, which we refer to as tumor lesions, that are linked to genomic instability. These 16 tumor lesions are present in approximately 30% of tumors, and are largely mutually exclusive. For each of these 16 tumor lesions, we have completed a SNIPRx screen campaign to identify both previously reported and unreported targets that are SL with the tumor lesion of the campaign. The majority of our SNIPRx screen campaigns have identified multiple potential targets, which allows us to prioritize and select targets to advance into drug discovery based on a systematic and proprietary set of criteria, which

include thresholds for biological validation, cellular function, known and likely toxicity, druggability with small molecules, patentability and the potential for clinical impact versus alternative therapies. Once a SL product candidate is identified, we perform our STEP² screen to identify additional genomic alterations that are SL with our product candidate. We believe the identification of these new SL pairs will allow us to rationally expand our targeted patient populations by enabling us to potentially treat patients with tumors across multiple genomic alterations with the same product candidate. For our clinical trials, we plan to enroll patients with tumors that contain either the original tumor lesion or any one of the genomic alterations identified by our STEP² screens. We believe this strategy will allow us to enroll only those patients who are most likely to achieve clinical benefit from our product candidates. This approach can be divided into six steps, as depicted in the graphic below.

Our Integrated Approach to Drug Discovery and Development



Our Clinical Program, RP-3500

Our lead product candidate, RP-3500, is a potent and selective oral small molecule inhibitor of ATR that we are developing for the treatment of tumors with mutations in ATM, which is a SL pair with ATR. ATR is a critical DNA damage response, or DDR, protein that acts as both the master regulator of the response to DNA replication stress, as well as a central effector of the DNA damage checkpoint. Based on the previously published SL relationship between ATR and ATM, ATR has been the target of prior drug discovery efforts, and ATR inhibitors in development have demonstrated promising, durable clinical responses in a small number of patients in early clinical trials. Through our STEP² screens, we believe that we have more precisely identified and expanded the patient populations that would benefit from RP-3500, which allows us to differentiate and enrich our clinical development strategy, as well as address multiple types of solid tumors.

RP-3500 has demonstrated an optimized anti-tumor effect, selectivity and pharmacokinetics profile in preclinical studies that we believe supports the potential for it to be a best-in-class ATR inhibitor. These data led to our decision to advance RP-3500 into IND-enabling studies. We also conducted multiple STEP² screens in which we confirmed the SL relationship between ATR and ATM and identified an additional 19 genes that are also SL with ATR, potentially expanding the patient populations that may benefit from our product candidate. We anticipate filing an IND application and initiating an open-label Phase 1/2 clinical trial of RP-3500 in . We have designed our Phase 1/2 clinical trial to enroll patients based on the presence of alterations in ATM or any of the 19 STEP²-identified genes. Based on the observed synergistic activity in preclinical models with ATM and STEP²-identified genes, we also intend to include a combination arm in this trial to evaluate the anti-tumor activity of RP-3500 with an approved PARP inhibitor. We expect to report preliminary safety and efficacy data for the monotherapy and combination therapy dose escalation phase of the trial in .

Our Preclinical Programs

CCNE1-SL Inhibitor Program

Our CCNE1-SL inhibitor program is a proprietary drug discovery program for tumors with amplification of CCNE1. We have identified an undisclosed gene and corresponding protein, which we have found to be SL with amplifications in the gene for CCNE1. Amplification of CCNE1 is found in many tumor types, including gynecological and upper gastrointestinal malignancies, and these CCNE-1 amplified tumors typically do not respond well to platinum or PARP inhibitor treatment. Through our SNIPRx screen campaign for targets that are SL with CCNE1 amplification, we have identified and validated a SL target that we believe has the characteristics of a therapeutic target. We have developed novel and selective inhibitors against the target that have repeatedly demonstrated compelling anti-tumor activity. We anticipate advancing a clinical candidate for this potential first-in-class program into IND-enabling studies in .

Polymerase Theta (Polq) Program

We are developing a small molecule inhibitor of the gene polymerase theta, or Polq, a SL target associated with BRCA mutations as well as other genomic alterations. Polymerase theta enzyme, or POLQ, is a DNA polymerase enzyme that participates in the repair of double-strand breaks in DNA. Mutations in genes such as BRCA1 and BRCA2 increase the frequency of these breaks, resulting in SL with Polq. Preclinical studies have shown that inactivation of Polq both on its own and in combination with PARP inhibitors reduces survival in BRCA-mutated cells, but not in BRCA wild-type cells. BRCA1 and BRCA2 mutations are routinely identified in multiple genetic profiling tests and observed in approximately 1% to 7% of patients with breast and ovarian cancer. We anticipate advancing a clinical candidate and initiating IND-enabling studies for this program in .

Our Strategy

Our goal is to be the leading biopharmaceutical company developing precision oncology, small molecule therapies based on SL. The key elements of our strategy are to:

- **Advance our lead product candidate, RP-3500, through clinical development by leveraging our differentiated STEP2 patient selection approach.** We designed RP-3500 to have a highly selective and potent profile that may enable it to be a best-in-class inhibitor of ATR. We intend to initiate an open-label Phase 1/2 clinical trial of RP-3500 in . in patients with advanced tumors that have alterations in the ATM gene or any of the 19 genes identified through our STEP2 screens. We believe this clinical trial design element will enrich the patient population in our trials with those who are most likely to respond to RP-3500. In parallel with the monotherapy dose-escalation portion of the trial, we intend to initiate a combination therapy arm to evaluate the safety and efficacy of RP-3500 in combination with an approved PARP inhibitor in the same patient subgroups. We expect preliminary safety and efficacy data for the monotherapy and combination therapy dose escalation phase of the trial in , which may inform the design, including the targeted patient population, of a future pivotal trial.
- **Continue to advance our preclinical programs into clinical development.** In addition to RP-3500, we have two programs in advanced preclinical development. One of these programs is focused on a novel target we discovered using our SNIPRx platform to be SL with CCNE1 amplification in tumors such as gynecological and upper gastrointestinal malignancies. We anticipate advancing a clinical candidate for this potential first-in-class program into IND-enabling studies in . We are also developing an inhibitor of Polq, which is SL with multiple gene deficiencies found in tumors, including BRCA1 or BRCA2. We anticipate advancing a clinical candidate and initiating IND-enabling studies for this program in .

- **Extend our leading position in SL drug discovery.** We have systematically analyzed genomic data from approximately 60,000 tumor samples and have identified an initial set of 16 tumor lesions that are linked to genomic instability. This initial set of tumor lesions provides us with the opportunity to be among the first to mine this substantial, largely non-overlapping genomic space for new SL gene pairs and develop a robust portfolio of novel targeted therapeutics. We intend to continue leveraging our leading position in the identification of novel oncology SL gene pairs and systematically applying our STEP2 screens to expand the addressable patient populations for each of our product candidates. We believe our approach will allow us to continue to build a sustainable and long-term pipeline of novel product candidates for the targeted treatment of cancers with high unmet medical need.
- **Opportunistically pursue strategic partnerships to maximize the full potential of our pipeline and SNIPRx platform.** The large number of pre-existing mutations affecting genomic stability in tumors combined with the high throughput of our SNIPRx platform has the potential to provide us with an abundance of novel targets. We believe this provides the opportunity to selectively enter into strategic partnerships and leverage our partners' complementary capabilities. We intend to selectively evaluate partnerships to maximize the long-term value of our research and development portfolio.

Our Corporate History and Team

Our company was founded in 2016 by field-leading academics and Versant Ventures to systematically employ SL insights and platforms and develop new precision oncology medicines. Our co-founder, Daniel Durocher, Ph.D., a principal investigator at the Lunenfeld-Tanenbaum Research Institute, was an early pioneer of genome-wide, SL screening using CRISPR, which formed the framework for our SNIPRx platform. Our other co-founders, Agnel Sfeir, Ph.D. at NYU-Langone Medical Center and Frank Sicheri, Ph.D. at the Lunenfeld-Tanenbaum Research Institute, also played a key role in the development of our company.

Our Scientific Advisory Board, comprised of Samuel Aparicio, Ph.D. at the University of British Columbia; Jim Carmichael, M.D. at the Protein Homeostasis Thematic Center of Excellence at Celgene Corp.; Ronny Drapkin, M.D., Ph.D. at the Penn Ovarian Cancer Research Center; Laurie Glimcher, M.D., president and chief executive officer of the Dana-Farber Cancer Institute; Mark Pegram, M.D. at the Stanford Women's Cancer Center; Richard Wood, Ph.D. at MD Anderson Cancer Center; and Timothy Yap, M.B.B.S., Ph.D. at MD Anderson Cancer Center, as well as ad hoc advisors, provide critical insights and further capabilities in the fields of SL, genomic instability and DNA damage repair.

We have assembled a highly qualified management team with broad experience in drug discovery and development to execute on our mission to develop novel precision oncology therapies based on SL. Our scientific co-founders and members of our management team collectively have extensive experience in oncology drug discovery and development and are pioneers in the SL field. Our management team includes industry veterans with prior experience at companies such as Pfizer, AstraZeneca, Merck, Bicycle Therapeutics and Clementia Pharmaceuticals. Since our inception, we have raised an aggregate of approximately \$135.2 million of gross proceeds from the sale of our preferred shares. Our investors include Versant Ventures, MPM Capital, Cowen Healthcare Investments, OrbiMed, BVF Partners, Redmile Group, Logos Capital, Celgene/Bristol Myers Squibb, Fonds de Solidarité FTQ, and Amplitude Ventures.

Risks Associated with Our Business

Our business is subject to a number of risks of which you should be aware before making a decision to invest in our common shares. These risks are more fully described in the section titled "Risk Factors," including the following:

- Our limited operating history may make it difficult for you to evaluate the success of our business to date and to assess our future viability.

- We will require substantial additional funding to finance our operations. If we are unable to raise capital when needed, we could be forced to delay, reduce or terminate certain of our product development programs or other operations.
- We are very early in our development efforts. All of our product candidates are in preclinical development.
- Our business substantially depends upon the successful development of product candidates generated through the application of our SNIPRx platform, and in particular, our lead product candidate, RP-3500. If we are unable to obtain regulatory approval for, and successfully commercialize, products developed through the application of our SNIPRx platform, our business may be materially harmed.
- The outbreak of the novel strain of coronavirus disease, COVID-19, could adversely impact our business, including our preclinical studies and clinical trials.
- The successful development of targeted therapeutics, including our portfolio of synthetic lethality small molecule inhibitors, as well as any related diagnostics, is highly uncertain.
- The regulatory approval processes of the FDA and comparable foreign regulatory authorities are lengthy, time consuming and inherently unpredictable, and if we are ultimately unable to obtain regulatory approval for our product candidates, on a timely basis or at all, our business will be substantially harmed.
- Synthetic lethality represents an emerging class of precision medicine targets, and negative perceptions of the efficacy, safety or tolerability of this class of targets, including any that we develop, could adversely affect our ability to conduct our business, advance our product candidates or obtain regulatory approvals.
- We may not be successful in applying our SNIPRx platform to discover synthetic lethality targets with therapeutic and commercial potential or in the discovery and development of commercially viable product candidates for us or our collaborators.
- Difficulty in enrolling patients could delay or prevent clinical trials of our product candidates. We may find it difficult to enroll patients in our open-label Phase 1/2 clinical trial for RP-3500 with the genomic alterations that RP-3500 is designed to target.
- We face substantial competition, which may result in others developing or commercializing drugs before or more successfully than us.
- We rely on third parties to supply and manufacture our product candidates, and we expect to continue to rely on third parties to manufacture our products, if approved.
- Our success depends in part on our ability to protect our intellectual property. It is difficult and costly to protect our proprietary rights and technology, and we may not be able to ensure their protection.

Our Corporate Information

We were incorporated under the Canada Business Corporations Act, or CBCA, on September 6, 2016. Our principal executive offices are located at 7210 Frederick-Banting, Suite 100, Montréal, Québec, Canada H4S 2A1, and our telephone number is (857) 412-7018. In June 2017, we incorporated our wholly-owned subsidiary, Repare Therapeutics USA Inc., a Delaware corporation. Our corporate website address is www.reparerx.com. Information contained on, or accessible through, our website is not a part of this prospectus. We have included our website in this prospectus solely as an inactive textual reference.

Implications of Being an Emerging Growth Company

We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. For so long as we remain an emerging growth company, we are permitted to rely on certain exemptions from various public company reporting requirements, including:

- being permitted to present in this prospectus only two years of audited financial statements, with correspondingly reduced “Management’s Discussion and Analysis of Financial Condition and Results of Operations” disclosure;
- reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements;
- not being required to submit to our shareholders a nonbinding advisory vote on executive compensation or any golden parachute payments not previously approved;
- not being required to have our internal control over financial reporting audited by our independent registered public accounting firm pursuant to Section 404(b) of the Sarbanes-Oxley Act of 2002; and
- an exemption from new or revised financial accounting standards until they would apply to private companies and from compliance with any new requirements adopted by the Public Company Accounting Oversight Board requiring mandatory audit firm rotation.

We may take advantage of these exemptions for up to the last day of the fiscal year ending after the fifth anniversary of this offering or such earlier time that we are no longer an emerging growth company. We would cease to be an emerging growth company on the date that is the earliest of (1) the last day of the fiscal year in which we have total annual gross revenues of \$1.07 billion or more; (2) the last day of our fiscal year following the fifth anniversary of the date of the completion of this offering; (3) the date on which we have issued more than \$1.0 billion in nonconvertible debt during the previous three years; or (4) the date on which we are deemed to be a large accelerated filer under the rules of the Securities and Exchange Commission, or the SEC. We may choose to take advantage of some but not all of these exemptions. We have taken advantage of certain reduced reporting requirements in this prospectus. Accordingly, the information contained herein may be different from the information you receive from other public companies in which you hold stock.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. We have elected to take advantage of the extended transition period to comply with new or revised accounting standards and to adopt certain of the reduced disclosure requirements available to emerging growth companies. As a result of the accounting standards election, we will not be subject to the same implementation timing for new or revised accounting standards as other public companies that are not emerging growth companies which may make comparison of our financials to those of other public companies more difficult. As a result of these elections, the information that we provide in this prospectus may be different than the information you may receive from other public companies in which you hold equity interests. In addition, it is possible that some investors will find our common shares less attractive as a result of these elections, which may result in a less active trading market for our common shares and higher volatility in our share price.

THE OFFERING

Common shares to be offered	shares
Option to purchase additional common shares	shares
Common shares to be outstanding after this offering	shares (shares if the underwriters exercise in full their option to purchase additional shares)
Use of proceeds	<p>We estimate that the net proceeds from this offering will be approximately \$ million (or approximately \$ million if the underwriters exercise in full their option to purchase up to additional common shares), based on an assumed initial public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting fees and commissions and estimated offering expenses payable by us.</p> <p>We currently intend to use the net proceeds from this offering, together with our existing cash, as follows:</p> <ul style="list-style-type: none">• approximately \$ million to advance clinical development of RP-3500;• approximately \$ million to fund continued development of our preclinical programs; and• the remainder to fund working capital and other general corporate purposes. <p>See “Use of Proceeds” for additional information.</p>
Risk factors	<p>You should read the section titled “Risk Factors” for a discussion of factors to consider carefully, together with all the other information included in this prospectus, before deciding to invest in our common shares.</p>
Proposed Nasdaq Global Market symbol	“RPTX”

The number of common shares to be outstanding after this offering is based on 139,951,975 common shares outstanding as of December 31, 2019, and excludes:

- 21,248,158 common shares issuable upon the exercise of outstanding options as of December 31, 2019, at a weighted-average exercise price of \$0.34 per share;
- 3,449,250 common shares reserved for future issuance under our Repare Therapeutics Inc. Amended and Restated Option Plan, or the Existing Plan, as of December 31, 2019, which shares will cease to be available for future issuance immediately prior to the time that our 2020 Plan becomes effective in connection with this offering;
- common shares reserved for future issuance under our 2020 Equity Incentive Plan, or the 2020 Plan, which will become effective immediately prior to the execution of the underwriting

agreement related to this offering, as well as any future increases in the number of common shares reserved for issuance under our 2020 Plan; and

- common shares reserved for future issuance under our 2020 Employee Share Purchase Plan, or the ESPP, which will become effective immediately prior to the execution of the underwriting agreement related to this offering, as well as any future increases in the number of common shares reserved for issuance under our ESPP.

Unless otherwise indicated, all information contained in this prospectus assumes or gives effect to:

- the filing and effectiveness of our amended and restated articles of incorporation immediately after the completion of this offering and the adoption of our amended and restated bylaws immediately prior to the completion of this offering;
- the automatic conversion of all outstanding preferred shares into an aggregate of 130,686,975 common shares immediately prior to the completion of this offering;
- a -for- stock split of our common shares to be completed prior to the completion of this offering;
- no exercise of the outstanding options described above; and
- no exercise by the underwriters of their option to purchase up to additional common shares.

SUMMARY CONSOLIDATED FINANCIAL DATA

The following tables set forth our summary consolidated statements of operations data for the years ended December 31, 2017, 2018 and 2019 and the summary consolidated balance sheet data as of December 31, 2019, which has been derived from our audited consolidated financial statements appearing elsewhere in this prospectus. Our historical results are not necessarily indicative of the results to be expected in the future. You should read this consolidated summary financial data together with our consolidated financial statements and related notes to those statements, as well as the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” which are included elsewhere in this prospectus. The summary financial data in this section are not intended to replace our consolidated financial statements and are qualified in their entirety by our consolidated financial statements and related notes included elsewhere in this prospectus.

	YEAR ENDED DECEMBER 31,		
	2017	2018	2019
	(in thousands, except share and per share amounts)		
Summary of Consolidated Operations Data:			
Operating expenses:			
Research and development, net of tax credits	\$ 4,401	\$ 9,906	\$ 20,995
General and administrative	1,774	2,914	5,382
Total operating expenses	<u>6,175</u>	<u>12,820</u>	<u>26,377</u>
Loss from operations	(6,175)	(12,820)	(26,377)
Other (expense) income, net:			
Realized and unrealized (loss) gain on foreign exchange	(147)	(292)	712
Change in fair value of convertible notes	(1,615)	—	—
Change in fair value of series A preferred share tranche obligation	180	(1,130)	(1,350)
Other expense	(39)	(6)	(6)
Total other expense, net	<u>(1,621)</u>	<u>(1,428)</u>	<u>(644)</u>
Loss before income taxes	(7,796)	(14,248)	(27,021)
Income tax expense	—	(35)	(195)
Net loss and comprehensive loss	<u>\$ (7,796)</u>	<u>\$ (14,283)</u>	<u>\$ (27,216)</u>
Net loss per share:(1)			
Basic and diluted	<u>\$ (0.84)</u>	<u>\$ (1.54)</u>	<u>\$ (2.94)</u>
Weighted average shares used in computing net loss per share:(1)			
Basic and diluted	<u>9,229,658</u>	<u>9,265,000</u>	<u>9,265,000</u>
Pro forma net loss per share (unaudited):(1)			
Basic and diluted			<u>\$ (0.27)</u>
Weighted average shares outstanding used in computing pro forma net loss per share (unaudited):(1)			
Basic and diluted			<u>95,722,801</u>

(1) See Note 13 to our audited consolidated financial statements included elsewhere in this prospectus for an explanation of the calculations of our basic and diluted net loss per share, pro forma net loss per share and the weighted-average number of shares used in the computation of the per share amounts.

	AS OF DECEMBER 31, 2019		
	ACTUAL	PRO FORMA(1)	PRO FORMA AS ADJUSTED(2)
(in thousands)			
Consolidated Balance Sheet Data:			
Cash	\$ 94,797	\$ 94,797	\$
Working capital	94,326	94,326	
Total assets	102,695	102,695	
Convertible preferred shares	135,997	—	
Accumulated deficit	(49,941)	(49,941)	
Total shareholders' (deficit) equity	(46,129)	89,868	

- (1) The pro forma column reflects the conversion of all of the outstanding preferred shares into an aggregate of 130,686,975 common shares upon completion of this offering.
- (2) The pro forma as adjusted column reflects the pro forma adjustments set forth above and the sale of common shares in this offering at an assumed initial public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting fees and commissions and estimated offering expenses payable by us.

The pro forma as adjusted information discussed above is illustrative only and will depend on the actual initial public offering price and other terms of this offering determined at pricing. Each \$1.00 increase or decrease in the assumed initial public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease each of the amount of cash, working capital, total assets and total shareholders' equity by \$ million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting fees and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. Each increase or decrease of 1,000,000 in the number of common shares offered by us would increase or decrease each of cash, working capital, total assets and shareholders' (deficit) equity by \$ million, assuming the assumed initial public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting fees and commissions.

RISK FACTORS

Investing in our common shares involves a high degree of risk. You should carefully consider the risks described below, as well as the other information in this prospectus, including our consolidated financial statements and the related notes and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” before deciding whether to invest in our common shares. The occurrence of any of the events or developments described below could harm our business, financial condition, results of operations and prospects. In such an event, the market price of our common shares could decline and you may lose all or part of your investment.

Risks Related to Our Financial Position and Capital Needs

Our limited operating history may make it difficult for you to evaluate the success of our business to date and to assess our future viability.

We are a preclinical-stage biopharmaceutical company founded in 2016, and our operations to date have focused primarily on raising capital, organizing and staffing our company, conducting discovery and research activities, identifying potential synthetic lethal, or SL, gene pairs, establishing and protecting our intellectual property portfolio including for our proprietary SNIPRx platform, developing and progressing our product candidates through preclinical studies and preparing for clinical trials and establishing arrangements with third parties for the manufacture of initial quantities of our product candidates and component materials. We do not have any product candidates approved for sale and have not generated any revenue from product sales. Additionally, as an organization, we have not yet demonstrated an ability to successfully complete clinical development, obtain regulatory approvals, manufacture a commercial-scale product or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful commercialization. Consequently, any predictions about our future success or viability may not be as accurate as they could be if we had a longer operating history.

We may encounter unforeseen expenses, difficulties, complications, delays and other known or unknown factors in achieving our business objectives. In time, we will need to transition from a company with a research and development focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

Additionally, we expect our financial condition and operating results to continue to fluctuate from quarter to quarter and year to year due to a variety of factors, many of which are beyond our control. Accordingly, you should not rely upon the results of any quarterly or annual periods as indications of future operating performance.

We have incurred significant operating losses since inception and anticipate that we will continue to incur substantial operating losses for the foreseeable future and may never achieve or maintain profitability.

Investment in biopharmaceutical product development is a highly speculative undertaking and entails substantial upfront capital expenditures and significant risk that any potential product candidate will fail to demonstrate adequate efficacy or an acceptable safety profile, gain regulatory approval and become commercially viable. We are still in the early stages of development of our product candidates and have not yet initiated our first clinical trial. We have no products approved for commercial sale and have not generated any product revenue to date, and we are devoting substantially all of our financial resources and efforts to research and development of our product candidates including RP-3500, as well as to enhancing our SNIPRx platform. Since our inception, we have funded our operations primarily through equity financings, and have raised an aggregate of approximately \$135.2 million of gross proceeds from the sale of our preferred shares.

We have incurred significant operating losses since our inception in 2016. Our net loss was \$7.8 million, \$14.3 million and \$27.2 million for the years ended December 31, 2017, 2018 and 2019, respectively. As of

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December 31, 2019, we had an accumulated deficit of \$49.9 million. We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future. It could be several years, if ever, before we have a commercialized drug. We anticipate that our expenses will increase substantially if, and as, we:

- continue our ongoing and planned development of RP-3500, including our planned open-label Phase 1/2 clinical trial of RP-3500;
- initiate preclinical studies and clinical trials for any additional product candidates that we may pursue in the future, including our earlier-stage programs;
- seek to identify novel SL targets, develop small molecule inhibitors of these targets, nominate and develop additional product candidates and further expand our clinical product pipeline;
- seek regulatory approvals for RP-3500 and any future product candidates that successfully complete clinical trials;
- build a portfolio of product candidates through the discovery, development, or acquisition or in-license of drugs, product candidates or technologies;
- establish a sales, marketing, manufacturing and distribution capability to commercialize RP-3500 and any future product candidate for which we may obtain marketing approval;
- maintain, protect and expand our intellectual property portfolio;
- acquire or in-license other product candidates and technologies;
- hire additional clinical, regulatory and scientific personnel;
- add operational, financial and management information systems and personnel, including personnel to support our product development and planned future commercialization efforts; and
- incur additional legal, accounting and other expenses associated with operating as a public company.

To become and remain profitable, we must succeed in developing and eventually commercializing products that generate significant revenue. This will require us to be successful in a range of challenging activities, including completing clinical trials of RP-3500 and any future product candidates that we may pursue, obtaining regulatory approval, procuring commercial-scale manufacturing, marketing and selling RP-3500 and any future products for which we may obtain regulatory approval, as well as discovering or acquiring and then developing additional product candidates. We are only in the preliminary stages of some of these activities and have never initiated a clinical trial. We may never succeed in these activities and, even if we do, may never generate revenues that are significant enough to achieve profitability.

Because of the numerous risks and uncertainties associated with drug development, we are unable to accurately predict the timing or amount of expenses or when, or if, we will be able to achieve profitability. Our expenses could increase beyond our expectations if we are required by the U.S. Food and Drug Administration, or FDA, the European Medicines Agency, or EMA, or other regulatory authorities to perform studies in addition to those we currently expect, or if there are any delays in the initiation and completion of our clinical trials or the development of RP-3500 or any future product candidates.

Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would decrease the value of our common shares and could impair our ability to raise capital, maintain our research and development efforts, expand our business or continue our operations. A decline in the value of our common shares could also cause you to lose all or part of your investment.

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We will require substantial additional funding to finance our operations. If we are unable to raise capital when needed, we could be forced to delay, reduce or terminate certain of our product development programs or other operations.

To date, we have primarily funded our operations through private placements of equity securities. We expect to spend substantial amounts to advance our product candidates into clinical development and to complete the clinical development of, seek regulatory approvals for and commercialize our product candidates, if approved. We will require additional capital beyond the proceeds of this offering, which we may raise through equity offerings, debt financings, marketing and distribution arrangements and other collaborations, strategic alliances and licensing arrangements or other sources to enable us to complete the development and potential commercialization of our product candidates. Furthermore, upon the closing of this offering, we expect to incur additional costs associated with operating as a public company. Adequate additional financing may not be available to us on acceptable terms, or at all. Our failure to raise capital as and when needed would have a negative effect on our financial condition and our ability to pursue our business strategy. In addition, attempting to secure additional financing may divert the time and attention of our management from day-to-day activities and harm our product candidate development efforts. If we are unable to raise capital when needed or on acceptable terms, we would be forced to delay, reduce or eliminate certain of our research and development programs.

As of December 31, 2019, our cash was \$94.8 million. We believe that the net proceeds from this offering, together with our existing cash on hand, will enable us to fund our operating expenses and capital expenditure requirements until . However, we will need to obtain substantial additional funding in connection with our continuing operations and planned activities. Our future capital requirements will depend on many factors, including:

- the initiation, timing, costs, progress and results of our planned clinical trials of RP-3500;
- the progress of preclinical development and possible clinical trials of our current earlier-stage programs;
- the scope, progress, results and costs of our research programs and preclinical development of other product candidates that we may pursue;
- the development requirements of other product candidates that we may pursue;
- our headcount growth and associated costs as we expand our research and development and establish a commercial infrastructure;
- the timing and amount of milestone and royalty payments that we are required to make or eligible to receive under our current or future collaboration agreements;
- the cost of establishing a sales, marketing and distribution infrastructure to commercialize any product candidates for which we may obtain marketing approval;
- the outcome, timing and cost of meeting regulatory requirements established by the FDA, EMA and other regulatory authorities;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval;
- the cost of expanding, maintaining and enforcing our intellectual property portfolio, including filing, prosecuting, defending and enforcing our patent claims and other intellectual property rights;
- the cost of defending potential intellectual property disputes, including patent infringement actions brought by third parties against us or any of our product candidates;
- the effect of competing technological and market developments;

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- the cost and timing of completion of commercial-scale manufacturing activities;
- the extent to which we partner our programs, acquire or in-license other product candidates and technologies or enter into additional strategic collaborations;
- the revenue, if any, received from commercial sales of RP-3500 and any future product candidates for which we receive marketing approval;
- add equipment and physical infrastructure to support our research and development; and
- the costs of operating as a public company.

Identifying potential product candidates and conducting preclinical testing and clinical trials is a time-consuming, expensive and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain regulatory approval and achieve product sales. In addition, RP-3500 and any future product candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of products that we do not expect to be commercially available for several years, if at all. Accordingly, we will need to continue to rely on additional financing to achieve our business objectives. Adequate additional financing may not be available to us on acceptable terms, or at all. In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. If we are unable to raise capital when needed or on attractive terms, we could be forced to delay, reduce or altogether terminate our research and development programs or future commercialization efforts.

Raising additional capital will cause dilution to our shareholders, including purchasers of our common shares in this offering, restrict our operations or require us to relinquish rights to our product candidates.

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our cash needs through public or private equity or debt financings, third-party funding, marketing and distribution arrangements, as well as other collaborations, strategic alliances and licensing arrangements, or any combination of these approaches. We do not have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a shareholder. Debt and equity financings, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as redeeming our shares, making investments, incurring additional debt, making capital expenditures, declaring dividends or placing limitations on our ability to acquire, sell or license intellectual property rights.

If we raise additional capital through future collaborations, strategic alliances or third-party licensing arrangements, we may have to relinquish certain valuable rights to our intellectual property, future revenue streams, research programs or product candidates, or grant licenses on terms that may not be favorable to us. If we are unable to raise additional capital when needed, we may be required to delay, limit, reduce or terminate our clinical development or future commercialization efforts, or grant rights to develop and market product candidates that we would otherwise develop and market ourselves.

Risks Related to the Development of Our Product Candidates

We are very early in our development efforts. All of our product candidates are in preclinical development. If we are unable to advance RP-3500 or any of our other product candidates into and through clinical development, obtain regulatory approval and ultimately commercialize RP-3500 or any of our other product candidates, or experience significant delays in doing so, our business will be materially harmed.

All of our product candidates are still in preclinical development. We have no products approved for sale and our lead product candidate, RP-3500, is not yet in clinical development and will require clinical

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development, regulatory review and approval in each jurisdiction in which we intend to market it, access to sufficient commercial manufacturing capacity, and significant sales and marketing efforts before we can generate any revenue from product sales. Our ability to generate product revenues, which we do not expect will occur for many years, if ever, will depend heavily on the successful clinical development and eventual commercialization of RP-3500 and one or more of our other product candidates. The success of our product candidates will depend on several factors, including the following:

- successful completion of preclinical studies, including the identification of clinical candidates for each of our preclinical programs;
- approval of investigational new drug, or IND, applications for our planned clinical trials or future clinical trials;
- acceptance by the FDA, EMA or foreign regulatory authority of our development strategy;
- successful initiation of clinical trials;
- successful patient enrollment in and completion of clinical trials;
- safety, tolerability and efficacy profiles for our product candidates that are satisfactory to the FDA, EMA or any foreign regulatory authority for marketing approval;
- the extent of any required post-marketing approval commitments to applicable regulatory authorities;
- obtaining and maintaining patent and trade secret protection and regulatory exclusivity for our product candidates;
- making arrangements with third-party manufacturers, or establishing manufacturing capabilities, for both clinical and commercial supplies of our product candidates, if any product candidates are approved;
- establishing sales, marketing and distribution capabilities and launching commercial sales of our products, if and when approved, whether alone or in collaboration with others;
- acceptance of our products, if and when approved, by patients, the medical community and third-party payors;
- effectively competing with other cancer therapies;
- obtaining and maintaining third-party coverage and adequate reimbursement and patients' willingness to pay out-of-pocket in the absence of such coverage and adequate reimbursement; and
- maintaining a continued acceptable safety profile of products following approval.

There is no guarantee that the results obtained in current preclinical studies, our planned open-label Phase 1/2 clinical trial of RP-3500 or any future clinical trials of any product candidate will be sufficient to obtain regulatory approval or marketing authorization for such product candidate.

Many of these risks are beyond our control, including the risks related to clinical development, the regulatory submission process, potential threats to our intellectual property rights and the manufacturing, marketing and sales efforts of any future collaborator. If we are unable to develop, receive regulatory approval for, or successfully commercialize our current or future product candidates, or if we experience delays as a result of any of these risks or otherwise, our business could be materially harmed.

Our business substantially depends upon the successful development of product candidates generated through the application of our SNIPRx platform, and in particular, our lead product candidate, RP-3500. If we are unable to obtain regulatory approval for, and successfully commercialize, products developed through the application of our SNIPRx platform, our business may be materially harmed.

Our lead product candidate, RP-3500, was developed through the application of our SNIPRx platform. All of our product candidates to date were derived based on the same principle of SL. As such, negative results in the

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development of RP-3500 may also impact our ability to obtain regulatory approval for our other product candidates, either at all or within anticipated timeframes because, although other product candidates may target different indications, the underlying technology platform, manufacturing process and development process is the same for all of our product candidates. Accordingly, a failure in any one program may decrease trust in our technology and affect the ability to obtain regulatory approval to continue or conduct clinical programs for other product candidates. If RP-3500 shows unexpected adverse events or a lack of efficacy in the indications we intend to treat, or if we experience other regulatory or developmental issues, our development plans and business could be significantly harmed.

We have no experience as a company in conducting clinical trials.

We have no experience as a company in conducting clinical trials. In part because of this lack of experience, we cannot be certain that our ongoing preclinical studies will be completed on time or if the planned preclinical studies and clinical trials will begin or be completed on time, if at all. Large-scale clinical trials would require significant additional financial and management resources and reliance on third-party clinical investigators, contract research organizations, or CROs, and consultants. Relying on third-party clinical investigators, CROs and consultants may force us to encounter delays that are outside of our control. We may be unable to identify and contract with sufficient investigators, CROs and consultants on a timely basis or at all. For our lead product candidate, RP-3500, we recently entered into a clinical services agreement, and may in the future enter into master services agreement, with a CRO to lead our first-in-human planned Phase 1/2 clinical trial. There can be no assurance that we will be able to negotiate and enter into any additional master services agreement with other CROs, as necessary, on terms that are acceptable to us on a timely basis or at all.

We may not be able to file INDs or IND amendments to commence additional clinical trials on the timelines we expect, and even if we are able to, the FDA may not permit us to proceed.

We plan to submit an IND for RP-3500 in _____, but we may not be able to file INDs for our other product candidates on the timelines we expect. For example, we may experience manufacturing delays or other delays with IND-enabling studies. Moreover, we cannot be sure that submission of an IND will result in the FDA allowing further clinical trials to begin, or that, once begun, issues will not arise that suspend or terminate clinical trials. Additionally, even if such regulatory authorities agree with the design and implementation of the clinical trials set forth in an IND, we cannot guarantee that such regulatory authorities will not change their requirements in the future. These considerations also apply to new clinical trials we may submit as amendments to existing INDs or to a new IND. Any failure to file INDs on the timelines we expect or to obtain regulatory approvals for our trials may prevent us from completing our clinical trials or commercializing our products on a timely basis, if at all.

The effects of health epidemics, including the recent COVID-19 coronavirus pandemic, in regions where we, or the third parties on which we rely, have business operations could adversely impact our business, including our preclinical studies and clinical trials. The COVID-19 pandemic could materially affect our operations, including at our offices in Montréal and in the Boston Metro Area, which are currently subject to executive orders, and at our clinical trial sites, as well as the business or operations of our CROs or other third parties with whom we conduct business.

Our business could be adversely affected by health epidemics in regions where we have concentrations of clinical trial sites or other business operations, and could cause significant disruption in the operations of third party manufacturers and CROs upon whom we rely. In December 2019, a novel strain of coronavirus, COVID-19, was reported to have surfaced in Wuhan, China. Since then, COVID-19 coronavirus has spread to multiple countries, including the United States and several European countries. Our company headquarters is located in Montréal, our U.S. headquarters is located in the Boston Metro Area, and our CROs and CMOs are located in the United States and abroad. In March 2020, the World Health Organization declared the COVID-19 outbreak a pandemic, and the U.S. government imposed travel restrictions on travel between the United States,

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Europe and certain other countries. Further, the President of the United States declared the COVID-19 pandemic a national emergency, invoking powers under the Stafford Act, the legislation that directs federal emergency disaster response. In addition, on March 23, 2020, the Governor of Massachusetts ordered all individuals living in the Commonwealth of Massachusetts to stay at their place of residence for an indefinite period of time (subject to certain exceptions to facilitate authorized necessary activities) to mitigate the impact of the COVID-19 pandemic. The executive order exempts certain individuals needed to maintain continuity of operations of critical infrastructure sectors as determined by the federal government, and the Governor has clarified to MassBio that all biopharma research and development is essential and exempt. Also on March 23, 2020, Premier François Legault ordered all individuals in Québec to stay at their place of residence for an indefinite period of time (subject to certain exceptions to facilitate authorized necessary activities)

In response to these public health directives and orders, we have implemented work-from-home policies to support the community efforts to reduce the transmission of COVID-19 and protect employees, complying with guidance from federal, state/provincial or municipal government and health authorities. We implemented a number of measures to ensure employee safety and business continuity. Employees who can work from home have been doing so, while those needing to work in laboratory facilities are divided into shifts to reduce the number of people gathered together at one time. Business travel has been suspended, and online and teleconference technology is used to meet virtually rather than in person. We have taken measures to secure our research and development project activities, while work in laboratories and facilities has been organized to reduce risk of COVID-19 transmission.

The effects of the executive orders and our work-from-home policies may negatively impact productivity, disrupt our business and delay our clinical programs and timelines (for example, our timeline for RP-3500), the magnitude of which will depend, in part, on the length and severity of the restrictions and other limitations on our ability to conduct our business in the ordinary course. These and similar, and perhaps more severe, disruptions in our operations could negatively impact our business, operating results and financial condition.

Quarantines, shelter-in-place and similar government orders, or the perception that such orders, shutdowns or other restrictions on the conduct of business operations could occur, related to COVID-19 or other infectious diseases could impact personnel at third-party manufacturing facilities in the United States and other countries, or the availability or cost of materials, which would disrupt our supply chain.

If addition, our planned clinical trials may be affected by the COVID-19 pandemic, including:

- delays or difficulties in enrolling patients in our clinical trials, including patients that may not be able or willing to comply with clinical trial protocols if quarantines impede patient movement or interrupt healthcare services;
- delays or difficulties in clinical site initiation, including difficulties in recruiting and retaining clinical site investigators and clinical site staff;
- diversion or prioritization of healthcare resources away from the conduct of clinical trials and towards the COVID-19 pandemic, including the diversion of hospitals serving as our clinical trial sites and hospital staff supporting the conduct of our clinical trials, and because, who, as healthcare providers, may have heightened exposure to COVID-19 and adversely impact our clinical trial operations;
- interruption of our clinical supply chain or key clinical trial activities, such as clinical trial site monitoring, due to limitations on travel imposed or recommended by federal, state/provincial or municipal governments, employers and others; and
- limitations in employee resources that would otherwise be focused on the conduct of our clinical trials, including because of sickness of employees or their families or the desire of employees to avoid contact with large groups of people.

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For our clinical trials that we expect to conduct at sites outside the United States, particularly in countries which are experiencing heightened impact from the COVID-19 coronavirus, in addition to the risks listed above, we may also experience the following adverse impacts:

- delays in receiving approval from local regulatory authorities to initiate our planned clinical trials;
- delays in clinical sites receiving the supplies and materials needed to conduct our clinical trials;
- interruption in global shipping that may affect the transport of clinical trial materials, such as investigational drug product and comparator drugs used in our clinical trials;
- changes in federal, state/provincial or municipal regulations as part of a response to the COVID-19 coronavirus outbreak which may require us to change the ways in which our clinical trials are conducted, which may result in unexpected costs, or to discontinue the clinical trials altogether;
- delays in necessary interactions with local regulators, ethics committees and other important agencies and contractors due to limitations in employee resources or forced furlough of government employees; and
- the refusal of the FDA to accept data from clinical trials in these affected geographies.

The global outbreak of the COVID-19 coronavirus continues to rapidly evolve. The extent to which the COVID-19 coronavirus may impact our business and clinical trials will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the ultimate geographic spread of the disease, the duration of the outbreak, travel restrictions and social distancing in the United States, Canada and other countries, business closures or business disruptions and the effectiveness of actions taken in the United States, Canada and other countries to contain and treat the disease.

The successful development of targeted therapeutics, including our portfolio of SL small molecule inhibitors, as well as any related diagnostics, is highly uncertain.

Successful development of targeted therapeutics, such as our portfolio of SL small molecule inhibitors, as well as any related diagnostics, is highly uncertain and is dependent on numerous factors, many of which are beyond our control. Our SNIPRx platform is based on new technologies and methods relating to precision target and biomarker identification, screening and validation. While we believe our clinical development approach of RP-3500 will eventually provide validation of our SNIPRx platform, we have not, to date, sought regulatory approval for RP-3500 or any therapeutics developed through our platform. As such, it is difficult to accurately predict the developmental challenges we may incur for our current and future product candidates as we proceed through product discovery, identification, preclinical studies and clinical trials.

Our SNIPRx platform is novel and may not be effective at identifying SL targets for product candidates. We therefore cannot provide any assurance that we will be able to successfully identify additional novel targets or product candidates, advance any of these additional product candidates or diagnostics for their associated biomarkers through the development process. Most of our proposed targets are unproven in clinical trials and there is no guarantee that the preclinical data will translate into a clinical relevance of such novel biomarkers and targets.

Targeted therapeutics that appear promising in the early phases of development may fail to reach the market for several reasons, including:

- research or preclinical studies may show our targeted small molecule inhibitors or antagonists to be less effective than desired or to have harmful or problematic side effects or toxicities;
- failure to accurately identify, validate or develop clinically relevant biomarkers for our targeted therapeutic product candidates;

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- trial results may show our targeted therapeutic small molecule inhibitors to be less effective than expected based on preclinical studies (e.g., a clinical trial could fail to meet its primary endpoint(s)) or to have unacceptable side effects or toxicities;
- the failure to receive the necessary regulatory approvals or a delay in receiving such approvals. Among other things, such delays may be caused by slow enrollment in clinical trials, patients dropping out of trials, length of time to achieve trial endpoints, additional time requirements for data analysis, preparation of IND applications, discussions with the FDA, an FDA request for additional preclinical or clinical data, or unexpected safety or manufacturing issues;
- manufacturing costs, formulation issues, pricing or reimbursement issues, or other factors that may make our targeted therapeutic small molecule inhibitors uneconomical;
- the size of the patient population that have disease with the appropriate biomarkers for which we are developing our product candidates may not be large enough to support commercial viability of our product candidates, if approved;
- proprietary rights of others and their competing products and technologies that may prevent our targeted therapeutic small molecule inhibitors, or the diagnostics for biomarkers associated with such small molecule inhibitors, from being commercialized;
- the development of alternative treatments or evolution in the standard of care for our targets may make our drugs less attractive; and
- our approach of using any of our product candidates in combination with other agents, including standard of care agents, may not materialize due to overlapping toxicity, high cost or an inability to replicate preclinical results in clinical trials.

As a result of these factors, it is more difficult for us to predict the time and cost of product candidate development, and we cannot predict whether the application of our SNIPRx platform will result in the identification, development, and regulatory approval of any products.

We may incur unexpected costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.

We may not commercialize, market, promote or sell any product candidate without obtaining marketing approval from the FDA, EMA or other comparable regulatory authority, and we may never receive such approvals. It is impossible to predict when or if any of our product candidates will prove effective or safe in humans and will receive regulatory approval. Before obtaining marketing approval from regulatory authorities for the sale of our product candidates, we must complete preclinical development and then conduct extensive clinical trials to demonstrate the safety and efficacy of our product candidates in humans. Clinical testing is expensive, difficult to design and implement, can take many years to complete and is uncertain as to outcome. Competing clinical trials for the same populations targeted as ours may limit our enrollment, or the results of competitors with similar technologies and products may falsely undermine the potential of our SNIPRx platform. A failure of one or more clinical trials can occur at any stage of testing. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their products.

We may experience numerous unforeseen events prior to, during, or as a result of, clinical trials that could delay or prevent our ability to receive marketing approval or commercialize RP-3500 and any future product candidates, including:

- delays in reaching a consensus with regulatory authorities on design or implementation of our clinical trials;

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- regulators or institutional review boards, or IRBs, may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- delays in reaching agreement on acceptable terms with prospective CROs and clinical trial sites;
- the number of patients required for clinical trials of our product candidates may be larger than we anticipate, enrollment in these clinical trials may be slower than we anticipate, patients may drop out of these clinical trials at a higher rate than we anticipate or fail to return for post-treatment follow-up or we may fail to recruit suitable patients to participate in a trial;
- delays in our combination trials due to lack of access to the drugs with which we are testing our product candidates;
- clinical trials of our product candidates may produce negative or inconclusive results;
- imposition of a clinical hold by regulatory authorities as a result of a serious adverse event, concerns with a class of product candidates or after an inspection of our clinical trial operations, trial sites or manufacturing facilities;
- occurrence of serious adverse events associated with the product candidate that are viewed to outweigh its potential benefits;
- external business disruptions affecting the initiation, patient enrollment, development and operation of our clinical trials, including a public health emergency, such as the recent global outbreak of the COVID-19 coronavirus;
- changes in regulatory requirements and guidance that require amending or submitting new clinical protocols; or
- we may decide, or regulators may require us, to conduct additional clinical trials or abandon product development programs.

Any inability to successfully complete preclinical and clinical development could result in additional costs to us or impair our ability to generate revenue from future drug sales or other sources. In addition, if we make manufacturing or formulation changes to our product candidates, we may need to conduct additional testing to bridge our modified product candidate to earlier versions. Clinical trial delays could also shorten any periods during which we may have the exclusive right to commercialize our product candidates, if approved, or allow our competitors to bring competing drugs to market before we do, which could impair our ability to successfully commercialize our product candidates and may harm our business, financial condition, results of operations and prospects.

Additionally, if the results of our clinical trials are inconclusive or if there are safety concerns or serious adverse events associated with our product candidates, we may:

- be delayed in obtaining marketing approval, if at all;
- obtain approval for indications or patient populations that are not as broad as intended or desired;
- obtain approval with labeling that includes significant use or distribution restrictions or safety warnings;
- be subject to additional post-marketing testing requirements;
- be required to perform additional clinical trials to support approval or be subject to additional post-marketing testing requirements;
- have regulatory authorities withdraw, or suspend, their approval of the drug or impose restrictions on its distribution in the form of a modified risk evaluation and mitigation strategy, or REMS;
- be subject to the addition of labeling statements, such as warnings or contraindications;

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- be sued; or
- experience damage to our reputation.

Our product development costs will also increase if we experience delays in testing or obtaining marketing approvals. We do not know whether any of our preclinical studies or clinical trials will begin as planned, need to be restructured or be completed on schedule, if at all.

Clinical trials are very expensive, time consuming and difficult to design and implement.

Our product candidates will require clinical testing before we are prepared to submit a new drug application, or NDA, or equivalent application required in another jurisdiction for regulatory approval. We cannot predict with any certainty if or when we might submit an NDA or equivalent application required in another jurisdiction for regulatory approval for any of our product candidates or whether any such application will be approved by the FDA or other comparable regulatory authority, as applicable. Human clinical trials are very expensive and difficult to design and implement, in part because they are subject to rigorous regulatory requirements. For instance, the FDA or other comparable regulatory authority may not agree with our proposed endpoints for any future clinical trial of our product candidates, which may delay the commencement of our clinical trials. In addition, we may not succeed in developing and validating disease-relevant clinical endpoints based on insights regarding biological pathways for the diseases we are studying. The clinical trial process is also time consuming. We estimate that the successful completion of clinical trials for RP-3500 and any future product candidates will take several years to complete. Furthermore, failure can occur at any stage, and we could encounter problems that cause us to abandon or repeat clinical trials.

Success in preclinical studies or earlier clinical trials may not be indicative of results in future clinical trials and we cannot assure you that any ongoing, planned or future clinical trials will lead to results sufficient for the necessary regulatory approvals.

We have not yet initiated our first clinical trial, a planned open-label Phase 1/2 clinical trial of RP-3500. Success in preclinical testing and earlier clinical trials does not ensure that later clinical trials will generate the same results or otherwise provide adequate data to demonstrate the efficacy and safety of a product candidate. Preclinical tests and Phase 1 and Phase 2 clinical trials are primarily designed to test safety, to study pharmacokinetics and pharmacodynamics and to understand the side effects of product candidates at various doses and schedules. Success in preclinical studies and earlier clinical trials does not ensure that later efficacy trials will be successful, nor does it predict final results. Frequently, product candidates that have shown promising results in early clinical trials have subsequently suffered significant setbacks in later clinical trials. In addition, the design of a clinical trial can determine whether its results will support approval of a product and flaws in the design of a clinical trial may not become apparent until the clinical trial is well advanced. We have limited experience designing clinical trials and may be unable to design and execute a clinical trial to support regulatory approval. There is a high failure rate for drugs and biologic products proceeding through clinical trials. Many companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials even after achieving promising results in preclinical testing and earlier-stage clinical trials. These setbacks have been caused by, among other things, preclinical findings made while clinical trials were underway or safety or efficacy observations made in clinical trials, including previously unreported adverse events. Additionally, we plan on pursuing tumor agnostic clinical development in our trials of RP-3500. However, anti-tumor activity may be different in each of the different tumor types we plan on evaluating in the clinical trial. Therefore, even though we plan on pursuing tumor agnostic clinical development of RP-3500, the tumor response may be low or clinically insignificant in patients with some cancers compared to others. This may result in discontinuation of development of RP-3500 as a monotherapy for patients with these tumor types due to insufficient clinical benefit while continuing development for a more limited population of patients more likely to benefit. As a consequence, we may need to start combination therapies or we may have to negotiate with the FDA to reach agreement on defining the optimal patient population, study design and size in order to obtain

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regulatory approval, any of which may require significant additional resources and delay the timing of our clinical trials and ultimately the approval, if any, of any of our product candidates.

In addition, differences in trial design between early-stage clinical trials and later-stage clinical trials make it difficult to extrapolate the results of earlier clinical trials to later clinical trials. The early trials will be single arm and not comparing the results with existing (or new) standard of care. Moreover, clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in clinical trials have nonetheless failed to obtain marketing approval of their products or had to withdraw the product after comparator or later stage trials delivered results. Additionally, some of our trials may be open-label studies, where both the patient and investigator know whether the patient is receiving the investigational product candidate or either an existing approved drug, introducing bias in early interpretation of the results. Most typically, open-label clinical trials test only the investigational product candidate and sometimes do so at different dose levels. Open-label clinical trials are subject to various limitations that may exaggerate any therapeutic effect as patients in open-label clinical trials are aware when they are receiving treatment. In addition, open-label clinical trials may be subject to an “investigator bias” where those assessing and reviewing the physiological outcomes of the clinical trials are aware of which patients have received treatment and may interpret the information of the treated group more favorably given this knowledge. Therefore, it is possible that positive results observed in open-label trials will not be replicated in later placebo-controlled trials.

Data obtained from preclinical and clinical activities are subject to varying interpretations, which may delay, limit or prevent regulatory approval. Moreover, as the development of the SL pair, ATM-ATR, is still early, any clinical validation to the SL approach to treating cancer may or may not validate our approach. In addition, we may experience regulatory delays or rejections as a result of many factors, including due to changes in regulatory policy during the period of our product candidate development. Any such delays could negatively impact our business, financial condition, results of operations and prospects.

Interim, “top-line” and preliminary data from our clinical trials that we announce or publish from time to time may change as more patient data become available and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publish interim, “top-line” or preliminary data from our planned clinical trials. Interim data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. Preliminary or “top-line” data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, interim and preliminary data should be viewed with caution until the final data are available. Differences between preliminary or interim data and final data could significantly harm our business prospects and may cause the trading price of our common shares to fluctuate significantly.

The regulatory approval processes of the FDA and comparable foreign regulatory authorities are lengthy, time consuming and inherently unpredictable, and if we are ultimately unable to obtain regulatory approval for our product candidates, on a timely basis or at all, our business will be substantially harmed.

The length of time necessary to complete clinical trials and to submit an application for marketing approval for a decision by a regulatory authority may be difficult to predict for targeted therapeutic small molecule inhibitors, in large part because of the limited regulatory history associated with them. The clinical trial requirements of the FDA and other comparable foreign regulatory authorities and the criteria these regulators use to determine the safety and efficacy of a product candidate vary substantially according to the type, complexity, novelty and intended use and market of the product candidate. There is a limited history of multi-tumor indications, and any regulatory approvals may be conditioned upon confirmatory trials with clinical endpoints

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such as survival. Such trials are not only more expensive to conduct but take several years to complete. Increasing pressure from reimbursement bodies may result in poor (or no) acceptance of early trials for reimbursement. Except for certain PARP inhibitors, no products based on SL have been approved to date by regulators. As a result, the regulatory approval process for product candidates such as ours is uncertain and may be more expensive and take longer than the approval process for product candidates based on other, better known or more extensively studied technologies. It is difficult to determine how long it will take or how much it will cost to obtain regulatory approvals for our product candidates in either the United States or other comparable regions of the world or how long it will take to commercialize our product candidates. Delay or failure to obtain, or unexpected costs in obtaining, the regulatory approval necessary to bring a potential product candidate to market would adversely affect our business, financial condition, results of operations and prospects.

Our product candidates could fail to receive regulatory approval for many reasons, including the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a product candidate is safe and effective for its proposed indication;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- we may be unable to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of our product candidates may not be sufficient to support the submission of an NDA to the FDA or other submission or to obtain regulatory approval in the United States or elsewhere;
- the FDA or comparable foreign regulatory authorities may fail to approve the manufacturing processes or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; and
- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

Prior to obtaining approval to commercialize a product candidate in the United States or elsewhere, we or our collaborators must demonstrate with substantial evidence from well-controlled clinical trials, and to the satisfaction of the FDA or comparable foreign regulatory agencies, that such product candidates are safe and effective for their intended uses. Results from nonclinical studies and clinical trials can be interpreted in different ways. Even if we believe the nonclinical or clinical data for our product candidates are promising, such data may not be sufficient to support approval by the FDA or comparable foreign regulatory authorities. The FDA may also require us to conduct additional preclinical studies or clinical trials for our product candidates either prior to or post-approval, or it may object to elements of our clinical development program. Depending on the extent of these or any other studies required by the FDA or comparable foreign regulatory authorities, approval of any regulatory approval applications that we submit may be delayed by several years, or may require us to expend significantly more resources than we have available.

Of the large number of potential products in development, only a small percentage successfully complete the FDA or comparable foreign regulatory approval processes and are commercialized. The lengthy approval process as well as the unpredictability of future clinical trial results may result in our failing to obtain regulatory approval to market our product candidates, which would significantly harm our business, results of operations and prospects.

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In addition, even if we were to obtain approval, regulatory authorities may approve any of our product candidates for fewer or more limited indications than we request, may impose significant limitations in the form of narrow indications, warnings, or a post-marketing risk management strategy such as a REMS or the equivalent in another jurisdiction. Regulatory authorities may not approve the price we intend to charge for our products, may grant approval contingent on the performance of costly post-marketing clinical trials, or may approve a product candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that product candidate. Any of the foregoing scenarios could materially harm the commercial prospects for our product candidates.

Synthetic lethality represents an emerging class of precision medicine targets, and negative perceptions of the efficacy, safety or tolerability of this class of targets, including any that we develop, could adversely affect our ability to conduct our business, advance our product candidates or obtain regulatory approvals.

Aside from PARP inhibitors, such as Lynparza, Rubraca, Zejula and Talzenna, no SL small molecule inhibitor therapeutics have been approved to date by the FDA or other comparable regulators. Adverse events in future clinical trials of our product candidates or in clinical trials of others developing similar products and the resulting publicity, as well as any other adverse events in the field of SL, or other products that are perceived to be similar to SL, such as those related to gene therapy or gene editing, could result in a decrease in the perceived benefit of one or more of our programs, increased regulatory scrutiny, decreased confidence by patients and CROs in our product candidates, and less demand for any product that we may develop. Our pipeline of SL small molecule inhibitor product candidates could result in a greater quantity of reportable adverse events or other reportable negative clinical outcomes, manufacturing reportable events or material clinical events that could lead to clinical delays or holds by the FDA or applicable regulatory authority or other clinical delays, any of which could negatively impact the perception of one or more of our SL programs, as well as our business as a whole. In addition, responses by U.S. federal or foreign governments to negative public perception may result in new legislation or regulations that could limit our ability to develop any product candidates or commercialize any approved products, obtain or maintain regulatory approval, or otherwise achieve profitability. More restrictive statutory regimes, government regulations, or negative public opinion would have an adverse effect on our business, financial condition, results of operations, and prospects, and may delay or impair the development of our product candidates and commercialization of any approved products or demand for any products we may develop.

We may not be successful in applying our SNIPRx platform to discover SL targets with therapeutic and commercial potential or in the discovery and development of commercially viable product candidates for us or our collaborators.

Our scientific approach focuses on applying our proprietary SNIPRx platform to identify SL targets across the human genome. Our drug discovery team then chooses targets identified by SNIPRx and develops potent and selective inhibitors of these targets. We use these inhibitors to further validate our SL findings before advancing them into clinical development.

We believe the results of our SNIPRx screen campaigns suggest that our platform is capable of identifying high quality product candidates, but past success in identifying potential product candidates does not assure future success for us with our internal drug discovery programs. Our SNIPRx platform is novel, and we may not succeed in applying our SNIPRx platform to identify targets for product candidates. We therefore cannot provide any assurance that we or our collaborators will be able to successfully identify additional product candidates or advance any of these additional product candidates. In addition, others may have discovered and prosecuted targets that we believe are undiscovered. As a result of these factors, it is more difficult for us to predict the time and cost of product candidate development, and we cannot predict whether the application of our SNIPRx platform will result in the identification, development, and regulatory approval of any products. In addition, we may not succeed in applying our STEP² screens to expand the potential patient populations that can be treated with our product candidates.

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Efforts to identify, acquire or in-license, and then develop product candidates require substantial technical, financial and human resources, whether or not any product candidates are ultimately identified. We apply our SNIPRx technology and STEP² screening in our efforts to discover potential precision targets for which our product candidates may be developed. Our efforts may initially show promise in identifying potential product candidates, yet fail to yield product candidates for clinical development, approved products or commercial revenues for many reasons, including the following:

- the methodology used may not be successful in identifying potential product candidates;
- competitors may develop alternatives that render any product candidates we develop obsolete;
- any product candidates we develop may nevertheless be covered by third parties' patents or other exclusive rights;
- a product candidate may be shown to have harmful side effects or other characteristics that indicate it is unlikely to be effective or otherwise does not meet applicable regulatory criteria;
- a product candidate may not be capable of being produced in commercial quantities at an acceptable cost, or at all; and
- a product candidate may not be accepted as safe and effective by physicians, patients, the medical community or third-party payors.

Difficulty in enrolling patients could delay or prevent clinical trials of our product candidates. We may find it difficult to enroll patients in our open-label Phase 1/2 clinical trial for RP-3500 with the genomic alterations that RP-3500 is designed to target.

Identifying and qualifying patients to participate in clinical trials of our product candidates is critical to our success. The timing of completion of our clinical trials depends in part on the speed at which we can recruit patients to participate in testing our product candidates, and we may experience delays in our clinical trials if we encounter difficulties in enrollment. We may not be able to initiate or continue clinical trials for our product candidates if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA or similar regulatory authorities outside the United States. In particular, because we are focused on patients with specific genomic alterations, our ability to enroll eligible patients may be limited or may result in slower enrollment than we anticipate. For example, with respect to RP-3500, we are researching 19 STEP²-identified genomic alterations in addition to ATM deficiency, including several novel genes that have not been previously reported as rendering sensitivity to ATR inhibitors. Further, certain of these genes are not yet included in commercially available panels or CLIA-validated panels used in large academic centers. As such, for our planned Phase 1/2 trial, we have identified and partnered with multiple large, leading clinical centers globally where tumor sequencing is the standard of care. While we believe that these panels will include the majority, if not all, of the 20 genes, genes may not be available on certain panels at our clinical sites. We cannot be certain how many patients will have each of the genomic alterations that RP-3500 is designed to target or that the number of patients enrolled for each mutation will suffice for regulatory approval and inclusion of each such mutation in the approved label. We may be unsuccessful in our efforts to work with our clinical partners to identify patients who are eligible for our clinical trial of RP-3500.

In addition, some of our competitors have ongoing clinical trials for product candidates that treat the same or similar populations as our product candidates, and patients who would otherwise be eligible for our clinical trials may instead enroll in clinical trials of our competitors' product candidates.

We are engaging third parties to develop patient selection tools for use in our clinical trials, but such third parties may not be successful in developing such tools, furthering the difficulty in identifying patients with the targeted genomic alterations for our clinical trials and risking enrollment into our trials. Next Generation Sequencing panels may not include genes required for screening for our clinical trials or may not be broadly commercially available. The optimal method of diagnosis is not yet known and the availability of third party

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payment for diagnostic tests may limit our clinical trials as well. Further, if we are unable to include patients with the targeted genomic alterations, this could compromise our ability to seek participation in FDA's expedited review and development programs or otherwise seek to accelerate clinical development and regulatory timelines.

The enrollment of patients further depends on many factors, including:

- the risks and benefits of the product candidate under trial;
- the availability and efficacy of competing therapies and clinical trials;
- the availability of genetic sequencing information for patient tumors so that we can identify patients with the targeted genomic alterations;
- the patient referral practices of physicians;
- the proximity of patients to clinical trial sites;
- the design of the clinical trial;
- our ability to recruit clinical trial investigators with the appropriate competencies and experience;
- the ability of any current or future license partner to execute on its development commitments and responsibilities for any product candidate to which it has acquired development rights in a given geography;
- our ability to obtain and maintain patient consents;
- reporting of the preliminary results of any of our clinical trials; and
- the risk that patients enrolled in clinical trials will drop out of the clinical trials before clinical trial completion.

Our clinical trials will compete with other clinical trials for product candidates that are in the same therapeutic areas as our product candidates, and this competition will reduce the number and types of patients available to us because some patients who might have opted to enroll in our clinical trials may instead opt to enroll in a clinical trial being conducted by one of our competitors. Since the number of qualified clinical investigators is limited, we expect to conduct some of our clinical trials at the same clinical trial sites that some of our competitors use, which will reduce the number of patients who are available for our clinical trials at such clinical trial sites. Moreover, because our product candidates represent a departure from more commonly used methods for cancer treatment and because our product candidates have not been tested in humans before, potential patients and their doctors may be inclined to use conventional therapies, such as chemotherapy, rather than enroll patients in any future clinical trial.

If we experience delays in the completion of, or termination of, any clinical trial of our product candidates, the commercial prospects of our product candidates will be harmed, and our ability to generate product revenue from any of these product candidates could be delayed or prevented.

Our product candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval, limit the commercial potential or result in significant negative consequences following any potential marketing approval.

Serious adverse events or undesirable side effects caused by our product candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA, EMA or other authorities. Results of our clinical trials could reveal a high and unacceptable severity and prevalence of side effects, toxicities or unexpected characteristics, including death.

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If unacceptable side effects or deaths arise in the development of our product candidates, we, the IRBs at the institutions in which our studies are conducted, the FDA or any comparable foreign regulatory authority could suspend or terminate our clinical trials or the FDA or other regulatory authorities could order us to cease clinical trials or deny approval of our product candidates for any or all targeted indications. Undesirable side effects or deaths in clinical trials with our product candidates may cause the FDA or comparable foreign regulatory authorities to place a clinical hold on the associated clinical trials, to require additional studies, or otherwise to delay or deny approval of our product candidates for any or all targeted indications. Treatment-related side effects could also affect patient recruitment or the ability of enrolled patients to complete the trial or result in potential product liability claims. In addition, these side effects may not be appropriately recognized or managed by the treating medical staff. We expect to have to train medical personnel using our product candidates to understand the side effect profiles for our clinical trials and upon any commercialization of any of our product candidates. Inadequate training in recognizing or managing the potential side effects of our product candidates could result in patient injury or death. Any of these occurrences may harm our business, financial condition and prospects significantly.

If any of our product candidates receives marketing approval, and we or others later identify undesirable side effects caused by any such product, including during any long-term follow-up observation period recommended or required for patients who receive treatment using our products, a number of potentially significant negative consequences could result, including:

- regulatory authorities may suspend, limit or withdraw approvals of such product, or seek an injunction against its manufacture and distribution;
- we may be required to recall a product or change the way such product is administered to patients;
- additional restrictions may be imposed on the marketing of the particular product or the manufacturing processes for the product;
- regulatory authorities may require additional warnings on the label, such as a boxed warning or contraindication, or issue safety alerts, Dear Healthcare Provider letters, press releases or other communications containing warnings or other safety information about the product;
- we may be required to implement a REMS or create a medication guide outlining the risks of such side effects for distribution to patients;
- the product could become less competitive;
- a strategic collaborator for the product may choose to terminate its agreement and compromise our ability to commercialize such product in the collaborator's geography;
- we may be subject to fines, injunctions, or the imposition of civil or criminal penalties;
- we could be sued and held liable for harm caused to patients; and
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of the particular product candidate, if approved, and could significantly harm our business, results of operations and prospects.

We may in the future conduct clinical trials for product candidates outside the United States, and the FDA and comparable foreign regulatory authorities may not accept data from such trials.

We currently expect, and may in the future choose, to conduct one or more clinical trials outside the United States, including in Europe. The acceptance of study data from clinical trials conducted outside the United States or another jurisdiction by the FDA or comparable foreign regulatory authority may be subject to certain conditions or may not be accepted at all. In cases where data from foreign clinical trials are intended to serve as the basis for marketing approval in the United States, the FDA will generally not approve the application on the

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basis of foreign data alone unless (i) the data are applicable to the U.S. population and U.S. medical practice; and (ii) the trials were performed by clinical investigators of recognized competence and pursuant to good clinical practice, or GCP, regulations. Additionally, the FDA's clinical trial requirements, including sufficient size of patient populations and statistical powering, must be met. Many foreign regulatory authorities have similar approval requirements. In addition, such foreign trials would be subject to the applicable local laws of the foreign jurisdictions where the trials are conducted. Results for our clinical trials may differ by jurisdiction as a result of varying standards of care or local restrictions on reimbursement from third-party payors for clinical trials, thereby affecting the willingness of the FDA or any comparable foreign regulatory authority to accept such data. There can be no assurance that the FDA or any comparable foreign regulatory authority will accept data from trials conducted outside of the United States or the applicable jurisdiction. If the FDA or any comparable foreign regulatory authority does not accept such data, it would result in the need for additional trials, which could be costly and time-consuming, and which may result in product candidates that we may develop not receiving approval for commercialization in the applicable jurisdiction.

If it is determined that companion diagnostics are needed, we may be unable to successfully develop companion diagnostics for biomarkers that enable patient selection, or experience significant delays in doing so, we may not realize the full commercial potential of our product candidates.

A key component of our strategy includes the use of diagnostic tools to guide patient selection of our product candidates. In some cases, a diagnostic tool may be commercially available, for example, on a tumor-profiling panel. If not already commercially available, we may be required to seek collaborations with diagnostic companies for the development of diagnostics for biomarkers associated with our product candidates. We may have difficulty in establishing or maintaining such development relationships, and we will face competition from other companies in establishing these collaborations. Furthermore, even if a diagnostic is commercially available, we may not be able to obtain reimbursement for its use without obtaining regulatory approval.

There are also several risks associated with biomarker identification and validation. We, in collaboration with any diagnostic partners, may not be able to identify predictive biomarkers or pharmacodynamic biomarkers for one or more of our programs. We may not be able to validate potential biomarkers (e.g., certain genomic alterations) or their functional relevance preclinically in relevant *in vitro* or *in vivo* models. Data analytics and information from databases that we rely on for identifying or validating some of our biomarker-target relationships may not accurately reflect potential patient populations or may be based on incorrect methodology. Potential biomarkers, even if validated preclinically, may not be functionally validated in human clinical trials.

If it is determined that companion diagnostics are needed, we may, in collaboration with these parties, be unable to successfully develop companion diagnostics for our product candidates, or experience delays in doing so, which may adversely affect the development of our product candidates. The development of companion diagnostic products requires a significant investment of working capital, and may not result in any future income. This could require us to raise additional funds, which could dilute our current investors or impact our ability to continue our operations in the future.

There are also risks associated with diagnostics that are commercially available, including that we may not have access to reliable supply for such diagnostics.

The failure to obtain required regulatory approvals for any companion diagnostic tests that may be required and that we may pursue may prevent or delay approval of our product candidates. Moreover, the commercial success of any of our product candidates may be tied to the regulatory approval, market acceptance and continued availability of a companion diagnostic.

The FDA and other comparable regulatory authorities regulate *in vitro* companion diagnostics as medical devices that will likely be subject to clinical trials in conjunction with the clinical trials for our product candidates, and which will require regulatory clearance or approval prior to commercialization. If it is

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determined that companion diagnostics are needed, we plan to collaborate with third parties for the development, testing and manufacturing of these companion diagnostics, the application for and receipt of any required regulatory clearances or approvals, and the commercial supply of these companion diagnostics. Our third-party collaborators may fail to obtain the required regulatory clearances or approvals, which could prevent or delay approval of our product candidates. In addition, the commercial success of any of our product candidates may be tied to and dependent upon the receipt of required regulatory clearances or approvals of the companion diagnostic.

For example, ATM is a common cancer mutation and its prognostic significance has not been validated for the patient populations that we are targeting. Such development risk contributes to the costs that we may need to bear in validating the ATM as well as the optimal method of diagnostic screening for our clinical trial populations.

Even if a companion diagnostic is approved, we will rely on the continued ability of any third-party collaborator to make the companion diagnostic commercially available to us on reasonable terms in the relevant geographies. Market acceptance of the companion diagnostic may be low as a result of the cost and complexity of utilizing such companion diagnostic. Furthermore, if commercial tumor profiling panels are not able to be updated to include additional tumor-associated genes, or if clinical oncologists do not incorporate molecular or genetic sequencing into their clinical practice, we may not be successful in developing or commercializing our existing product candidates or any future product candidates.

We intend to pursue the development of certain of our product candidates in combination with other therapies, and regulatory approval, safety or supply issues with these other therapies may delay or prevent the development and approval of our product candidates.

We intend to pursue the development of RP-3500 as a monotherapy and in combination with approved PARP inhibitors. In the near future, we may explore the use of our product candidates in combination with other therapies, including those that are not yet approved. If we choose to develop a product candidate for use in combination with an approved therapy, we are subject to the risk that the FDA or comparable foreign regulatory authorities could revoke approval of, or that safety, efficacy, manufacturing or supply issues could arise with, the therapy used in combination with our product candidate. If the therapies we use in combination with our product candidates are replaced as the standard of care, the FDA or comparable foreign regulatory authorities may require us to conduct additional clinical trials, or we may not be able to obtain adequate reimbursement from third-party payors. The occurrence of any of these risks could result in our product candidates, if approved, being removed from the market or being less successful commercially.

Where we develop a product candidate for use in combination with a therapy that has not been approved by the FDA or comparable foreign regulatory authorities, we will not be able to market our product candidate for use in combination with such an unapproved therapy, unless and until the unapproved therapy receives regulatory approval. These unapproved therapies face the same risks described with respect to our product candidates currently in development, including serious adverse effects and delays in their clinical trials. In addition, other companies may also develop their products or product candidates in combination with the unapproved therapies with which we are developing our product candidates for use in combination. Any setbacks in these companies' clinical trials, including the emergence of serious adverse effects, may delay or prevent the development and approval of our product candidates.

If the FDA or comparable foreign regulatory authorities do not approve or revoke their approval of, or if safety, efficacy, manufacturing, or supply issues arise with, therapies we choose to evaluate in combination with any of our product candidates, we may be unable to obtain regulatory approval of or to commercialize such product candidates in combination with these therapies.

Risks Related to the Commercialization of Our Product Candidates

We have never commercialized a product candidate and may experience delays or unexpected difficulties in obtaining regulatory approval for our current or future product candidates for our initial or potential additional indications.

We have never obtained regulatory approval for, or commercialized, a drug. It is possible that the FDA may refuse to accept any or all of our planned NDAs for substantive review or may conclude after review of our data that our application is insufficient to obtain regulatory approval for any product candidates. If the FDA does not approve any of our planned NDAs, it may require that we conduct additional costly clinical, nonclinical or manufacturing validation studies before it will reconsider our applications. Depending on the extent of these or any other FDA-required studies, approval of any NDA or other application that we submit may be significantly delayed, possibly for several years, or may require us to expend more resources than we have available. Any failure or delay in obtaining regulatory approvals would prevent us from commercializing our current or future product candidates, generating revenues and achieving and sustaining profitability. It is also possible that additional studies, if performed and completed, may not be considered sufficient by the FDA to approve any NDA or other application that we submit. If any of these outcomes occur, we may be forced to abandon the development of our product candidates, which would materially adversely affect our business and could potentially cause us to cease operations. We face similar risks for our applications in foreign jurisdictions.

We currently have no marketing and sales organization and have no experience as a company in marketing products. If we are unable to establish marketing and sales capabilities or enter into agreements with third parties to market and sell our product candidates, if approved, we may not be able to generate product revenue.

We currently have no sales, marketing or distribution capabilities and have no experience in marketing products. We intend to develop an in-house marketing organization and sales force, which will require significant capital expenditures, management resources and time. We will have to compete with other pharmaceutical and biotechnology companies to recruit, hire, train and retain marketing and sales personnel.

If we are unable or decide not to establish internal sales, marketing and distribution capabilities, we will pursue arrangements with third-party sales, marketing, and distribution collaborators regarding the sales and marketing of our products, if approved. However, there can be no assurance that we will be able to establish or maintain such arrangements on favorable terms or if at all, or if we are able to do so, that these third-party arrangements will provide effective sales forces or marketing and distribution capabilities. Any revenue we receive will depend upon the efforts of such third parties, which may not be successful. We may have little or no control over the marketing and sales efforts of such third parties and our revenue from product sales may be lower than if we had commercialized our product candidates ourselves. We also face competition in our search for third parties to assist us with the sales and marketing efforts of our product candidates.

There can be no assurance that we will be able to develop in-house sales and distribution capabilities or establish or maintain relationships with third-party collaborators to commercialize any product in the United States or overseas.

Due to our limited resources and access to capital, we must, and have in the past decided to, prioritize development of certain product candidates over other potential product candidates. These decisions may prove to have been wrong and may adversely affect our ability to develop our own programs, our attractiveness as a commercial partner and may ultimately have an impact on our commercial success.

Because we have limited resources and access to capital to fund our operations, we must decide which product candidates to pursue and the amount of resources to allocate to each. Our decisions concerning the allocation of research, collaboration, management and financial resources toward particular proprietary molecules in our library, product candidates or therapeutic areas may not lead to the development of viable

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commercial products and may divert resources away from better opportunities. Similarly, our decisions to delay, terminate or collaborate with third parties in respect of certain product development programs may also prove not to be optimal and could cause us to miss valuable opportunities. If we make incorrect determinations regarding the market potential of our product candidates or misread trends in the biopharmaceutical industry, in particular for our lead product candidate, our business, financial condition and results of operations could be materially adversely affected.

Even if we obtain regulatory approval of our product candidates, the products may not gain market acceptance among physicians, patients, hospitals, cancer treatment centers and others in the medical community.

The use of precision medicines as a potential cancer treatment is a recent development and may not become broadly accepted by physicians, patients, hospitals, cancer treatment centers and others in the medical community. Various factors will influence whether our product candidates are accepted in the market, including:

- the clinical indications for which our product candidates are approved;
- physicians, hospitals, cancer treatment centers and patients considering our product candidates as a safe and effective treatment;
- the potential and perceived advantages of our product candidates over current or future alternative treatments;
- our ability to demonstrate the advantages of our product candidates over other cancer medicines;
- the prevalence and severity of any side effects;
- the prevalence and severity of any side effects for other precision medicines and public perception of other precision medicines;
- product labeling or product insert requirements of the FDA or comparable foreign regulatory authorities;
- limitations or warnings contained in the labeling approved by the FDA or comparable foreign regulatory authorities;
- the timing of market introduction of our product candidates as well as competitive products;
- the cost of treatment, including with respect to diagnostic tools for our product candidates, and the availability of testing for patient selection;
- the pricing of our products, if approved, and the availability of adequate coverage and reimbursement by third-party payors and government authorities;
- the willingness of patients to pay out-of-pocket in the absence of coverage by third-party payors and government authorities;
- relative convenience and ease of administration, including as compared to alternative treatments and competitive therapies; and
- the effectiveness of our sales and marketing efforts.

If our product candidates are approved for commercialization but fail to achieve market acceptance among physicians, patients, hospitals, cancer treatment centers or others in the medical community, we will not be able to generate significant revenue.

In addition, although our product candidates differ in certain ways from other precision medicine approaches, serious adverse events or deaths in other clinical trials involving precision medicines, even if not ultimately attributable to our product or product candidates, could result in increased government regulation,

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unfavorable public perception and publicity, potential regulatory delays in the testing or licensing of our product candidates, stricter labeling requirements for those product candidates that are licensed, and a decrease in demand for any such product candidates.

Even if our products achieve market acceptance, we may not be able to maintain that market acceptance over time if new products or technologies are introduced that are more favorably received than our products, are more cost effective or render our products obsolete.

The market opportunities for our product candidates may be relatively small as it will be limited to those patients who are ineligible for or have failed prior treatments and our estimates of the prevalence of our target patient populations may be inaccurate.

Cancer therapies are sometimes characterized as first line, second line, or third line, and the FDA often approves new therapies initially only for a particular line of use. When cancer is detected early enough, first line therapy is sometimes adequate to cure the cancer or prolong life without a cure. Whenever first line therapy, usually chemotherapy, antibody drugs, tumor-targeted small molecules, hormone therapy, radiation therapy, surgery, or a combination of these, proves unsuccessful, second line therapy may be administered. Second line therapies often consist of more chemotherapy, radiation, antibody drugs, tumor-targeted small molecules, or a combination of these. Third line therapies can include chemotherapy, antibody drugs and small molecule tumor-targeted therapies, more invasive forms of surgery and new technologies. We expect to initially seek approval of our product candidates in most instances at least as a second or third line therapy. Subsequently, for those product candidates that prove to be sufficiently safe and beneficial, if any, we would expect to seek approval as a second line therapy and potentially as a first line therapy, but there is no guarantee that our product candidates, even if approved as a second or third or subsequent line of therapy, would be approved for an earlier line of therapy, and, prior to any such approvals, we may have to conduct additional clinical trials.

We rely on various sources, including published literature and public or proprietary databases, to ascertain an estimate of the number of patients having particular genomic alterations, such as mutations, deletions or fusions. The determinable prevalence may vary depending on the source and quality of the underlying data and in some cases, insufficient data or poorly curated data may impact our ability to accurately estimate the prevalence of our target patient populations for each indication and in the aggregate across multiple indications both in the clinical trial setting, as well as in the commercial setting, if our product is approved. If the market opportunities for our product candidates are smaller than we estimate, our business, financial position, results of operations and prospects may be harmed. In addition, upon treatment with our product candidates, patients may have or develop resistance to our product candidates, reducing the addressable patient population and duration of treatment.

We face substantial competition, which may result in others developing or commercializing drugs before or more successfully than us.

The biopharmaceutical industry is characterized by intense competition and rapid innovation. Our competitors may be able to develop other compounds or drugs that are able to achieve similar or better results. Our potential competitors include major multinational pharmaceutical companies, established biotechnology companies, specialty pharmaceutical companies and universities and other research institutions. Many of our competitors have substantially greater financial, technical and other resources, such as larger research and development staff and experienced marketing and manufacturing organizations and well-established sales forces. Smaller or early-stage companies may also prove to be significant competitors, particularly as they develop novel approaches to treating disease indications that our product candidates are also focused on treating. Established pharmaceutical companies may also invest heavily to accelerate discovery and development of novel therapeutics or to in-license novel therapeutics that could make the product candidates that we develop obsolete. Mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even more resources being concentrated in our competitors. Competition may increase further as a result of advances in the commercial applicability of technologies and greater availability of capital for investment in these industries. Our

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competitors, either alone or with collaborative partners, may succeed in developing, acquiring or licensing on an exclusive basis drug or biologic products that are more effective, safer, more easily commercialized or less costly than our product candidates or may develop proprietary technologies or secure patent protection that we may need for the development of our technologies and products. We believe the key competitive factors that will affect the development and commercial success of our product candidates are efficacy, safety, tolerability, reliability, convenience of use, price and reimbursement.

We face competition from segments of the pharmaceutical, biotechnology and other related markets that pursue the development of precision oncology therapies for patients with genetically-defined cancers. Several biopharmaceutical companies, including Loxo Oncology, Inc. (recently acquired by Eli Lilly and Company), Blueprint Medicines Corporation, Agios Pharmaceuticals, Inc., SpringWorks Therapeutics, Inc., Black Diamond Therapeutics, Inc., Deciphera Pharmaceuticals, Inc. and Turning Point Therapeutics, Inc., are developing precision oncology medicines. In addition, we may face competition from companies developing product candidates that are based on SL, including AstraZeneca, GlaxoSmithKline, Pfizer, Bayer, Merck Serono, Artios Pharma Ltd. and IDEAYA Biosciences, Inc.

We anticipate that we will continue to face intense and increasing competition as new treatments enter the market and advanced technologies become available. There can be no assurance that our competitors are not currently developing, or will not in the future develop, products that are equally or more effective or are more economically attractive than any of our current or future product candidates. Competing products may gain faster or greater market acceptance than our products, if any, and medical advances or rapid technological development by competitors may result in our product candidates becoming non-competitive or obsolete before we are able to recover our research and development and commercialization expenses. If we or our product candidates do not compete effectively, it may have a material adverse effect on our business, financial condition and results of operations.

If we obtain approval to commercialize any products outside of the United States, a variety of risks associated with international operations could adversely affect our business.

If any of our product candidates are approved for commercialization, we may seek to enter into agreements with third parties to market them in certain jurisdictions outside the United States. We expect that we would be subject to additional risks related to international pharmaceutical operations, including:

- different regulatory requirements for drug approvals and rules governing drug commercialization in foreign countries;
- reduced protection for intellectual property rights;
- foreign reimbursement, pricing and insurance regimes;
- unexpected changes in tariffs, trade barriers and regulatory requirements;
- economic weakness, including inflation, or political instability in particular foreign economies and markets;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenues, and other obligations incident to doing business in another country;
- business interruptions resulting from geopolitical actions, including war and terrorism, natural disasters including earthquakes, typhoons, floods and fires, or from economic or political instability, or public health emergencies, such as the novel COVID-19 coronavirus and related shelter-in-place orders, travel, social distancing and quarantine policies, boycotts, curtailment of trade and other business restrictions;
- greater difficulty with enforcing our contracts;

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- potential noncompliance with the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act 2010 and similar anti-bribery and anticorruption laws in other jurisdictions; and
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad.

As an organization, we have no prior experience in these areas. In addition, there are complex regulatory, tax, labor and other legal requirements imposed by individual countries in Europe with which we may need to comply. If we are unable to successfully manage the challenges of international expansion and operations, our business and operating results could be harmed.

Coverage and adequate reimbursement may not be available for RP-3500 or any future product candidates, which could make it difficult for us to sell profitably or at all, if approved.

Market acceptance and sales of any product candidates that we commercialize, if approved, will depend in part on the extent to which reimbursement for these drugs and related treatments will be available from third-party payors, including government health administration authorities, managed care organizations and other private health insurers. Third-party payors decide which therapies they will pay for and establish reimbursement levels. Reimbursement by a third-party payor may depend upon a number of factors, including, but not limited to, the third-party payor's determination that use of a product is:

- a covered benefit under its health plan;
- safe, effective and medically necessary;
- appropriate for the specific patient;
- cost-effective; and
- neither experimental nor investigational.

While no uniform policy for coverage and reimbursement exists in the United States, third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own coverage and reimbursement policies. However, decisions regarding the extent of coverage and amount of reimbursement to be provided for any product candidates that we develop will be made on a payor-by-payor basis. Therefore, one payor's determination to provide coverage for a drug does not assure that other payors will also provide coverage, and adequate reimbursement, for the drug. Additionally, a third-party payor's decision to provide coverage for a therapy does not imply that an adequate reimbursement rate will be approved. Each payor determines whether or not it will provide coverage for a therapy, what amount it will pay the manufacturer for the therapy, and on what tier of its formulary it will be placed. The position on a payor's list of covered drugs, or formulary, generally determines the co-payment that a patient will need to make to obtain the therapy and can strongly influence the adoption of such therapy by patients and physicians. Patients who are prescribed treatments for their conditions and providers prescribing such services generally rely on third-party payors to reimburse all or part of the associated healthcare costs. Patients are unlikely to use our products unless coverage is provided and reimbursement is adequate to cover a significant portion of the cost of our products.

Third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. We cannot be sure that coverage and reimbursement will be available for any drug that we commercialize and, if reimbursement is available, what the level of reimbursement will be. Inadequate coverage and reimbursement may impact the demand for, or the price of, any drug for which we obtain marketing approval. Additionally, we or our collaborators may develop companion diagnostic tests for use with our product candidates. Companion diagnostic tests require coverage and reimbursement separate and apart from the coverage and reimbursement for their companion pharmaceutical or biological products. Similar challenges to obtaining coverage and reimbursement, applicable to pharmaceutical products, will apply to companion diagnostics. If coverage and adequate reimbursement are not available, or are available only to limited levels, we may not be able to successfully commercialize RP-3500 or any future product candidates that we develop.

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Even if we are successful in obtaining regulatory approval, commercial success of any approved products will also depend in large part on the availability of insurance coverage and adequate reimbursement from third-party payors, including government payors, such as the Medicare and Medicaid programs, and managed care organizations, which may be affected by existing and future healthcare reform measures designed to reduce the cost of healthcare. Third-party payors could require us to conduct additional studies, including post-marketing studies related to the cost-effectiveness of a product, to qualify for reimbursement, which could be costly and divert our resources. If government and other healthcare payors were not to provide adequate insurance coverage and reimbursement levels for one any of our products once approved, market acceptance and commercial success would be limited.

We may become exposed to costly and damaging liability claims, either when testing our product candidates in the clinic or at the commercial stage, and our product liability insurance may not cover all damages from such claims.

We are exposed to potential product liability and professional indemnity risks that are inherent in the research, development, manufacturing, marketing and use of biopharmaceutical products. Currently, we have no products that have been approved for commercial sale; however, the current and future use of product candidates by us and our collaborators in clinical trials, and the potential sale of any approved products in the future, may expose us to liability claims. These claims might be made by patients who use the product, healthcare providers, pharmaceutical companies, our collaborators or others selling such products. Any claims against us, regardless of their merit, could be difficult and costly to defend and could materially adversely affect the market for our product candidates or any prospects for commercialization of our product candidates. Although the clinical trial process is designed to identify and assess potential side effects, it is always possible that a product, even after regulatory approval, may exhibit unforeseen side effects. If any of our product candidates were to cause adverse side effects during clinical trials or after approval of the product candidate, we may be exposed to substantial liabilities. Physicians and patients may not comply with any warnings that identify known potential adverse effects and patients who should not use our product candidates. Regardless of the merits or eventual outcome, liability claims may result in:

- decreased demand for our products due to negative public perception;
- injury to our reputation;
- withdrawal of clinical trial participants or difficulties in recruiting new trial participants;
- initiation of investigations by regulators;
- costs to defend or settle the related litigation;
- a diversion of management's time and our resources;
- substantial monetary awards to trial participants or patients;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenues from product sales; and
- the inability to commercialize any of our product candidates, if approved.

Although we believe we maintain adequate product liability insurance for our product candidates, it is possible that our liabilities could exceed our insurance coverage. We intend to expand our insurance coverage to include the sale of commercial products if we obtain marketing approval for any of our product candidates. However, we may not be able to maintain insurance coverage at a reasonable cost or obtain insurance coverage that will be adequate to satisfy any liability that may arise. If a successful product liability claim or series of claims is brought against us for uninsured liabilities or in excess of insured liabilities, our assets may not be sufficient to cover such claims and our business operations could be impaired.

Should any of the events described above occur, this could have a material adverse effect on our business, financial condition and results of operations.

Risks Related to Regulatory Matters

Even if we obtain FDA approval for any of our product candidates in the United States, we may never obtain approval for or commercialize any of them in any other jurisdiction, which would limit our ability to realize their full market potential.

In order to market any products in any particular jurisdiction, we must establish and comply with numerous and varying regulatory requirements on a country-by-country basis regarding safety and efficacy.

Approval by the FDA in the United States does not ensure approval by regulatory authorities in other countries or jurisdictions. However, the failure to obtain approval in one jurisdiction may negatively impact our ability to obtain approval elsewhere. In addition, clinical trials conducted in one country may not be accepted by regulatory authorities in other countries, and regulatory approval in one country does not guarantee regulatory approval in any other country.

Approval processes vary among countries and can involve additional product testing and validation and additional administrative review periods. Seeking foreign regulatory approval could result in difficulties and increased costs for us and require additional preclinical studies or clinical trials which could be costly and time consuming. Regulatory requirements can vary widely from country to country and could delay or prevent the introduction of our products in those countries. We do not have any product candidates approved for sale in any jurisdiction, including in international markets, and we do not have experience in obtaining regulatory approval in international markets. If we fail to comply with regulatory requirements in international markets or to obtain and maintain required approvals, or if regulatory approvals in international markets are delayed, our target market will be reduced and our ability to realize the full market potential of any product we develop will be unrealized.

Even if we receive regulatory approval of any product candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense, and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our product candidates.

If any of our product candidates are approved, they will be subject to ongoing regulatory requirements for manufacturing, labeling, packaging, storage, advertising, promotion, sampling, record-keeping, conduct of post-marketing studies and submission of safety, efficacy and other post-market information, including both federal and state requirements in the United States and requirements of comparable foreign regulatory authorities. In addition, we will be subject to continued compliance with cGMP and GCP requirements for any clinical trials that we conduct post-approval.

Manufacturers and manufacturers' facilities are required to comply with extensive FDA and comparable foreign regulatory authority requirements, including ensuring that quality control and manufacturing procedures conform to cGMP regulations. As such, we and our contract manufacturers will be subject to continual review and inspections to assess compliance with cGMP and adherence to commitments made in any NDA, other marketing application, and previous responses to inspection observations. Accordingly, we and others with whom we work must continue to expend time, money, and effort in all areas of regulatory compliance, including manufacturing, production and quality control.

Any regulatory approvals that we receive for our product candidates may be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including Phase 4 clinical trials and surveillance to

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monitor the safety and efficacy of the product candidate. The FDA may also require a REMS program as a condition of approval of our product candidates, which could entail requirements for long-term patient follow-up, a medication guide, physician communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. Comparable foreign regulatory authorities may also have programs similar to REMS. In addition, if the FDA or a comparable foreign regulatory authority approves our product candidates, we will have to comply with requirements including submissions of safety and other post-marketing information and reports and registration.

The FDA may impose consent decrees or withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with our product candidates, including adverse events of unanticipated severity or frequency, or with our third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical trials to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of our products, withdrawal of the product from the market or voluntary or mandatory product recalls;
- fines, warning letters or holds on clinical trials;
- refusal by the FDA to approve pending applications or supplements to approved applications filed by us or suspension or revocation of license approvals;
- product seizure or detention or refusal to permit the import or export of our product candidates; and
- injunctions or the imposition of civil or criminal penalties.

The FDA strictly regulates marketing, labeling, advertising, and promotion of products that are placed on the market. Products may be promoted only for the approved indications and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses and a company that is found to have improperly promoted off-label uses may be subject to significant liability. However, physicians may, in their independent medical judgment, prescribe legally available products for off-label uses. The FDA does not regulate the behavior of physicians in their choice of treatments but the FDA does restrict manufacturer's communications on the subject of off-label use of their products. The policies of the FDA and of comparable foreign regulatory authorities may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability.

Our relationships with customers, physicians, and third-party payors are subject, directly or indirectly, to federal and state healthcare fraud and abuse laws, false claims laws, health information privacy and security laws, and other healthcare laws and regulations. If we are unable to comply, or have not fully complied, with such laws, we could face substantial penalties.

Healthcare providers, physicians and third-party payors in the United States and elsewhere will play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our current and future arrangements with healthcare professionals, principal investigators, consultants, customers and third-party payors subject us to various federal and state fraud and abuse laws and other healthcare

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laws that may constrain the business or financial arrangements and relationships through which we research, sell, market, and distribute our product candidates, if we obtain marketing approval. Such laws include:

- the U.S. federal Anti-Kickback Statute, which prohibits, among other things, persons or entities from knowingly and willfully soliciting, offering, receiving or providing any remuneration (including any kickback, bribe, or certain rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, lease, order or recommendation of, any good, facility, item or service, for which payment may be made, in whole or in part, under U.S. federal and state healthcare programs such as Medicare and Medicaid. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- the U.S. federal civil and criminal false claims laws, including the civil False Claims Act, which can be enforced by private individuals on behalf of the government through civil whistleblower or qui tam actions, and civil monetary penalties laws prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, to the U.S. federal government, claims for payment or approval that are false or fraudulent, knowingly making, using or causing to be made or used, a false record or statement material to a false or fraudulent claim, or from knowingly making a false statement to avoid, decrease or conceal an obligation to pay money to the U.S. federal government. Manufacturers can be held liable under the False Claims Act even when they do not submit claims directly to government payors if they are deemed to “cause” the submission of false or fraudulent claims. In addition, the government may assert that a claim including items and services resulting from a violation of the U.S. federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act;
- the U.S. federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created additional federal civil and criminal liability for, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement, in connection with the delivery of, or payment for, healthcare benefits, items or services. Similar to the U.S. federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their implementing regulations, which impose certain obligations, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information without appropriate authorization by covered entities subject to the rule, such as health plans, healthcare clearinghouses and certain healthcare providers as well as their business associates, independent contractors of a covered entity that perform certain services involving the use or disclosure of individually identifiable health information. HITECH also created new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys’ fees and costs associated with pursuing federal civil actions;
- the Federal Food, Drug, and Cosmetic Act, which prohibits, among other things, the adulteration or misbranding of drugs, biologics and medical devices;
- the U.S. Public Health Service Act, which prohibits, among other things, the introduction into interstate commerce of a biological product unless a biologics license is in effect for that product;
- the U.S. Physician Payments Sunshine Act and its implementing regulations, which require certain manufacturers of drugs, devices, biologics and medical supplies that are reimbursable under Medicare, Medicaid, or the Children’s Health Insurance Program, with specific exceptions, to report annually to the Centers for Medicare & Medicaid Services, or CMS, information related to certain payments and

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other transfers of value to physicians (currently defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. Effective January 1, 2022, these reporting obligations will extend to include transfers of value made, as well as ownership and investment interests held, during the previous year to certain non-physician providers such as physician assistants and nurse practitioners;

- analogous U.S. state laws and regulations, including: state anti-kickback and false claims laws, which may apply to our business practices, including but not limited to, research, distribution, sales and marketing arrangements and claims involving healthcare items or services reimbursed by any third-party payor, including private insurers; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the U.S. federal government, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state laws and regulations that require drug manufacturers to file reports relating to drug pricing and marketing information, which requires tracking gifts and other remuneration and items of value provided to healthcare professionals and entities; state and local laws that require the registration of pharmaceutical sales representatives; and state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts; and
- analogous laws in other jurisdictions including, but not limited to, laws relating to interactions with government officials, privacy laws, transparency laws, laws relating to reimbursement, competition, consumer protection laws, laws relating to the marketing of health products and other healthcare-related laws.

In addition, we are also subject to federal and state consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm customers.

Ensuring that our business arrangements with third parties comply with applicable healthcare laws and regulations will likely be costly. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from participating in government funded healthcare programs, such as Medicare and Medicaid, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, contractual damages, reputational harm and the curtailment or restructuring of our operations.

If the physicians or other providers or entities with whom we expect to do business are found not to be in compliance with applicable laws, they may be subject to significant criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs. Even if resolved in our favor, litigation or other legal proceedings relating to healthcare laws and regulations may cause us to incur significant expenses and could distract our technical and management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common shares. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development, manufacturing, sales, marketing or distribution activities. Uncertainties resulting from the initiation and continuation of litigation or other proceedings relating to applicable healthcare laws and regulations could have a material adverse effect on our ability to compete in the marketplace.

Enacted and future healthcare legislation may increase the difficulty and cost for us to progress our clinical programs and obtain marketing approval of and commercialize our product candidates and may affect the prices we may set.

In the United States and other jurisdictions, there have been, and we expect there will continue to be, a number of legislative and regulatory changes and proposed changes to the healthcare system that could affect our future results of operations. In particular, there have been and continue to be a number of initiatives at the U.S. federal and state levels that seek to reduce healthcare costs and improve the quality of healthcare. For example, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively the ACA, was enacted, which substantially changed the way healthcare is financed by both governmental and private insurers. Among the provisions of the ACA, those of greatest importance to the pharmaceutical and biotechnology industries include the following:

- an annual, non-deductible fee payable by any entity that manufactures or imports certain branded prescription drugs and biologic agents (other than those designated as orphan drugs), which is apportioned among these entities according to their market share in certain government healthcare programs;
- a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to certain individuals with income at or below 133% of the federal poverty level, thereby potentially increasing a manufacturer's Medicaid rebate liability;
- a licensure framework for follow on biologic products;
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research; and
- establishment of a Center for Medicare & Medicaid Innovation at CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending.

There remain judicial, Congressional and executive branch challenges to certain aspects of the ACA, and we expect there will be additional challenges and amendments to the ACA in the future. While Congress has not passed comprehensive repeal legislation, it has enacted laws that modify certain provisions of the ACA such as removing penalties, starting January 1, 2019, for not complying with the ACA's individual mandate to carry health insurance and increasing the point-of-sale discount that is owed by pharmaceutical manufacturers who participate in Medicare Part D. Further, the 2020 federal spending package permanently eliminated, effective January 1, 2020, the ACA-mandated "Cadillac" tax on high-cost employer-sponsored health coverage and medical device tax and, effective January 1, 2021, also eliminates the health insurer tax. On December 14, 2018, a U.S. District Court Judge in Texas ruled that the ACA is unconstitutional in its entirety because the "individual mandate" was repealed by Congress as part of the legislation enacted in 2017, informally titled the Tax Cuts and Jobs Act, or the Tax Act. Additionally, on December 18, 2019, the U.S. Court of Appeals for the 5th Circuit ruled that the individual mandate was unconstitutional and remanded the case back to the District Court to determine whether the remaining provisions of the ACA are invalid as well. On March 2, 2020, the United States Supreme Court granted the petitions for writs of certiorari to review this case and has allotted one hour for oral arguments. It is unclear when such oral arguments are to be held and when a decision is expected to be made. It is also unclear how such litigation and other efforts to repeal and replace the ACA will impact the ACA and our business.

In addition, other legislative changes have been proposed and adopted in the United States since the ACA was enacted. In August 2011, the Budget Control Act of 2011, among other things, led to aggregate reductions of Medicare payments to providers of 2% per fiscal year. These reductions went into effect in April 2013 and, due to subsequent legislative amendments to the statute will remain in effect through 2029 unless additional action is

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taken by Congress. These Medicare sequester reductions will be suspended from May 1, 2020 through December 31, 2020 due to the COVID-19 pandemic. In January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These new laws or any other similar laws introduced in the future may result in additional reductions in Medicare and other health care funding, which could negatively affect our customers and accordingly, our financial operations.

Moreover, payment methodologies may be subject to changes in healthcare legislation and regulatory initiatives. For example, CMS may develop new payment and delivery models, such as bundled payment models. In addition, recently there has been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several U.S. Congressional inquiries and proposed and enacted federal legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, and review the relationship between pricing and manufacturer patient programs. The Trump administration's budget proposal for fiscal year 2021 includes a \$135 billion allowance to support legislative proposals seeking to reduce drug prices, increase competition, lower out-of-pocket drug costs for patients, and increase patient access to lower-cost generic and biosimilar drugs. On March 10, 2020, the Trump administration sent "principles" for drug pricing to Congress, calling for legislation that would, among other things, cap Medicare Part D beneficiary out-of-pocket pharmacy expenses, provide an option to cap Medicare Part D beneficiary monthly out-of-pocket expenses, and place limits on pharmaceutical price increases. On May 11, 2018, President Trump laid out his administration's "Blueprint" to lower drug prices and reduce out-of-pocket costs of prescription drugs that contained proposals to increase manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products and reduce the out of pocket costs of drug products paid by consumers. The Department of Health and Human Services, or HHS, has solicited feedback on some of these measures and has implemented others under its existing authority. For example, in May 2019, CMS issued a final rule to allow Medicare Advantage plans the option to use step therapy for Part B drugs beginning January 1, 2020. This final rule codified CMS's policy change that was effective January 1, 2019. Although some of these and other measures may require additional authorization through to become effective, Congress and the Trump administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs. We expect that additional U.S. federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that the U.S. federal government will pay for healthcare products and services, which could result in reduced demand for our product candidates or additional pricing pressures.

On May 30, 2018, the Right to Try Act was signed into law. The law, among other things, provides a federal framework for certain patients to access certain investigational new drug products that have completed a Phase 1 clinical trial and that are undergoing investigation for FDA approval. Under certain circumstances, eligible patients can seek treatment without enrolling in clinical trials and without obtaining FDA permission under the FDA expanded access program. There is no obligation for a drug manufacturer to make its drug products available to eligible patients as a result of the Right to Try Act, but the manufacturer must develop an internal policy and respond to patient requests according to that policy.

Individual states in the United States have also increasingly passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. Legally mandated price controls on payment amounts by third-party payors or other restrictions could harm our business, results of operations, financial condition and prospects. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other healthcare programs. This could reduce the ultimate demand for our product candidates or put pressure on our product pricing.

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In markets outside of the United States, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies. The price control regulations outside of the United States can have a significant impact on the profitability of a given market, and further uncertainty is introduced if and when these laws change. For example, in Canada, price control legislation for patented medicines is currently undergoing significant change that may have significant effects on profitability in Canada.

We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action in the United States or any other jurisdiction. It is possible that additional governmental action is taken to address the COVID-19 pandemic. If we or any third parties we may engage are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we or such third parties are not able to maintain regulatory compliance, our product candidates may lose any regulatory approval that may have been obtained and we may not achieve or sustain profitability.

We may face potential liability if we obtain identifiable patient health information from clinical trials sponsored by us.

Most healthcare providers, including certain research institutions from which we may obtain patient health information, are subject to privacy and security regulations promulgated under HIPAA, as amended by the HITECH. We are not currently classified as a covered entity or business associate under HIPAA and thus are not directly subject to its requirements or penalties. However, any person may be prosecuted under HIPAA's criminal provisions either directly or under aiding-and-abetting or conspiracy principles. Consequently, depending on the facts and circumstances, we could face substantial criminal penalties if we knowingly receive individually identifiable health information from a HIPAA-covered healthcare provider or research institution that has not satisfied HIPAA's requirements for disclosure of individually identifiable health information. In addition, in the future, we may maintain sensitive personally identifiable information, including health information, that we receive throughout the clinical trial process, in the course of our research collaborations, and directly from individuals (or their healthcare providers) who may enroll in patient assistance programs if we choose to implement such programs. As such, we may be subject to state laws requiring notification of affected individuals and state regulators in the event of a breach of personal information, which is a broader class of information than the health information protected by HIPAA.

The EU General Data Protection Regulation, or GDPR, also confers a private right of action on data subjects and consumer associations to lodge complaints with supervisory authorities, seek judicial remedies, and obtain compensation for damages resulting from violations of the GDPR. In addition, the GDPR includes restrictions on cross-border data transfers. The GDPR may increase our responsibility and liability in relation to personal data that we process where such processing is subject to the GDPR, and we may be required to put in place additional mechanisms to ensure compliance with the GDPR, including as implemented by individual countries. Compliance with the GDPR will be a rigorous and time-intensive process that may increase our cost of doing business or require us to change our business practices, and despite those efforts, there is a risk that we may be subject to fines and penalties, litigation, and reputational harm in connection with our European activities. Further, the United Kingdom's decision to leave the European Union, referred to as Brexit, has created uncertainty with regard to data protection regulation in the United Kingdom. In particular, it is unclear how data transfers to and from the United Kingdom will be regulated now that the United Kingdom has left the European Union.

Furthermore, certain health privacy laws, data breach notification laws, consumer protection laws and genetic testing laws may apply directly to our operations and/or those of our collaborators and may impose restrictions on our collection, use and dissemination of individuals' health information. Patients about whom we or our collaborators may obtain health information, as well as the providers who may share this information with us, may have statutory or contractual rights that limit our ability to use and disclose the information. We may be required to expend significant capital and other resources to ensure ongoing compliance with applicable privacy

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and data security laws. Claims that we have violated individuals' privacy rights or breached our contractual obligations, even if we are not found liable, could be expensive and time-consuming to defend and could result in adverse publicity that could harm our business.

If we or third-party CMOs, CROs or other contractors or consultants fail to comply with applicable federal, state/provincial or local regulatory requirements, we could be subject to a range of regulatory actions that could affect our or our contractors' ability to develop and commercialize our therapeutic candidates and could harm or prevent sales of any affected therapeutics that we are able to commercialize, or could substantially increase the costs and expenses of developing, commercializing and marketing our therapeutics. Any threatened or actual government enforcement action could also generate adverse publicity and require that we devote substantial resources that could otherwise be used in other aspects of our business. Increasing use of social media could give rise to liability, breaches of data security or reputational damage.

Additionally, we are subject to state and foreign equivalents of each of the healthcare laws described above, among others, some of which may be broader in scope and may apply regardless of the payor.

If we or our third-party manufacturers and suppliers fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could have a material adverse effect on the success of our business.

We are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our research and development activities involve the use of biological and hazardous materials and produce hazardous waste products. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials, which could cause an interruption of our commercialization efforts, research and development efforts and business operations, environmental damage resulting in costly clean-up and liabilities under applicable laws and regulations governing the use, storage, handling and disposal of these materials and specified waste products. Although we believe that the safety procedures utilized by our third-party manufacturers for handling and disposing of these materials generally comply with the standards prescribed by these laws and regulations, we cannot guarantee that this is the case or eliminate the risk of accidental contamination or injury from these materials. In such an event, we may be held liable for any resulting damages and such liability could exceed our resources and state or federal or other applicable authorities may curtail our use of certain materials and/or interrupt our business operations. Furthermore, environmental laws and regulations are complex, change frequently and have tended to become more stringent. We cannot predict the impact of such changes and cannot be certain of our future compliance. In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. Failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials or other work-related injuries, this insurance may not provide adequate coverage against potential liabilities. We do not carry specific biological waste or hazardous waste insurance coverage, workers compensation or property and casualty and general liability insurance policies that include coverage for damages and fines arising from biological or hazardous waste exposure or contamination.

We are subject to U.S. and certain foreign export and import controls, sanctions, embargoes, anti-corruption laws, and anti-money laundering laws and regulations. Compliance with these legal standards could impair our ability to compete in domestic and international markets. We can face criminal liability and other serious consequences for violations, which can harm our business.

We are subject to export control and import laws and regulations, including the U.S. Export Administration Regulations, U.S. Customs regulations, various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Controls, the U.S. Foreign Corrupt Practices Act of 1977, as amended, or FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, and other state and national anti-bribery and anti-money laundering laws in the countries in which we conduct activities. Anti-corruption laws are interpreted broadly and prohibit companies and their employees, agents, contractors, and other collaborators from authorizing, promising, offering, or providing, directly or indirectly, improper payments or anything else of value to recipients in the public or private sector. We may engage third parties for clinical trials outside of the United States, to sell our products abroad once we enter a commercialization phase, and/or to obtain necessary permits, licenses, patent registrations, and other regulatory approvals. We may also have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities, and other organizations. We can be held liable for the corrupt or other illegal activities of our employees, agents, contractors, and other collaborators, even if we do not explicitly authorize or have actual knowledge of such activities. Any violations of the laws and regulations described above may result in substantial civil and criminal fines and penalties, imprisonment, the loss of export or import privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm, and other consequences.

Risks Related to Our Dependence on Third Parties

We rely, and expect to continue to rely, on third parties, including independent clinical investigators, contracted laboratories and CROs, to conduct our preclinical studies and clinical trials. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may not be able to obtain regulatory approval for or commercialize our product candidates and our business could be substantially harmed.

We have relied upon and plan to continue to rely upon third parties, including independent clinical investigators, contracted laboratories and third-party CROs, to conduct our preclinical studies and clinical trials in accordance with applicable regulatory requirements and to monitor and manage data for our ongoing preclinical and clinical programs. We rely on these parties for execution of our preclinical studies and clinical trials, and control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our studies and trials is conducted in accordance with the applicable protocol, legal and regulatory requirements and scientific standards, and our reliance on these third parties does not relieve us of our regulatory responsibilities. We and our third party contractors and CROs are required to comply with good laboratory practices, or GLPs, as applicable, and GCP requirements, which are regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities for all of our products in clinical development. Regulatory authorities enforce these GLPs and GCPs through periodic inspections of laboratories conducting GLP studies, trial sponsors, principal investigators and trial sites. If we, our investigators or any of our CROs or contracted laboratories fail to comply with applicable GLPs and GCPs, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional preclinical studies or clinical trials before approving our marketing applications. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our preclinical studies or clinical trials comply with applicable GLP or GCP regulations. In addition, our clinical trials must be conducted with product, including biologic product, produced in compliance with applicable cGMP regulations. Our failure to comply with these regulations may require us to repeat preclinical studies or clinical trials, which would delay the regulatory approval process.

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Further, these laboratories, investigators and CROs are not our employees and we will not be able to control, other than by contract, the amount of resources, including time, which they devote to our product candidates and clinical trials. If independent laboratories, investigators or CROs fail to devote sufficient resources to the development of our product candidates, or if their performance is substandard, it may delay or compromise the prospects for approval and commercialization of any product candidates that we develop. In addition, the use of third-party service providers requires us to disclose our proprietary information to these parties, which could increase the risk that this information will be misappropriated.

Our CROs have the right to terminate their agreements with us in the event of an uncured material breach. In addition, some of our CROs have an ability to terminate their respective agreements with us if we make a general assignment for the benefit of our creditors or if we are liquidated.

If any of our relationships with these third-party laboratories, CROs or clinical investigators terminate, we may not be able to enter into arrangements with alternative laboratories, CROs or investigators or to do so in a timely manner or on commercially reasonable terms. If laboratories, CROs or clinical investigators do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our preclinical or clinical protocols, regulatory requirements or for other reasons, our preclinical or clinical trials may be extended, delayed or terminated and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates. As a result, our results of operations and the commercial prospects for our product candidates would be harmed, our costs could increase and our ability to generate revenues could be delayed.

Switching or adding additional laboratories or CROs (or investigators) involves additional cost and requires management time and focus. In addition, there is a natural transition period when a new laboratory or CRO commences work. As a result, delays occur, which can materially impact our ability to meet our desired clinical development timelines. Though we carefully manage our relationships with our contracted laboratories and CROs, there can be no assurance that we will not encounter similar challenges or delays in the future or that these delays or challenges will not have a material adverse impact on our business, financial condition and results of operations.

In addition, clinical investigators may serve as scientific advisors or consultants to us from time to time and may receive cash or equity compensation in connection with such services. If these relationships and any related compensation result in perceived or actual conflicts of interest, or the FDA concludes that the financial relationship may have affected the interpretation of the preclinical study or clinical trial, the integrity of the data generated at the applicable preclinical study or clinical trial site may be questioned and the utility of the preclinical study or clinical trial itself may be jeopardized, which could result in the delay or rejection by the FDA. Any such delay or rejection could prevent us from commercializing our clinical-stage product candidate or any future product candidates.

We rely on third parties to supply and manufacture our product candidates, and we expect to continue to rely on third parties to manufacture our products, if approved. The development of such product candidates and the commercialization of any products, if approved, could be stopped, delayed or made less profitable if any such third party fails to provide us with sufficient quantities of product candidates or products or fails to do so at acceptable quality levels or prices or fails to maintain or achieve satisfactory regulatory compliance.

We do not currently have the infrastructure or capability internally to manufacture all our product candidates for use in the conduct of our preclinical studies and clinical trials or for commercial supply, if our products are approved. We rely on, and expect to continue to rely on, contract manufacturing organizations, or CMOs. Any replacement of our CMOs could require significant effort and expertise because there may be a limited number of qualified CMOs. This could be particularly problematic where we rely on a single-source supplier, as is currently the case for the manufacture of RP-3500. Reliance on third-party providers may expose

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us to more risk than if we were to manufacture our product candidates ourselves. We are dependent on our CMOs for the production of our product candidates in accordance with relevant regulations, such as cGMP, which includes, among other things, quality control, quality assurance and the maintenance of records and documentation. Moreover, many of the third parties with whom we contract may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting product development activities that could harm our competitive position.

Our third-party manufacturers may be subject to damage or interruption from, among other things, fire, natural or man-made disaster, disease outbreaks or public health pandemics, power loss, telecommunications failure, unauthorized entry, computer viruses, denial-of-service attacks, acts of terrorism, human error, vandalism or sabotage, financial insolvency, bankruptcy and similar events. For example, in December 2019, COVID-19 was reported to have surfaced in Wuhan, China. The extent to which COVID-19 may impact our manufacturing and supply chain as well as our results will depend on future developments, which are highly uncertain and cannot be predicted, including new information which may emerge concerning the severity of COVID-19 and the actions to contain COVID-19 or treat its impact, among others.

If we were to experience an unexpected loss of supply of or if any supplier were unable to meet our demand for any of our product candidates, we could experience delays in our research or planned clinical trials or commercialization. We could be unable to find alternative suppliers of acceptable quality, in the appropriate volumes who could meet our timelines at an acceptable cost. Moreover, our suppliers are often subject to strict manufacturing requirements and rigorous testing requirements, which could limit or delay production. The long transition periods necessary to switch manufacturers and suppliers, if necessary, could significantly delay our preclinical studies, our clinical trials and the commercialization of our products, if approved, which could materially adversely affect our business, financial condition and results of operation.

In complying with the applicable manufacturing regulations of the FDA and comparable foreign regulatory authorities, we and our third-party suppliers must spend significant time, money and effort in the areas of design and development, testing, production, record-keeping and quality control to assure that the products meet applicable specifications and other regulatory requirements. The failure to comply with these requirements could result in an enforcement action against us, including the seizure of products and shutting down of production. We and any of these third-party suppliers may also be subject to audits by the FDA and comparable foreign regulatory authorities. If any of our third-party suppliers fails to comply with cGMP or other applicable manufacturing regulations, our ability to develop and commercialize the products could suffer significant interruptions. We face risks inherent in relying on CMOs, as any disruption, such as a fire, natural hazards, vandalism or an outbreak of contagious disease affecting the CMO or any supplier of the CMO could significantly interrupt our manufacturing capability. In case of a disruption, we will have to establish alternative manufacturing sources. This would require substantial capital on our part, which we may not be able to obtain on commercially acceptable terms or at all. Additionally, we would likely experience months of manufacturing delays as the CMO builds or locates replacement facilities and seeks and obtains necessary regulatory approvals. If this occurs, we will be unable to satisfy manufacturing needs on a timely basis, if at all.

Our current and future collaborations will be important to our business. If we are unable to enter into new collaborations, or if these collaborations are not successful, our business could be adversely affected.

A part of our strategy is to strategically evaluate and, as deemed appropriate, enter into partnerships in the future when strategically attractive, including potentially with major biotechnology or pharmaceutical companies. We have limited capabilities for product development and do not yet have any capability for commercialization. Accordingly, we may enter into collaborations with other companies to provide us with important technologies and funding for our programs and technology. If we fail to enter into or maintain collaborations on reasonable terms or at all, our ability to develop our existing or future research programs and product candidates could be delayed, the commercial potential of our product could change and our costs of development and commercialization could increase. Furthermore, we may find that our programs require the use

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of intellectual property rights held by third parties, and the growth of our business may depend in part on our ability to acquire or in-license these intellectual property rights.

For example, we are currently party to a collaboration agreement with Ono Pharmaceutical Co., or Ono, pursuant to which we and Ono have agreed to collaborate in the research of potential product candidates targeting Polq and the development of our small molecule Polq inhibitor program. This and any future collaborations we enter into may pose a number of risks, including, but not limited to, the following:

- collaborators have significant discretion in determining the efforts and resources that they will apply;
- collaborators may not perform their obligations as expected;
- collaborators may not pursue development and commercialization of any product candidates that achieve regulatory approval or may elect not to continue or renew development or commercialization programs or license arrangements based on clinical trial results, changes in the collaborators' strategic focus or available funding, or external factors, such as a strategic transaction that may divert resources or create competing priorities;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our products and product candidates if the collaborators believe that the competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- product candidates discovered in collaboration with us may be viewed by our collaborators as competitive with their own product candidates or products, which may cause collaborators to cease to devote resources to the commercialization of our product candidates;
- collaborators may fail to comply with applicable regulatory requirements regarding the development, manufacture, distribution or marketing of a product candidate or product;
- collaborators with marketing and distribution rights to one or more of our product candidates that achieve regulatory approval may not commit sufficient resources to the marketing and distribution of such product or products;
- disagreements with collaborators, including disagreements over proprietary rights, contract interpretation or the preferred course of development, might cause delays or terminations of the research, development or commercialization of product candidates, might lead to additional responsibilities for us with respect to product candidates, or might result in litigation or arbitration, any of which would be time-consuming and expensive;
- collaborators may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential litigation;
- collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability;
- if a collaborator of ours is involved in a business combination, the collaborator might deemphasize or terminate the development or commercialization of any product candidate licensed to it by us; and
- collaborations may be terminated by the collaborator, and, if terminated, we could be required to raise additional capital to pursue further development or commercialization of the applicable product candidates.

If our collaborations do not result in the successful discovery, development and commercialization of product candidates or if one of our collaborators terminates its agreement with us, we may not receive any future

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research funding or milestone or royalty payments under such collaboration. All of the risks relating to product development, regulatory approval and commercialization described in this prospectus also apply to the activities of our therapeutic collaborators.

Additionally, if one of our collaborators terminates its agreement with us, we may find it more difficult to attract new collaborators and our perception in the business and financial communities could be adversely affected.

We face significant competition in seeking appropriate collaborative partners. Our ability to reach a definitive agreement for a partnership will depend, among other things, upon an assessment of the collaborator's resources and expertise, the terms and conditions of the proposed partnership and the proposed collaborator's evaluation of a number of factors. These factors may include the design or results of preclinical studies or clinical trials, the likelihood of regulatory approval, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing products, the existence of any uncertainty with respect to our ownership of technology (which can exist if there is a challenge to such ownership regardless of the merits of the challenge) and industry and market conditions generally. The collaborator may also consider alternative product candidates or technologies for similar indications that may be available to collaborate on and whether such a partnership could be more attractive than the one with us.

We may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of the product candidate for which we are seeking to collaborate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization, reduce the scope of any sales or marketing activities or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we may not be able to further develop product candidates or bring them to market and generate product revenue.

Risks Related to Our Intellectual Property

Our success depends in part on our ability to protect our intellectual property. It is difficult and costly to protect our proprietary rights and technology, and we may not be able to ensure their protection.

Our commercial success will depend in large part on obtaining and maintaining patent, trademark and trade secret protection of our proprietary technologies and our product candidates, their respective components, formulations, combination therapies, methods used to manufacture them and methods of treatment, as well as successfully defending these patents against third-party challenges. Our ability to stop unauthorized third parties from making, using, selling, offering to sell or importing our product candidates is dependent upon the extent to which we have rights under valid and enforceable patents that cover these activities. If we are unable to secure and maintain patent protection for any product or technology we develop, or if the scope of the patent protection secured is not sufficiently broad, our competitors could develop and commercialize products and technology similar or identical to ours, and our ability to commercialize any product candidates we may develop may be adversely affected.

The patenting process is expensive and time-consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. In addition, we may not pursue or obtain patent protection in all relevant markets. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. Moreover, in some circumstances, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering technology that we license from or license to third parties and are reliant on our licensors or licensees.

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The strength of patents in the biotechnology and pharmaceutical field involves complex legal and scientific questions and can be uncertain. The patent applications that we own or in-license may fail to result in issued patents with claims that cover our product candidates or uses thereof in the United States or in other foreign countries. Even if the patents do successfully issue, third parties may challenge the validity, enforceability or scope thereof, which may result in such patents being narrowed, invalidated or held unenforceable. Furthermore, even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property or prevent others from designing around our claims. If the breadth or strength of protection provided by the patent applications we hold with respect to our product candidates is threatened, it could dissuade companies from collaborating with us to develop, and threaten our ability to commercialize, our product candidates. Further, if we encounter delays in our clinical trials, the period of time during which we could market our product candidates under patent protection would be reduced.

Since patent applications in the United States and most other countries are confidential for a period of time after filing, we cannot be certain that we were the first to file any patent application related to our product candidates. Furthermore, for United States applications in which all claims are entitled to a priority date before March 16, 2013, an interference proceeding can be provoked by a third-party or instituted by the United States patent office, or USPTO, to determine who was the first to invent any of the subject matter covered by the patent claims of our applications.

We cannot be certain that we are the first to invent the inventions covered by pending patent applications and, if we are not, we may be subject to priority disputes. We may be required to disclaim part or all of the term of certain patents or all of the term of certain patent applications. There may be prior art of which we are not aware that may affect the validity or enforceability of a patent claim. There also may be prior art of which we are aware, but which we do not believe affects the validity or enforceability of a claim, which may, nonetheless, ultimately be found to affect the validity or enforceability of a claim. No assurance can be given that if challenged, our patents would be declared by a court to be valid or enforceable or that even if found valid and enforceable, a competitor's technology or product would be found by a court to infringe our patents. We may analyze patents or patent applications of our competitors that we believe are relevant to our activities, and consider that we are free to operate in relation to our product candidates, but our competitors may achieve issued claims, including in patents we consider to be unrelated, which block our efforts or may potentially result in our product candidates or our activities infringing such claims. The possibility exists that others will develop products which have the same effect as our products on an independent basis which do not infringe our patents or other intellectual property rights, or will design around the claims of patents that we have had issued that cover our products.

Recent or future patent reform legislation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents. Under the enacted Leahy-Smith America Invents Act, or America Invents Act, enacted in 2013, the United States moved from a "first to invent" to a "first-to-file" system. Under a "first-to-file" system, assuming the other requirements for patentability are met, the first inventor to file a patent application generally will be entitled to a patent on the invention regardless of whether another inventor had made the invention earlier. The America Invents Act includes a number of other significant changes to U.S. patent law, including provisions that affect the way patent applications are prosecuted, redefine prior art and establish a new post-grant review system. The effects of these changes are currently unclear as the USPTO only recently developed new regulations and procedures in connection with the America Invents Act and many of the substantive changes to patent law, including the "first-to-file" provisions, only became effective in March 2013. In addition, the courts have yet to address many of these provisions and the applicability of the act and new regulations on specific patents discussed herein have not been determined and would need to be reviewed. However, the America Invents Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business and financial condition.

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The degree of future protection for our proprietary rights is uncertain because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. For example:

- others may be able to make or use compounds or cells that are similar to the biological compositions of our product candidates but that are not covered by the claims of our patents;
- the active biological ingredients in our current product candidates will eventually become commercially available in biosimilar drug products, and no patent protection may be available with regard to formulation or method of use;
- we or our licensors, as the case may be, may fail to meet our obligations to the U.S. government in regards to any in-licensed patents and patent applications funded by U.S. government grants, leading to the loss of patent rights;
- we or our licensors, as the case may be, might not have been the first to file patent applications for these inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies;
- it is possible that our pending patent applications will not result in issued patents;
- it is possible that there are prior public disclosures that could invalidate our or our licensors' patents, as the case may be, or parts of our or their patents;
- it is possible that others may circumvent our owned or in-licensed patents;
- it is possible that there are unpublished applications or patent applications maintained in secrecy that may later issue with claims covering our products or technology similar to ours;
- the laws of foreign countries may not protect our or our licensors', as the case may be, proprietary rights to the same extent as the laws of the United States;
- the claims of our owned or in-licensed issued patents or patent applications, if and when issued, may not cover our product candidates;
- our owned or in-licensed issued patents may not provide us with any competitive advantages, may be narrowed in scope, or be held invalid or unenforceable as a result of legal challenges by third parties;
- the inventors of our owned or in-licensed patents or patent applications may become involved with competitors, develop products or processes which design around our patents, or become hostile to us or the patents or patent applications on which they are named as inventors;
- it is possible that our owned or in-licensed patents or patent applications omit individual(s) that should be listed as inventor(s) or include individual(s) that should not be listed as inventor(s), which may cause these patents or patents issuing from these patent applications to be held invalid or unenforceable;
- we have engaged in scientific collaborations in the past, and will continue to do so in the future. Such collaborators may develop adjacent or competing products to ours that are outside the scope of our patents;
- we may not develop additional proprietary technologies for which we can obtain patent protection;
- it is possible that product candidates or diagnostic tests we develop may be covered by third parties' patents or other exclusive rights; or
- the patents of others may have an adverse effect on our business.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by government patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. In addition, periodic maintenance fees, renewal fees, annuity fees and various other government fees on patents and/or applications will have to be paid to the USPTO and various government patent agencies outside of the United States over the lifetime of our owned patents and/or applications and any patent rights we may own or license in the future. We rely on our outside counsel to pay these fees due to non-U.S. patent agencies. The USPTO and various non-U.S. government patent agencies require compliance with several procedural, documentary, fee payment and other similar provisions during the patent application process. We employ reputable law firms and other professionals to help us comply. Non-compliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If we fail to maintain the patents and patent applications covering our products or technologies, we may not be able to stop a competitor from marketing products that are the same as or similar to our product candidates, which would have a material adverse effect on our business. In many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. There are situations, however, in which non-compliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, potential competitors might be able to enter the market and this circumstance could harm our business.

We rely in part on trade secrets to protect our technology, and our failure to obtain or maintain trade secret protection could harm our business.

We rely on trade secrets to protect some of our technology and proprietary information, especially where we believe patent protection is not appropriate or obtainable as is the case for our SNIPRx platform. However, trade secrets are difficult to protect. Litigating a claim that a third party had illegally obtained and was using our trade secrets would be expensive and time consuming, and the outcome would be unpredictable. Moreover, if our competitors independently develop similar knowledge, methods and know-how, it will be difficult for us to enforce our rights and our business could be harmed.

Patent terms may be inadequate to protect our competitive position on our product candidates for an adequate amount of time.

Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. We expect to seek extensions of patent terms in the United States and, if available, in other countries where we are prosecuting patents. In the United States, the Drug Price Competition and Patent Term Restoration Act of 1984 permits a patent term extension of up to five years beyond the normal expiration of the patent, which is limited to the approved indication (or any additional indications approved during the period of extension). However, the applicable authorities, including the FDA and the USPTO in the United States, and any equivalent regulatory authority in other countries, may not agree with our assessment of whether such extensions are available, and may refuse to grant extensions to our patents, or may grant more limited extensions than we request. If this occurs, our competitors may be able to take advantage of our investment in development and clinical trials by referencing our clinical and preclinical data and launch their drug earlier than might otherwise be the case.

Patent term extensions in other countries may also be subject to certain procedural or administrative requirements including adherence to certain strict timelines. A failure to meet such requirements may result in a loss of the extension in those countries.

Intellectual property rights do not necessarily address all potential threats to our business.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations and may not adequately protect our business. The following examples are illustrative:

- others may be able to make compounds or formulations that are similar to our product candidates but that are not covered by the claims of any patents, should they issue, that we own or control;
- we or any strategic partners might not have been the first to make the inventions covered by the issued patents or pending patent applications that we own or control;
- we might not have been the first to file patent applications covering certain of our inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;
- it is possible that our pending patent applications will not lead to issued patents;
- issued patents that we own or control may not provide us with any competitive advantages, or may be held invalid or unenforceable as a result of legal challenges;
- our competitors might conduct research and development activities in the United States and other countries that provide a safe harbor from patent infringement claims for certain research and development activities, as well as in countries where we do not have patent rights and then use the information learned from such activities to develop competitive drugs for sale in our major commercial markets;
- we may not develop additional proprietary technologies that are patentable; and
- the patents of others may have an adverse effect on our business.

Should any of these events occur, they could have a material adverse effect on our business, financial condition, results of operations and prospects.

We may become involved in lawsuits to protect or enforce our patents or other intellectual property rights, which could be expensive, time consuming and unsuccessful.

Competitors may infringe our issued patents, future trademarks, copyrights or other intellectual property. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming and divert the time and attention of our management and scientific personnel. Any claims we assert against perceived infringers could provoke these parties to assert counterclaims against us alleging that we infringe their patents, trademarks, copyrights or other intellectual property. In addition, in a patent infringement proceeding, there is a risk that a court will decide that a patent of ours is invalid or unenforceable, in whole or in part, and that we do not have the right to stop the other party from using the invention at issue. There is also a risk that, even if the validity of such patents is upheld, the court will construe the patent's claims narrowly or decide that we do not have the right to stop the other party from using the invention at issue on the grounds that our patents do not cover the invention. An adverse outcome in a litigation or proceeding involving our patents could limit our ability to assert our patents against those parties or other competitors, and may curtail or preclude our ability to exclude third parties from making and selling similar or competitive products. Similarly, if we assert trademark infringement claims, a court may determine that the marks we have asserted are invalid or unenforceable, or that the party against whom we have asserted trademark infringement has superior rights to the marks in question. In this case, we could ultimately be forced to cease use of such trademarks.

In any infringement litigation, any award of monetary damages we receive may not be commercially valuable. Furthermore, because of the substantial amount of discovery required in connection with intellectual

property litigation, there is a risk that some of our confidential information could be compromised by disclosure during litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common shares. Moreover, there can be no assurance that we will have sufficient financial or other resources to file and pursue such infringement claims, which typically last for years before they are concluded. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. Even if we ultimately prevail in such claims, the monetary cost of such litigation and the diversion of the attention of our management and scientific personnel could outweigh any benefit we receive as a result of the proceedings. Accordingly, despite our efforts, we may not be able to prevent third parties from infringing, misappropriating or successfully challenging our intellectual property rights. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a negative impact on our ability to compete in the marketplace.

Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could have a negative impact on the success of our business.

Our commercial success depends, in part, upon our ability and the ability of future collaborators, if any, to develop, manufacture, market and sell our product candidates and use our proprietary technologies without infringing the proprietary rights and intellectual property of third parties. The biotechnology and pharmaceutical industries are characterized by extensive and complex litigation regarding patents and other intellectual property rights. We may in the future become party to, or be threatened with, adversarial proceedings or litigation regarding intellectual property rights with respect to our product candidates and technology, including interference proceedings, post grant review and inter partes review before the USPTO or equivalent foreign regulatory authority. Third parties may assert infringement claims against us based on existing patents or patents that may be granted in the future, regardless of their merit. There is a risk that third parties may choose to engage in litigation with us to enforce or to otherwise assert their patent rights against us. Even if we believe such claims are without merit, a court of competent jurisdiction could hold that these third-party patents are valid, enforceable and infringed, which could have a negative impact on our ability to commercialize our current and any future product candidates. In order to successfully challenge the validity of any such U.S. patent in federal court, we would need to overcome a presumption of validity. As this burden is a high one requiring us to present clear and convincing evidence as to the invalidity of any such U.S. patent claim, there is no assurance that a court of competent jurisdiction would invalidate the claims of any such U.S. patent. Foreign courts will have similar burdens to overcome in order to successfully challenge a third party claim of patent infringement. If we are found to infringe a third party's valid and enforceable intellectual property rights, we could be required to obtain a license from such third party to continue developing, manufacturing and marketing our product candidate(s) and technology. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors and other third parties access to the same technologies licensed to us, and it could require us to make substantial licensing and royalty payments. We could be forced, including by court order, to cease developing, manufacturing and commercializing the infringing technology or product candidate. In addition, we could be found liable for monetary damages, including treble damages and attorneys' fees, if we are found to have willfully infringed a patent or other intellectual property right. A finding of infringement could prevent us from manufacturing and commercializing our product candidates or force us to cease some or all of our business operations, which could materially harm our business. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on our business, financial condition, results of operations and prospects.

We may need to license intellectual property from third parties, and such licenses may not be available or may not be available on commercially reasonable terms.

A third party may hold intellectual property rights, including patent rights, that are important or necessary to the development of our product candidates. It may be necessary for us to use the patented or proprietary technology of third parties to commercialize our product candidates, in which case we would be required to obtain a license from these third parties. Such a license may not be available on commercially reasonable terms, or at all, and we could be forced to accept unfavorable contractual terms. If we are unable to obtain such licenses on commercially reasonable terms, our business could be harmed.

We depend on intellectual property licensed from a third party and termination of this license could result in the loss of significant rights, which would harm our business.

We are dependent on patents, know-how and proprietary technology, both our own and licensed from others. In particular, we are dependent on our license agreement with New York University. Any termination of this license could result in the loss of significant rights and could harm our ability to commercialize our product candidates. See “Business—License and Collaboration Agreements” for additional information.

Disputes may also arise between us and our current licensor or future licensors regarding intellectual property subject to a license agreement, including:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- whether and the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- our right to sublicense patent and other rights to third parties under collaborative development relationships;
- our diligence obligations with respect to the use of the licensed technology in relation to our development and commercialization of our product candidates, and what activities satisfy those diligence obligations; and
- the ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our partners.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current or future licensing arrangements on acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates.

We are generally also subject to all of the same risks with respect to protection of intellectual property that we license, as we are for intellectual property that we own, which are described below. If we, New York University or any future licensors fail to adequately protect any licensed intellectual property, our ability to commercialize products could suffer.

We may be subject to claims asserting that our employees, consultants or advisors have wrongfully used or disclosed alleged trade secrets of their current or former employers or claims asserting ownership of what we regard as our own intellectual property.

Many of our employees, consultants or advisors are currently, or were previously, employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we try to ensure that our employees, consultants and advisors do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that these individuals or we have used or disclosed intellectual property, including trade secrets or other proprietary information, of any such individual’s current or former employer. Litigation may be necessary to defend against these claims. If we fail in defending

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any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management.

In addition, we may in the future be subject to claims by our former employees or consultants asserting an ownership right in our patents or patent applications, as a result of the work they performed on our behalf. Although it is our policy to require our employees and contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who, in fact, conceives or develops intellectual property that we regard as our own, and we cannot be certain that our agreements with such parties will be upheld in the face of a potential challenge or that they will not be breached, for which we may not have an adequate remedy. The assignment of intellectual property rights may not be self-executing or the assignment agreements may be breached, and we may be forced to bring claims against third parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property.

Changes in U.S. patent law or the patent law of other countries or jurisdictions could diminish the value of patents in general, thereby impairing our ability to protect our future product candidates.

The United States has recently enacted and implemented wide ranging patent reform legislation. The U.S. Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on actions by the U.S. Congress, the federal courts, and the USPTO, the laws and regulations governing patents could change in unpredictable ways that could weaken our ability to obtain new patents or to enforce patents that we have licensed or that we might obtain in the future. Similarly, changes in patent law and regulations in other countries or jurisdictions, changes in the governmental bodies that enforce them or changes in how the relevant governmental authority enforces patent laws or regulations may weaken our ability to obtain new patents or to enforce patents that we have licensed or that we may obtain in the future.

We may not be able to protect our intellectual property rights throughout the world, which could negatively impact our business.

Filing, prosecuting and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States could be less extensive than those in the United States. In some cases, we may not be able to obtain patent protection for certain technology outside the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States, even in jurisdictions where we do pursue patent protection. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, even in jurisdictions where we do pursue patent protection or from selling or importing products made using our inventions in and into the United States or other jurisdictions.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, which could make it difficult for us to stop the infringement of our patents, if pursued and obtained, or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our

efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Reliance on third parties requires us to share our proprietary information, which increases the possibility that such information will be misappropriated or disclosed.

Because we rely on third parties to develop and manufacture our product candidates, or if we collaborate with third parties for the development or commercialization of our future product candidates, we must, at times, share proprietary information with them. We seek to protect our proprietary technology in part by entering into confidentiality agreements and, if applicable, material transfer agreements, consulting agreements or other similar agreements with our advisors, employees, third-party contractors and consultants prior to beginning research or disclosing proprietary information. These agreements typically limit the rights of the third parties to use or disclose our confidential information. Despite the contractual provisions employed when working with third parties, the need to share confidential information increases the risk that such information become known by our competitors, is inadvertently incorporated into the technology of others, or is disclosed or used in violation of these agreements. Given that our proprietary position is based, in part, on our know-how, a competitor's discovery of our know-how or other unauthorized use or disclosure could have an adverse effect on our business and results of operations.

In addition, these agreements typically restrict the ability of our advisors, employees, third-party contractors and consultants to publish data potentially relating to our know-how. Despite our efforts to protect our know-how, we may not be able to prevent the unauthorized disclosure or use of our technical know-how by the parties to these agreements. Moreover, we cannot guarantee that we have entered into such agreements with each party that may have or have had access to our confidential information or proprietary technology and processes. Monitoring unauthorized uses and disclosures is difficult, and we do not know whether the steps we have taken to protect our proprietary technologies will be effective. If any of the collaborators, scientific advisors, employees, contractors and consultants who are parties to these agreements breaches or violates the terms of any of these agreements, we may not have adequate remedies for any such breach or violation. Moreover, if confidential information that is licensed or disclosed to us by our partners, collaborators, or others is inadvertently disclosed or subject to a breach or violation, we may be exposed to liability to the owner of that confidential information. Enforcing a claim that a third-party illegally obtained and is using our proprietary information, like patent litigation, is expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States are sometimes less willing to protect proprietary information.

Any trademarks we may obtain may be infringed or successfully challenged, resulting in harm to our business.

We expect to rely on trademarks as one means to distinguish any of our product candidates that are approved for marketing from the products of our competitors. While we have registered a trademark for our SNIPRx platform, we have not yet selected trademarks for RP-3500 and have not yet begun the process of applying to register trademarks for RP-3500 or any other product candidate. Once we select trademarks and apply to register them, our trademark applications may not be approved. Third parties may oppose our trademark applications or otherwise challenge our use of the trademarks. In the event that our trademarks are successfully challenged, we could be forced to rebrand our products, which could result in loss of brand recognition and could require us to devote resources to advertising and marketing new brands. Our competitors may infringe our trademarks, and we may not have adequate resources to enforce our trademarks.

In addition, any proprietary name we propose to use with RP-3500 or any future product candidate in the United States must be approved by the FDA, regardless of whether we have registered it, or applied to register it, as a trademark. The FDA typically conducts a review of proposed product names, including an evaluation of the potential for confusion with other product names. If the FDA objects to any of our proposed proprietary product names, we may be required to expend significant additional resources in an effort to identify a suitable

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proprietary product name that would qualify under applicable trademark laws, not infringe the existing rights of third parties and be acceptable to the FDA. Comparable foreign regulators may have similar requirements, and it is possible that different proprietary or non-proprietary names may be required in different jurisdictions.

If we are unable to protect the confidentiality of our proprietary information, our business and competitive position would be harmed.

In addition to seeking patent and trademark protection for our product candidate, we also rely on unpatented know-how, technology and other proprietary information, to maintain our competitive position. We seek to protect our proprietary information, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, corporate collaborators, outside scientific collaborators, contract manufacturers, consultants, advisors and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information. Monitoring unauthorized uses and disclosures of our intellectual property is difficult, and we do not know whether the steps we have taken to protect our intellectual property will be effective. In addition, we may not be able to obtain adequate remedies for any such breaches. Enforcing a claim that a party illegally disclosed or misappropriated proprietary information is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the United States are less willing or unwilling to protect trade secrets.

Moreover, our competitors may independently develop knowledge, methods and know-how equivalent to our proprietary information. Competitors could purchase our products and replicate some or all of the competitive advantages we derive from our development efforts for technologies on which we do not have patent protection. If any of our proprietary information were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us. If any of our proprietary information were to be disclosed to or independently developed by a competitor, our competitive position would be harmed.

We also seek to preserve the integrity and confidentiality of our data and other confidential information by maintaining physical security of our premises and physical and electronic security of our information technology systems. While we have confidence in these individuals, organizations and systems, agreements or security measures may be breached and detecting the disclosure or misappropriation of confidential information and enforcing a claim that a party illegally disclosed or misappropriated confidential information is difficult, expensive and time-consuming, and the outcome is unpredictable. Further, we may not be able to obtain adequate remedies for any breach. In addition, our confidential information may otherwise become known or be independently discovered by competitors, in which case we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us.

If we do not obtain patent term extension for patents covering our product candidates, our business may be materially harmed, and in any case, the terms of our patents may not be sufficient to effectively protect our product candidates and business.

Patents have a limited term. In most countries, including the United States, the expiration of a patent is generally 20 years after its first effective non-provisional filing date. However, depending upon the timing, duration and specifics of FDA marketing approval of RP-3500, our other product candidates or any future product candidates, one or more of any U.S. patents we may be issued or have licensed may be eligible for limited patent term restoration under the Drug Price Competition and Patent Term Restoration Act of 1984, also known as the Hatch-Waxman Amendments.

The Hatch-Waxman Amendments permit a patent restoration term of up to five years as compensation for patent term lost during product development and the FDA regulatory review process. The Hatch-Waxman Act allows a maximum of one patent to be extended per FDA-approved product as compensation for the patent term

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lost during the FDA regulatory review process. A patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval and only those claims covering such approved drug product, a method for using it or a method for manufacturing it may be extended. Patent term extension may also be available in certain foreign countries upon regulatory approval of our product candidates. However, we may not be granted an extension because of, for example, failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents or otherwise failing to satisfy applicable requirements. Moreover, the applicable time period or the scope of patent protection afforded could be less than we request. If we are unable to obtain patent term extension or restoration or the term of any such extension is less than we request, our competitors may obtain approval of competing products following our patent expiration, and our competitive position, business, financial condition, results of operations, and prospects could be harmed, possibly materially.

If there are delays in obtaining regulatory approvals or other additional delays, the period of time during which we can market our product candidates under patent protection could be further reduced. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such product candidates might expire before or shortly after such product candidates are commercialized. Once the patent term has expired, we may be open to competition from similar or generic products. The launch of a generic version of one of our products in particular would be likely to result in an immediate and substantial reduction in the demand for that product, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

Risks Related to Our Business Operations, Employee Matters and Managing Growth

Our future success depends on our ability to retain key executives and to attract, retain and motivate qualified personnel.

We are highly dependent on our management team, including Lloyd Segal, our President and Chief Executive Officer, Michael Zinda, Ph.D., our Chief Scientific Officer, and Maria Koehler, M.D., Ph.D., our Chief Medical Officer. Each of them may currently terminate their employment with us at any time and will continue to be able to do so after the closing of this offering. The loss of the services of any of these persons could impede the achievement of our research, development and commercialization objectives. We do not currently maintain “key person” life insurance on the lives of our executives or any of our employees.

Recruiting and retaining qualified scientific and clinical personnel and, if we progress the development of any of our product candidates, commercialization, manufacturing and sales and marketing personnel, will be critical to our success. The loss of the services of our executive officers or other key employees could impede the achievement of our research, development and commercialization objectives and seriously harm our ability to successfully implement our business strategy. Furthermore, replacing executive officers and key employees may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to successfully develop, gain regulatory approval of and commercialize our product candidates. Competition to hire from this limited pool is intense, and we may be unable to hire, train, retain or motivate these key personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. If we are unable to continue to attract and retain high-quality personnel, our ability to pursue our growth strategy will be limited.

We expect to expand our organization, and we may experience difficulties in managing this growth, which could disrupt our operations.

As of December 31, 2019, we had 58 full-time employees, including 47 employees engaged in research and development. As our clinical development and commercialization plans and strategies develop, and as we

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transition into operating as a public company, we expect we will need additional managerial, operational, sales, marketing, financial, legal and other personnel. Future growth would impose significant added responsibilities on members of management, including:

- identifying, recruiting, integrating, maintaining and motivating additional employees;
- managing our development efforts effectively, including the planned Phase 1 clinical trial of RP-3500, while complying with our contractual obligations to contractors and other third parties; and
- improving our operational, financial and management controls, reporting systems and procedures.

Our future financial performance and our ability to commercialize our product candidates will depend, in part, on our ability to effectively manage any future growth, and our management may also have to divert a disproportionate amount of its attention away from day-to-day activities in order to devote a substantial amount of time to managing these growth activities.

We currently rely, and for the foreseeable future will continue to rely, in substantial part on certain independent organizations, advisors and consultants to provide certain services. The services include substantially all aspects of clinical trial management and manufacturing. We cannot assure you that the services of independent organizations, advisors and consultants will continue to be available to us on a timely basis when needed, or that we can find qualified replacements. In addition, if we are unable to effectively manage our outsourced activities or if the quality or accuracy of the services provided by consultants is compromised for any reason, our preclinical studies or clinical trials may be extended, delayed or terminated, and we may not be able to obtain marketing approval of our product candidates or otherwise advance our business. We cannot assure you that we will be able to manage our existing consultants or find other competent outside contractors and consultants on economically reasonable terms, or at all.

If we are not able to effectively expand our organization by hiring qualified new employees and expanding our groups of consultants and contractors, we may not be able to successfully implement the tasks necessary to further develop and commercialize our product candidates and, accordingly, may not achieve our research, development and commercialization goals.

Our internal computer systems, or those of our collaborators or other contractors or consultants, may fail or suffer security breaches, which could result in a significant disruption of our product development programs and our ability to operate our business effectively.

Our internal computer systems and those of our current and any future collaborators and other contractors or consultants are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. Cyber-attacks are increasing in their frequency, sophistication and intensity, and have become increasingly difficult to detect. Cyber-attacks could include the deployment of harmful malware, ransomware, denial-of-service attacks, social engineering and other means to affect service reliability and threaten the confidentiality, integrity and availability of information. Cyber-attacks also could include phishing attempts or e-mail fraud to cause payments or information to be transmitted to an unintended recipient.

While we have not experienced any significant system failure, accident or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a disruption of our development programs and our business operations, whether due to a loss of our trade secrets or other proprietary information or other similar disruptions. For example, the loss of clinical trial data from completed or future clinical trials by us or our CROs could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Additionally, any such event that leads to unauthorized access, use or disclosure of personal information, including personal information regarding our patients or employees, could harm our reputation, cause us not to comply with federal and/or state breach notification laws and foreign law equivalents

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and otherwise subject us to liability under laws and regulations that protect the privacy and security of personal information. Security breaches and other inappropriate access can be difficult to detect, and any delay in identifying them may lead to increased harm of the type described above. While we have implemented security measures to protect our information technology systems and infrastructure, such measures may not prevent service interruptions or security breaches that could adversely affect our business and to the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability, our competitive position could be harmed and the further development and commercialization of our product candidates could be delayed.

Business disruptions could seriously harm our future revenue and financial condition and increase our costs and expenses.

Our operations, and those of our CROs, CMOs and other contractors and consultants, could be subject to earthquakes, power shortages, telecommunications failures, water shortages, floods, hurricanes, typhoons, fires, extreme weather conditions, medical epidemics and other natural or man-made disasters or business interruptions, for which we are predominantly self-insured. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses. We rely on third-party manufacturers to produce our product candidates. Our ability to obtain clinical supplies of our product candidates could be disrupted if the operations of these suppliers are affected by a man-made or natural disaster or other business interruption.

Our international operations pose currency risks, which may adversely affect our operating results.

Our reporting and functional currency is the U.S. dollar. Assets and liabilities denominated in currencies other than the U.S. dollar are translated into U.S. dollars at exchange rates in effect at each balance sheet date. Income items and expenses are translated using the average exchange rate in effect for the relevant period.

Our operating results may be affected by volatility in currency exchange rates and our ability to manage effectively our currency transaction risks. Although we report, and will continue to report, our results in U.S. dollars, a portion our expenses are incurred in Canadian dollars as a result of our operations in Canada, as well as other currencies to a lesser extent. For example, we are also exposed to currency risk through our collaboration agreement with Ono as future payments receivable under our collaboration agreement, if any, are denominated in Japanese Yen.

In addition, we maintain a significant portion of our cash in Canadian dollar-denominated reserves. We do not currently manage our foreign currency exposure in a manner that would eliminate the effects of changes in foreign exchange rates. We do, however, keep expected Canadian dollar cash requirements in Canadian dollars to form a natural hedge. For example, we have not engaged in any active hedging techniques, and we have not employed any derivative instruments to date. Therefore, unfavorable fluctuations in the exchange rate between the Canadian dollar and U.S. dollar could have a negative impact on our business and financial results.

Failure to comply with health and data protection laws and regulations could lead to government enforcement actions, including civil or criminal penalties, private litigation, and adverse publicity and could negatively affect our operating results and business.

We and any current and future collaborators may be subject to federal, state/provincial, municipal and foreign data protection laws and regulations, such as laws and regulations that address privacy and data security. In the United States, numerous federal and state laws and regulations, including federal health information privacy laws, state data breach notification laws, state health information privacy laws, and federal and state consumer protection laws, including Section 5 of the Federal Trade Commission Act, that govern the collection, use, disclosure and protection of health-related and other personal information could apply to our operations or the operations of our collaborators. In addition, we may obtain health information from third parties, including

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research institutions from which we obtain clinical trial data, that are subject to privacy and security requirements under HIPAA, as amended by HITECH. Depending on the facts and circumstances, we could be subject to civil, criminal, and administrative penalties if we knowingly obtain, use, or disclose individually identifiable health information maintained by a HIPAA-covered entity in a manner that is not authorized or permitted by HIPAA.

Compliance with U.S. and international data protection laws and regulations could require us to take on more onerous obligations in our contracts, restrict our ability to collect, use and disclose data, or in some cases, impact our ability to operate in certain jurisdictions. Failure to comply with these laws and regulations could result in government enforcement actions (which could include civil, criminal and administrative penalties), private litigation, and/or adverse publicity and could negatively affect our operating results and business. Moreover, clinical trial subjects, employees and other individuals about whom we or our current or future collaborators obtain personal information, as well as the providers who share this information with us, may limit our ability to collect, use and disclose the information. Claims that we have violated individuals' privacy rights, failed to comply with data protection laws, or breached our contractual obligations, even if we are not found liable, could be expensive and time-consuming to defend and could result in adverse publicity that could harm our business.

Data collection is governed by restrictive regulations governing the use, processing and cross-border transfer of personal information.

In the event we decide to conduct clinical trials or continue to enroll subjects in our ongoing or future clinical trials, we may be subject to additional privacy restrictions. The collection, use, storage, disclosure, transfer, or other processing of personal data regarding individuals in the European Union, including personal health data, is subject to the GDPR, which became effective on May 25, 2018. The GDPR is wide-ranging in scope and imposes numerous requirements on companies that process personal data, including requirements relating to processing health and other sensitive data, obtaining consent of the individuals to whom the personal data relates, providing information to individuals regarding data processing activities, implementing safeguards to protect the security and confidentiality of personal data, providing notification of data breaches, and taking certain measures when engaging third-party processors. The GDPR also imposes strict rules on the transfer of personal data to countries outside the European Union, including the United States, and permits data protection authorities to impose large penalties for violations of the GDPR, including potential fines of up to €20 million or 4% of annual global revenues, whichever is greater. The GDPR also confers a private right of action on data subjects and consumer associations to lodge complaints with supervisory authorities, seek judicial remedies, and obtain compensation for damages resulting from violations of the GDPR. In addition, the GDPR includes restrictions on cross-border data transfers. The GDPR increased our responsibility and liability in relation to personal data that we process where such processing is subject to the GDPR, and we may be required to put in place additional mechanisms to ensure compliance with the GDPR, including as implemented by individual countries. Compliance with the GDPR will be a rigorous and time-intensive process that may increase our cost of doing business or require us to change our business practices, and despite those efforts, there is a risk that we may be subject to fines and penalties, litigation, and reputational harm in connection with our European activities. Further, the United Kingdom's vote in favor of exiting the European Union, often referred to as Brexit, has created uncertainty with regard to data protection regulation in the United Kingdom. In particular, it is unclear how data transfers to and from the United Kingdom will be regulated.

In addition, California recently enacted the California Consumer Privacy Act, or CCPA, which creates new individual privacy rights for California consumers (as defined in the law) and places increased privacy and security obligations on entities handling personal data of consumers or households. The CCPA requires covered companies to provide new disclosure to consumers about such companies' data collection, use and sharing practices, provide such consumers new ways to opt-out of certain sales or transfers of personal information, and provide consumers with additional causes of action. The CCPA went into effect on January 1, 2020, and the California Attorney General may bring enforcement actions for violations beginning July 1, 2020. The CCPA was amended on September 23, 2018, and it remains unclear what, if any, further modifications will be made to

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this legislation or how it will be interpreted. As currently written, the CCPA may impact our business activities and exemplifies the vulnerability of our business to the evolving regulatory environment related to personal data and protected health information.

Compliance with U.S. and international data protection laws and regulations could require us to take on more onerous obligations in our contracts, restrict our ability to collect, use and disclose data, or in some cases, impact our ability to operate in certain jurisdictions. Failure to comply with U.S. and international data protection laws and regulations could result in government enforcement actions (which could include civil or criminal penalties), private litigation or adverse publicity and could negatively affect our operating results and business. Moreover, clinical trial subjects about whom we or our current or future collaborators obtain information, as well as the providers who share this information with us, may contractually limit our ability to use and disclose the information. Claims that we have violated individuals' privacy rights, failed to comply with data protection laws, or breached our contractual obligations, even if we are not found liable, could be expensive and time consuming to defend and could result in adverse publicity that could harm our business.

Our employees, principal investigators, consultants and commercial partners may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements and insider trading.

We are exposed to the risk of fraud or other misconduct by our employees, principal investigators, consultants and commercial partners. Misconduct by these parties could include intentional failures to comply with FDA regulations or the regulations applicable in other jurisdictions, provide accurate information to the FDA and other regulatory authorities, comply with healthcare fraud and abuse laws and regulations in the United States and abroad, report financial information or data accurately or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Such misconduct also could involve the improper use of information obtained in the course of clinical trials or interactions with the FDA or other regulatory authorities, which could result in regulatory sanctions and cause serious harm to our reputation. It is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from government investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. If any such actions are instituted against us and we are not successful in defending ourselves or asserting our rights, those actions could result in significant civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from participating in government funded healthcare programs, such as Medicare and Medicaid, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, contractual damages, reputational harm and the curtailment or restructuring of our operations, any of which could have a negative impact on our business, financial condition, results of operations and prospects.

Risks Related to This Offering and Ownership of Our Common Shares

No public market for our common shares currently exists, and a public market may not develop or be liquid enough for you to sell your shares quickly or at or above the offering price, if at all.

This offering constitutes our initial public offering, and no public market for our common shares currently exists. Any delay in the commencement of trading of our common shares on The Nasdaq Global Market would impair the liquidity of the market for our common shares and make it more difficult for holders to sell their shares. If an active trading market for our common shares does not develop following this offering, you may not be able to sell your shares quickly or at the market price. An inactive market may also impair our ability to raise capital to continue to fund operations by selling our common shares and may impair our ability to acquire other

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companies or technologies by using our common shares as consideration. The initial public offering price of our common shares will be determined by negotiations between us and representatives of the underwriters and may not be indicative of the market prices of our common shares that will prevail in the trading market.

The trading price of our common shares may be volatile and fluctuate substantially, which could result in substantial losses for purchasers of our common shares in this offering.

The trading price of our common shares following this offering is likely to be highly volatile. The stock market in general and the market for biopharmaceutical and pharmaceutical companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, you may not be able to sell your common shares at or above the initial public offering price. In addition to the factors discussed in this “Risk Factors” section and elsewhere in this prospectus, the trading price for our common shares may be influenced by the following factors:

- the commencement, enrollment, timing and results of our planned or future clinical trials of RP-3500 and any future product candidates or those of our competitors;
- our success or failure in identifying new drug candidates to pursue in clinical development;
- the success or failure of our SNIPRx platform in identification of new druggable SL targets;
- the success of competitive drugs, therapies or technologies;
- development of new product candidates that may address our markets and make our product candidates less attractive;
- failure or discontinuation of any of our research or development programs;
- developments related to any existing or future collaborations;
- regulatory or legal developments in the United States and other countries;
- the success of competitive products or technologies;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- the recruitment or departure of key personnel;
- the level of expenses related to RP-3500 and any future product candidates or clinical development programs;
- the results of our efforts to discover, develop, acquire or in-license additional product candidates;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- our inability to obtain or delays in obtaining adequate drug supply for any approved drug or inability to do so at acceptable prices;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- significant lawsuits, including patent or shareholder litigation;
- variations in our financial results or those of companies that are perceived to be similar to us;
- changes in the structure of healthcare payment systems, including coverage and adequate reimbursement for any approved drug;
- sales of common shares by us, our executive officers, directors or principal shareholders, or others;
- market conditions in the pharmaceutical and biotechnology sectors;

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- general economic, political, and market conditions and overall fluctuations in the financial markets in the United States and abroad;
- investors' general perception of us and our business; and
- the other factors described in this "Risk Factors" section and elsewhere in this prospectus.

These and other market and industry factors may cause the market price and demand for our common shares to fluctuate substantially, regardless of our actual operating performance, which may limit or prevent investors from selling their shares at or above the price paid for the shares and may otherwise negatively affect the liquidity of our common shares. In addition, the stock market in general, and biopharmaceutical companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies.

Some companies that have experienced volatility in the trading price of their shares have been the subject of securities class action litigation. Any lawsuit to which we are a party, with or without merit, may result in an unfavorable judgment. We also may decide to settle lawsuits on unfavorable terms. Any such negative outcome could result in payments of substantial damages or fines, damage to our reputation or adverse changes to our business practices. Defending against litigation is costly and time-consuming, and could divert our management's attention and our resources. Furthermore, during the course of litigation, there could be negative public announcements of the results of hearings, motions or other interim proceedings or developments, which could have a negative effect on the market price of our common shares.

Concentration of ownership of our common shares among our existing executive officers, directors and principal shareholders may prevent new investors from influencing significant corporate decisions.

Based upon our common shares outstanding as of December 31, 2019, upon the completion of this offering, our executive officers, directors and shareholders who owned more than 5% of our outstanding common shares before this offering will, in the aggregate, beneficially own shares representing approximately % of our outstanding common shares. If our executive officers, directors and shareholders who owned more than 5% of our outstanding common shares acted together, they may be able to significantly influence all matters requiring shareholder approval, including the election and removal of directors and approval of any merger, consolidation or sale of all or substantially all of our assets. The concentration of voting power and transfer restrictions could delay or prevent an acquisition of our company on terms that other shareholders may desire or result in the management of our company in ways with which other shareholders disagree.

If research analysts do not publish research or reports, or publish unfavorable research or reports, about us, our business or our market, our share price and trading volume could decline.

The trading market for our common shares will be influenced by the research and reports that industry or financial analysts publish about us or our business. We do not currently have, and may never obtain, research coverage by industry or financial analysts. Equity research analysts may elect not to provide research coverage of our common shares after the completion of this offering, and such lack of research coverage may adversely affect the market price of our common shares. In the event we do have equity research analyst coverage, we will not have any control over the analysts or the content and opinions included in their reports. The price of our shares could decline if one or more equity research analysts downgrade our shares or issue other unfavorable commentary or research about us. If one or more equity research analysts ceases coverage of us or fails to publish reports on us regularly, demand for our shares could decrease, which in turn could cause the trading price or trading volume of our common shares to decline.

If you purchase our common shares in this offering, you will suffer immediate dilution of your investment.

The initial public offering price of our common shares will be substantially higher than the net tangible book value per common share. Therefore, if you purchase our common shares in this offering, you will pay a

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price per share that substantially exceeds our net tangible book value per share after this offering. Based on an assumed initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, you will experience immediate dilution of \$ _____ per share, representing the difference between our pro forma as adjusted net tangible book value per share after this offering and the initial public offering price per share. After this offering, we will also have outstanding options to purchase common shares with exercise prices lower than the initial public offering price. To the extent these outstanding options are exercised, there will be further dilution to investors in this offering. See the section titled "Dilution" for additional information.

A significant portion of our total outstanding shares are restricted from immediate resale, but may be sold into the market in the near future. This could cause the market price of our shares to drop significantly, even if our business is doing well.

Sales of a substantial number of our common shares in the public market could occur at any time.

If our shareholders sell, or the market perceives that our shareholders intend to sell, substantial amounts of our common shares in the public market following this offering, the market price of our common shares could decline significantly.

Upon completion of this offering, we will have _____ common shares outstanding, based on the number of shares outstanding as of December 31, 2019. Of these shares, the _____ common shares sold in this offering and _____ common shares currently outstanding will be freely tradable, and the remaining _____ common shares will be available for sale in the public market beginning 180 days after the date of this prospectus following the expiration of lock-up agreements entered into by our shareholders in connection with the offering. The representatives of the underwriters may agree to release these shareholders from their lock-up agreements at any time and without notice, which would allow for earlier sales of shares in the public market. Sales of a substantial number of such shares upon expiration of the lock-up agreements, the perception that such sales may occur, or early release of restrictions in the lock-up agreements, could cause the market price of our common shares to fall or make it more difficult for you to sell your shares at a time and price that you deem appropriate.

In addition, promptly following the completion of this offering, we intend to file one or more registration statements on Form S-8 registering the issuance of _____ common shares subject to options or other equity awards issued or reserved for future issuance under our equity incentive plans. Shares registered under these registration statements on Form S-8 will be available for sale in the public market subject to vesting arrangements and exercise of options, the lock-up agreements described above and, in the case of our affiliates, the restrictions of Rule 144 under the Securities Act of 1933, as amended.

Additionally, after this offering, the holders of an aggregate of 135,186,975 common shares, or their transferees, will have rights, subject to some conditions, to require us to file one or more registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other shareholders. If we were to register the resale of these shares, they could be freely sold in the public market. If these additional shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common shares could decline.

Because we do not anticipate paying any cash dividends on our share capital in the foreseeable future, capital appreciation, if any, will be your sole source of gain.

You should not rely on an investment in our common shares to provide dividend income. We have never declared or paid cash dividends on our share capital. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business. In addition, the terms of any future debt agreements or preferred equity may preclude us from paying dividends. As a result, capital appreciation, if any, of our common shares will be your sole source of gain for the foreseeable future. Investors seeking cash dividends should not purchase our common shares in this offering.

We have broad discretion in the use of our cash, including the net proceeds from this offering, and may use them ineffectively, in ways in which you do not agree or in ways that do not increase the value of your investment.

Our management will have broad discretion in the application of our cash, including the net proceeds from this offering, and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common shares. The failure by our management to apply these funds effectively could result in financial losses that could have a negative impact on our business, cause the price of our common shares to decline and delay the development of our product candidates. Pending their use, we may invest our cash, including the net proceeds from this offering, in a manner that does not produce income or that loses value. See the section titled “Use of Proceeds” for additional information.

If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results or prevent fraud. As a result, shareholders could lose confidence in our financial and other public reporting, which would harm our business and the trading price of our common shares.

Section 404(a) of the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act, requires that beginning with our second annual report following our initial public offering, management assess and report annually on the effectiveness of our internal control over financial reporting and identify any material weaknesses in our internal control over financial reporting. Although Section 404(b) of the Sarbanes-Oxley Act requires our independent registered public accounting firm to issue an annual report that addresses the effectiveness of our internal control over financial reporting, we have opted to rely on the exemptions provided in the JOBS Act, and consequently will not be required to comply with SEC rules that implement Section 404(b) until such time as we are no longer an emerging growth company.

Effective internal controls over financial reporting are necessary for us to provide reliable financial reports and, together with adequate disclosure controls and procedures, are designed to prevent fraud. Any failure to implement required new or improved controls, or difficulties encountered in their implementation could cause us to fail to meet our reporting obligations. In addition, any testing by us conducted in connection with Section 404, or any subsequent testing by our independent registered public accounting firm, may reveal deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses or that may require prospective or retroactive changes to our financial statements or identify other areas for further attention or improvement. Inadequate internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our common shares.

Our disclosure controls and procedures may not prevent or detect all errors or acts of fraud.

Upon the completion of this offering, we will become subject to the periodic reporting requirements of the Exchange Act. We designed our disclosure controls and procedures to reasonably assure that information we must disclose in reports we file or submit under the Exchange Act is accumulated and communicated to management, and recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures or internal controls and procedures, no matter how well-conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. For example, our directors or executive officers could inadvertently fail to disclose a new relationship or arrangement causing us to fail to make any related party transaction disclosures. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected.

If we are a passive foreign investment company following this offering, there could be adverse U.S. federal income tax consequences to U.S. Holders.

Under the Internal Revenue Code of 1986, as amended, or the Code, we will be a passive foreign investment company, or PFIC, for any taxable year in which (1) 75% or more of our gross income consists of passive income or (2) 50% or more of the average quarterly value of our assets consists of assets that produce, or are held for the production of, passive income, including cash. For purposes of these tests, passive income includes dividends, interest, gains from the sale or exchange of investment property and certain rents and royalties. In addition, for purposes of the above calculations, a non-U.S. corporation that directly or indirectly owns at least 25% by value of the shares of another corporation is treated as if it held its proportionate share of the assets and received directly its proportionate share of the income of such other corporation.

Based on our operating history and the projected composition of our income and valuation of our assets, including goodwill, we believe that we classified as a passive foreign investment company, or PFIC, for the taxable year ending December 31, 2020. However, no assurances regarding our PFIC status can be provided for any past, current or future taxable years. The determination of whether we are a PFIC is a fact-intensive determination made on an annual basis and the applicable law is subject to varying interpretation. In particular, the characterization of our assets as active or passive may depend in part on our current and intended future business plans, which are subject to change. In addition, for our current and future taxable years, the total value of our assets for PFIC testing purposes may be determined in part by reference to the market price of our common shares from time to time, which may fluctuate considerably. Under the income test, our status as a PFIC depends on the composition of our income which will depend on the transactions we enter into in the future and our corporate structure. The composition of our income and assets is also affected by how, and how quickly, we spend the cash we raise in any offering, including this offering. Accordingly, our U.S. counsel expresses no opinion with respect to our PFIC status for our taxable year ended December 31, 2020, and also expresses no opinion with regard to our expectations regarding our PFIC status in the future.

If we are a PFIC, a U.S. Holder (as defined below under “Material Income Tax Considerations—Material U.S. Federal Income Tax Considerations for U.S. Holders”) of our common shares would be subject to adverse U.S. federal income tax consequences, such as ineligibility for any preferential tax rates for individuals on capital gains or on actual or deemed dividends, interest charges on certain taxes treated as deferred, and additional reporting requirements under U.S. federal income tax laws and regulations. For further discussion of the PFIC rules and the adverse U.S. federal income tax consequences in the event we are classified as a PFIC, see the section titled “Material Income Tax Considerations—Material U.S. Federal Income Tax Considerations for U.S. Holders” in this prospectus. Each U.S. Holder should consult its own tax advisors with respect to the potential adverse U.S. tax consequences to it if we are or were to become a PFIC.

If we are a controlled foreign corporation, there could be materially adverse U.S. federal income tax consequences to certain U.S. Holders of our common shares.

Each “Ten Percent Shareholder” (as defined below) in a non-U.S. corporation that is classified as a controlled foreign corporation, or a CFC, for U.S. federal income tax purposes generally is required to include in income for U.S. federal tax purposes such Ten Percent Shareholder’s pro rata share of the CFC’s “Subpart F income,” global intangible low taxed income, and investment of earnings in U.S. property, even if the CFC has made no distributions to its shareholders. Subpart F income generally includes dividends, interest, rents, royalties, gains from the sale of securities and income from certain transactions with related parties. In addition, a Ten Percent Shareholder that realizes gain from the sale or exchange of shares in a CFC may be required to classify a portion of such gain as dividend income rather than capital gain. An individual that is a Ten Percent Shareholder with respect to a CFC generally would not be allowed certain tax deductions or foreign tax credits that would be allowed to a Ten Percent Shareholder that is a U.S. corporation. Failure to comply with these reporting obligations may subject a Ten Percent Shareholder to significant monetary penalties and may prevent the statute of limitations with respect to such Ten Percent Shareholder’s U.S. federal income tax return for the year for which reporting was due from starting.

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A non-U.S. corporation generally will be classified as a CFC for U.S. federal income tax purposes if Ten Percent Shareholders own, directly or indirectly, more than 50% of either the total combined voting power of all classes of stock of such corporation entitled to vote or of the total value of the stock of such corporation. A “Ten Percent Shareholder” is a United States person (as defined by the Code) who owns or is considered to own 10% or more of the total combined voting power of all classes of stock entitled to vote or 10% or more of the total value of all classes of stock of such corporation.

We believe that we were a CFC in the 2019 taxable year, and we may continue to be a CFC in the 2020 taxable year or in a subsequent taxable year. The determination of CFC status is complex and includes attribution rules, the application of which is not entirely certain. In addition, recent changes to the attribution rules relating to the determination of CFC status may make it difficult to determine our CFC status for any taxable year. Because our group includes at least one U.S. subsidiary (Repare Therapeutics USA Inc.), if we were to form or acquire any non-U.S. subsidiaries in the future, those changes to the attribution rules may cause such non-U.S. subsidiaries to be treated as controlled foreign corporations. We cannot provide any assurances that we will assist holders of our common shares in determining whether we or any non-U.S. subsidiaries that we may form or acquire are or will be treated as a CFC or whether any holder of the common shares is treated as a Ten Percent Shareholder with respect to any such CFC or furnish to any Ten Percent Shareholders information that may be necessary to comply with the aforementioned reporting and tax paying obligations.

Each U.S. Holder should consult its own tax advisors with respect to the potential adverse U.S. tax consequences of becoming a Ten Percent Shareholder in a CFC. If we are classified as both a CFC and a PFIC (as defined above), we generally will not be treated as a PFIC with respect to those U.S. Holders that meet the definition of a Ten Percent Shareholder during the period in which we are a CFC.

Future changes to tax laws could materially adversely affect our company and reduce net returns to our shareholders.

The tax treatment of the company is subject to changes in tax laws, regulations and treaties, or the interpretation thereof, tax policy initiatives and reforms under consideration and the practices of tax authorities in jurisdictions in which we operate, as well as tax policy initiatives and reforms related to the Organisation for Economic Co-Operation and Development’s, or OECD, Base Erosion and Profit Shifting, or BEPS, Project, the European Commission’s state aid investigations and other initiatives. Such changes may include (but are not limited to) the taxation of operating income, investment income, dividends received or (in the specific context of withholding tax) dividends paid. We are unable to predict what tax reform may be proposed or enacted in the future or what effect such changes would have on our business, but such changes, to the extent they are brought into tax legislation, regulations, policies or practices, could affect our financial position and overall or effective tax rates in the future in countries where we have operations, reduce post-tax returns to our shareholders, and increase the complexity, burden and cost of tax compliance.

Our ability to use our non-capital loss carryforwards to offset future taxable income may be subject to certain limitations.

In general, where control of a corporation has been acquired by a person or group of persons, subsection 111(5) of the Income Tax Act (Canada), or the Canadian Tax Act, and equivalent provincial income tax legislation restrict the corporation’s ability to carry forward non-capital losses from preceding taxation years. We have not performed a detailed analysis to determine whether an acquisition of control for the purposes of subsection 111(5) of the Canadian Tax Act has occurred after each of our previous issuances of common shares or preferred shares. In addition, if we undergo an acquisition of control after this public offering, our ability to utilize non-capital losses could be limited by subsection 111(5) of the Canadian Tax Act. As of December 31, 2019, we had Canadian federal and provincial non-capital loss carry forwards of \$31.5 million, which expire beginning in 2036 through 2039. In addition, we also have scientific research and experimental development expenditures of approximately \$15.8 million for Canadian federal and provincial income tax purposes, which have not been deducted. These

expenditures are available to reduce future taxable income and have an unlimited carry-forward period. We also have scientific research and experimental development tax credit carry forwards of approximately \$2.6 million for Canadian federal income tax purposes, which expire beginning in 2036 through 2039. Research and development tax credits and expenditures are subject to verification by the tax authorities, and, accordingly, these amounts may vary. Future changes in our share ownership, some of which are outside of our control, could result in an acquisition of control for the purposes of subsection 111(5) of the Canadian Tax Act. Furthermore, our ability to utilize non-capital losses (or U.S. equivalents) of companies that we may acquire in the future may be subject to limitations. As a result, even if we attain profitability, we may be unable to use a material portion of our non-capital losses and other tax attributes, which could negatively impact our future cash flows.

Tax authorities may disagree with our positions and conclusions regarding certain tax positions, resulting in unanticipated costs, taxes or non-realization of expected benefits.

A tax authority may disagree with tax positions that we have taken, which could result in increased tax liabilities. For example, the Canadian Revenue Agency, the U.S. Internal Revenue Service or another tax authority could challenge our allocation of income by tax jurisdiction and the amounts paid between our affiliated companies pursuant to our intercompany arrangements and transfer pricing policies, including amounts paid with respect to our intellectual property development. Similarly, a tax authority could assert that we are subject to tax in a jurisdiction where we believe we have not established a taxable connection, often referred to as a “permanent establishment” under international tax treaties, and such an assertion, if successful, could increase our expected tax liability in one or more jurisdictions. A tax authority may take the position that material income tax liabilities, interest and penalties are payable by us, in which case, we expect that we might contest such assessment. Contesting such an assessment may be lengthy and costly and if we were unsuccessful in disputing the assessment, the implications could increase our anticipated effective tax rate, where applicable.

Our deductions and credits in respect of scientific research and experimental development expenditures may be challenged by the Canadian tax authorities.

The Canadian taxation authorities may not necessarily agree with our determinations of the expenses and tax credits claimed by us, including scientific research and experimental development expenses and related tax credits. If the Canadian taxation authorities successfully challenge such expenses or the correctness of such income tax credits claimed, our operating results could be adversely affected. Furthermore, if the Canadian taxation authorities reduce the tax credit by reducing either the rate of the credit or the eligibility of some scientific research and experimental development expenses in the future, our operating results could be adversely affected.

We are an “emerging growth company” and a “smaller reporting company” and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies or smaller reporting companies will make our common shares less attractive to investors.

We are an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including (i) not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, (ii) reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements and (iii) exemptions from the requirements of holding nonbinding advisory shareholder votes on executive compensation and shareholder approval of any golden parachute payments not approved previously. In addition, as an emerging growth company, we are only required to provide two years of audited financial statements and two years of selected financial data in this prospectus. Under the JOBS Act, emerging growth companies can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have elected to take advantage of the benefits of this extended transition period. Our financial statements may therefore not be comparable to those of

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companies that comply with such new or revised accounting standards. Until the date that we are no longer an “emerging growth company” or affirmatively and irrevocably opt out of the exemption provided by Section 7(a)(2)(B) of the Securities Act, upon issuance of a new or revised accounting standard that applies to our financial statements and that has a different effective date for public and private companies, we will disclose the date on which adoption is required for non-emerging growth companies and the date on which we will adopt the recently issued accounting standard.

We could be an emerging growth company until the last day of our fiscal year following the fifth anniversary of the completion of this offering, although circumstances could cause us to lose that status earlier, including if we are deemed to be a “large accelerated filer,” which occurs when the market value of our common shares that is held by non-affiliates equals or exceeds \$700.0 million as of the prior June 30, or if we have total annual gross revenue of \$1.07 billion or more during any fiscal year before that time, in which cases we would no longer be an emerging growth company as of the following December 31, or if we issue more than \$1.0 billion in non-convertible debt during any three-year period before that time, in which case we would no longer be an emerging growth company immediately.

We are also a “smaller reporting company,” meaning that the market value of our common shares held by non-affiliates is less than \$700 million and our annual revenue was less than \$100 million during our most recently completed fiscal year. We may continue to be a smaller reporting company if either (i) the market value of our common shares held by non-affiliates is less than \$250 million or (ii) our annual revenue was less than \$100 million during the most recently completed fiscal year and the market value of our common shares held by non-affiliates is less than \$700 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act and reduced disclosure obligations regarding executive compensation in this prospectus and in our periodic reports and proxy statements. For so long as we remain a smaller reporting company, we are permitted and intend to rely on exemptions from certain disclosure and other requirements that are applicable to other public companies that are not smaller reporting companies.

We cannot predict if investors will find our common shares less attractive because we may rely on the exemptions and reduced disclosure obligations applicable to emerging growth companies and smaller reporting companies. If some investors find our common shares less attractive as a result, there may be a less active trading market for our common shares and our share price may be more volatile.

We will incur significantly increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives and corporate governance practices.

As a public company, and particularly after we are no longer an emerging growth company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. The Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of the Nasdaq Stock Market and other applicable securities rules and regulations impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, we expect these rules and regulations to substantially increase our legal and financial compliance costs and to make some activities more time consuming and costly. For example, we expect that these rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain sufficient coverage. We cannot predict or estimate the amount or timing of additional costs we may incur to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers. The increased costs may require us to reduce costs in other areas of our business or increase the prices of our services.

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Moreover, these rules and regulations are often subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices.

Because we are a Canadian company, it may be difficult to serve legal process or enforce judgments against us.

We are incorporated and have our corporate headquarters in Canada. In addition, while many of our directors and officers reside in the United States, several of them reside outside of the United States. Accordingly, service of process upon us may be difficult to obtain within the United States. Furthermore, because substantially all of our assets are located outside the United States, any judgment obtained in the United States against us, including one predicated on the civil liability provisions of the U.S. federal securities laws, may not be collectible within the United States. Therefore, it may not be possible to enforce those actions against us.

In addition, it may be difficult to assert U.S. securities law claims in original actions instituted in Canada. Canadian courts may refuse to hear a claim based on an alleged violation of U.S. securities laws against us or these persons on the grounds that Canada is not the most appropriate forum in which to bring such a claim. Even if a Canadian court agrees to hear a claim, it may determine that Canadian law and not U.S. law is applicable to the claim. If U.S. law is found to be applicable, the content of applicable U.S. law must be proved as a fact, which can be a time-consuming and costly process. Certain matters of procedure will also be governed by Canadian law. Furthermore, it may not be possible to subject foreign persons or entities to the jurisdiction of the courts in Canada. Similarly, to the extent that our assets are located in Canada, investors may have difficulty collecting from us any judgments obtained in the U.S. courts and predicated on the civil liability provisions of U.S. securities provisions.

We are governed by the corporate laws of Canada, which in some cases have a different effect on shareholders than the corporate laws of Delaware.

We are governed by the Canada Business Corporations Act, or the CBCA, and other relevant laws, which may affect the rights of shareholders differently than those of a company governed by the laws of a U.S. jurisdiction, and may, together with our charter documents, have the effect of delaying, deferring or discouraging another party from acquiring control of us by means of a tender offer, a proxy contest or otherwise, or may affect the price an acquiring party would be willing to offer in such an instance. The material differences between the CBCA and Delaware General Corporation Law, or the DGCL, that may have the greatest such effect include but are not limited to the following: (i) for material corporate transactions (such as mergers and amalgamations, other extraordinary corporate transactions or amendments to our articles), the CBCA generally requires a two-thirds majority vote by shareholders, whereas the DGCL generally only requires a majority vote; and (ii) under the CBCA, a holder of 5% or more of our common shares can requisition a special meeting of shareholders, whereas such right does not exist under the DGCL. Refer to the section titled “Description of Share Capital-Differences in Corporation Law” for more information.

Our amended and restated bylaws to be in effect following completion of this offering and certain Canadian legislation contain provisions that may have the effect of delaying or preventing certain change in control transactions or shareholder proposals.

Certain provisions of our amended and restated bylaws to be in effect following completion of this offering and certain Canadian legislation, together or separately, could discourage or delay certain change in control transactions or shareholder proposals.

Our amended and restated bylaws to be in effect following completion of this offering contain provisions that establish certain advance notice procedures for nomination of candidates for election as directors at

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shareholders' meetings. The CBCA requires that any shareholder proposal that includes nominations for the election of directors must be signed by one or more holders of shares representing in the aggregate not less than 5% of the shares or 5% of the shares of a class or series of shares of the corporation entitled to vote at the meeting to which the proposal is to be presented.

The Investment Canada Act requires that a non-Canadian must file an application for review with the Minister responsible for the Investment Canada Act and obtain approval of the Minister prior to acquiring control of a "Canadian business" within the meaning of the Investment Canada Act, where prescribed financial thresholds are exceeded. Furthermore, limitations on the ability to acquire and hold our common shares may be imposed by the Competition Act (Canada). This legislation permits the Commissioner of Competition, or Commissioner, to review any acquisition or establishment, directly or indirectly, including through the acquisition of shares, of control over or of a significant interest in our company. Otherwise, there are no limitations either under the laws of Canada or Québec, or in our articles on the rights of non-Canadians to hold or vote our common shares.

Any of these provisions may discourage a potential acquirer from proposing or completing a transaction that may have otherwise presented a premium to our shareholders.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements about us and our industry that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this prospectus, including statements regarding our strategy, future financial condition, future operations, projected costs, prospects, plans, objectives of management and expected market growth, are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “aim,” “anticipate,” “assume,” “believe,” “contemplate,” “continue,” “could,” “design,” “due,” “estimate,” “expect,” “goal,” “intend,” “may,” “objective,” “plan,” “predict,” “positioned,” “potential,” “seek,” “should,” “target,” “will,” “would” and other similar expressions that are predictions of or indicate future events and future trends, or the negative of these terms or other comparable terminology.

We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. These forward-looking statements are subject to a number of known and unknown risks, uncertainties and assumptions, including risks described in the section titled “Risk Factors” and elsewhere in this prospectus, regarding, among other things:

- the initiation, timing, progress and results of our current and future preclinical studies and clinical trials and related preparatory work and the period during which the results of the trials will become available, as well as our research and development programs;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- our ability to obtain regulatory approval of RP-3500 and any of our current and future product candidates that we develop;
- our ability to identify and develop additional product candidates using our SNIPRx platform;
- business disruptions affecting the initiation, patient enrollment, development and operation of our clinical trials, including a public health emergency, such as the recent global outbreak of the COVID-19 coronavirus;
- our expectations regarding the potential market size and the rate and degree of market acceptance for any product candidates that we develop;
- the effects of competition with respect to RP-3500 or any of our other current or future product candidates, as well as innovations by current and future competitors in our industry;
- our ability to fund our working capital requirements;
- our intellectual property position, including the scope of protection we are able to establish, maintain and enforce for intellectual property rights covering our product candidates;
- our financial performance and our ability to effectively manage our anticipated growth;
- our ability to obtain additional funding for our operations and our expected use of proceeds from this offering; and
- other risks and uncertainties, including those listed under the section titled “Risk Factors.”

The foregoing list of risks is not exhaustive. Other sections of this prospectus may include additional factors that could harm our business and financial performance. Moreover, we operate in a very competitive and rapidly changing environment. New risk factors emerge from time to time, and it is not possible for our management to predict all risk factors nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in, or implied by, any forward-looking statements.

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In light of the significant uncertainties in these forward-looking statements, you should not rely upon forward-looking statements as predictions of future events. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur at all. You should refer to the section titled “Risk Factors” for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. Except as required by law, we undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise. The Private Securities Litigation Reform Act of 1995 and Section 27A of the Securities Act of 1933, as amended, do not protect any forward-looking statements that we make in connection with this offering.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all forward-looking statements in this prospectus by these cautionary statements.

MARKET AND INDUSTRY DATA

Certain market and industry data included in this prospectus were obtained from independent third-party surveys, market research, publicly available information, reports of governmental agencies and industry publications and surveys. All market and industry data used in this prospectus involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. Although we are responsible for the disclosure contained in this prospectus and we believe the information from industry publications and other third-party sources included in this prospectus is reliable, such information is inherently imprecise. The industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of factors, including those described in the section titled "Risk Factors." These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us.

USE OF PROCEEDS

We estimate that the net proceeds to us from this offering will be approximately \$ million (or approximately \$ million if the underwriters exercise in full their option to purchase up to \$ additional common shares), based on an assumed initial public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting fees and commissions and estimated offering expenses payable by us.

Each \$1.00 increase or decrease in the assumed initial public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease the net proceeds to us from this offering by \$ million, assuming that the number of common shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting fees and commissions and estimated offering expenses payable by us. Similarly, each increase or decrease of 1,000,000 in the number of common shares offered by us, as set forth on the cover of this prospectus, would increase or decrease the net proceeds to us by \$ million, assuming the assumed initial public offering price per share remains the same and after deducting the estimated underwriting fees and commissions and estimated offering expenses payable by us.

As of December 31, 2019, we had cash of \$94.8 million. We currently intend to use the net proceeds from this offering, together with our existing cash, as follows:

- approximately \$ million to advance clinical development of RP-3500;
- approximately \$ million to fund continued development of our preclinical programs; and
- the remainder to fund working capital and other general corporate purposes.

Based on our planned use of the net proceeds from this offering and our existing cash, we estimate that such funds will be sufficient to fund our operating expenses and capital expenditure requirements at least through . We have based this estimate on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we expect. The expected net proceeds from this offering, together with our existing cash, will not be sufficient for us to fund any of our drug candidates through regulatory approval, and we will need to raise additional capital to complete the development and commercialization of our product candidates.

This expected use of the net proceeds from this offering represents our intentions based upon our current plans and prevailing business conditions, which could change in the future as such plans and conditions evolve. Predicting the cost necessary to develop product candidates can be difficult, and the amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our development, the status of and results from preclinical studies and clinical trials, any collaborations that we may enter into with third parties and any unforeseen cash needs. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering.

We may also use a portion of the remaining net proceeds to in-license, acquire or invest in complementary businesses, technologies, products or assets. However, we have no current commitments or obligations to do so.

Pending the use of the net proceeds from this offering as described above, we intend to invest the net proceeds in a variety of capital preservation instruments, including bank deposits, short-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed United States or Canadian government obligations.

DIVIDEND POLICY

We have never declared or paid cash dividends on our share capital, and we do not currently intend to pay any cash dividends on our share capital in the foreseeable future. We currently intend to retain all available funds and any future earnings, if any, to fund the development and expansion of our business. Any future determination related to dividend policy will be made at the discretion of our board of directors, subject to applicable laws, and will depend upon, among other factors, our results of operations, financial condition, contractual restrictions and capital requirements. In addition, our ability to pay cash dividends on our share capital in the future may be limited by the terms of any future debt or preferred securities we issue or any credit facilities we enter into.

CAPITALIZATION

The following table sets forth our cash, and our capitalization as of December 31, 2019 on:

- an actual basis;
- a pro forma basis, giving effect to the automatic conversion of all outstanding preferred shares into an aggregate of 130,686,975 common shares upon the completion of this offering; and
- a pro forma as adjusted basis, giving further effect to: (i) the sale of _____ common shares in this offering at an assumed initial public offering price of \$ _____ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting fees and commissions and estimated offering expenses payable by us; and (ii) the filing and effectiveness of our amended and restated articles of incorporation.

Our capitalization following the closing of this offering will depend on the actual initial public offering price and other terms of this offering determined at pricing. You should read this table together with the sections titled “Selected Consolidated Financial Data,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the related notes included elsewhere in this prospectus.

	AS OF DECEMBER 31, 2019		
(in thousands, except share and per share amounts)	ACTUAL	PRO FORMA	PRO FORMA AS ADJUSTED (1)
Cash	\$ 94,797	\$ 94,797	\$ _____
Series A preferred shares, no par value, unlimited shares authorized; 67,228,395 shares issued and outstanding, actual; unlimited shares authorized, no shares issued or outstanding, pro forma; no shares authorized, issued or outstanding, pro forma as adjusted	\$ 53,749	\$ —	\$ —
Series B preferred shares, no par value, unlimited shares authorized; 63,458,580 shares issued and outstanding, actual; unlimited shares authorized, no shares issued or outstanding, pro forma; no shares authorized, issued or outstanding, pro forma as adjusted	\$ 82,248	\$ —	\$ —
Shareholders’ (deficit) equity:			
Preferred shares, no par value, no shares authorized, issued and outstanding, actual and pro forma; _____ shares authorized and no shares issued and outstanding, pro forma as adjusted	—	—	—
Common shares, no par value, unlimited shares authorized, 9,265,000 shares issued and outstanding, actual; unlimited shares authorized, 139,951,975 shares issued and outstanding, pro forma; unlimited shares authorized, shares issued and outstanding, pro forma as adjusted	1	135,998	
Additional paid-in capital	3,811	3,811	
Accumulated deficit	(49,941)	(49,941)	
Total shareholders’ (deficit) equity	(46,129)	89,868	
Total capitalization	\$ 89,868	\$ 89,868	\$ _____

- (1) Each \$1.00 increase or decrease in the assumed initial public offering price of \$ _____ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease each of pro forma as adjusted cash, additional paid-in capital, total shareholders’ (deficit) equity and total capitalization by \$ _____ million, assuming that the number of common shares offered by us, as set forth

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on the cover page of this prospectus, remains the same and after deducting estimated underwriting fees and commissions and estimated offering expenses payable by us. Similarly, each increase or decrease of 1,000,000 in the number of common shares offered by us would increase or decrease each of pro forma as adjusted cash, additional paid-in capital, total shareholders' (deficit) equity and total capitalization by \$ million, assuming that the assumed initial public offering price remains the same and after deducting estimated underwriting fees and commissions and estimated offering expenses payable by us.

The number of common shares outstanding after this offering is based on 139,951,975 common shares outstanding as of December 31, 2019, and excludes:

- 21,248,158 common shares issuable upon the exercise of outstanding options as of December 31, 2019, at a weighted-average exercise price of \$0.34 per share;
- 3,449,250 common shares reserved for future issuance under our Existing Plan as of December 31, 2019, which shares will cease to be available for future issuance immediately prior to the time that our 2020 Plan becomes effective in connection with this offering;
- common shares reserved for future issuance under our 2020 Plan, which will become effective immediately prior to the execution of the underwriting agreement related to this offering, as well as any future increases in the number of common shares reserved for issuance under our 2020 Plan; and
- common shares reserved for future issuance under our ESPP, which will become effective immediately prior to the execution of the underwriting agreement related to this offering, as well as any future increases in the number of common shares reserved for issuance under our ESPP.

DILUTION

If you invest in our common shares in this offering, your ownership interest will be diluted immediately to the extent of the difference between the initial public offering price per common share and the pro forma as adjusted net tangible book value per common share after this offering.

Our historical net tangible book deficit as of December 31, 2019 was \$46.1 million, or (\$4.98) per common share. Our historical net tangible book deficit represents our total tangible assets less total liabilities and preferred shares. Historical net tangible book deficit per share is our historical net tangible book deficit divided by the number of common shares outstanding as of December 31, 2019.

Our pro forma net tangible book value as of December 31, 2019 was \$89.9 million, or \$0.64 per common share, which gives effect to the automatic conversion of all outstanding preferred shares into an aggregate of 130,686,975 common shares immediately prior to the completion of this offering. Pro forma net tangible book value per share is our pro forma net tangible book value divided by the number of common shares deemed to be outstanding as of December 31, 2019.

After giving further effect to the sale of _____ common shares in this offering at an assumed initial public offering price of \$ _____ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting fees and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of December 31, 2019 would have been \$ _____ million, or \$ _____ per share. This represents an immediate increase in pro forma as adjusted net tangible book value of \$ _____ per share to our existing shareholders and an immediate dilution of \$ _____ per share to new investors participating in this offering.

The following table illustrates this dilution on a per share basis:

Assumed initial public offering price per share	\$
Historical net tangible book deficit per share as of December 31, 2019	\$(4.98)
Pro forma increase in net tangible book value per share as of December 31, 2019 attributable to pro forma transactions described above	5.62
Pro forma net tangible book deficit per share as of December 31, 2019	0.64
Increase in pro forma net tangible book value per share attributable to new investors participating in this offering	_____
Pro forma as adjusted net tangible book value per share after this offering	_____
Dilution per share to new investors participating in this offering	\$ _____

Each \$1.00 increase or decrease in the assumed initial public offering price of \$ _____, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease our pro forma as adjusted net tangible book value per share after this offering by \$ _____ per share and the dilution per share to new investors participating in this offering by \$ _____ per share, assuming that the number of common shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting fees and commissions and estimated offering expenses payable by us. Similarly, an increase of 1,000,000 in the number of common shares offered by us would increase the pro forma as adjusted net tangible book value after this offering by \$ _____ per share and decrease the dilution per share to new investors participating in this offering by \$ _____ per share, and a decrease of 1,000,000 in the number of common shares offered by us would decrease the pro forma as adjusted net tangible book value by \$ _____ per share, and increase the dilution per share to new investors in this offering by \$ _____ per share, assuming that the assumed initial public offering price remains the same and after deducting estimated underwriting fees and commissions and estimated offering expenses payable by us.

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If the underwriters exercise in full their option to purchase up to additional common shares, the pro forma as adjusted net tangible book value per share after giving effect to this offering would be \$ per share and dilution to new investors participating in this offering would be \$ per share.

The following table summarizes, on the pro forma as adjusted basis described above, the differences between the number of shares purchased from us on an as converted basis, the total consideration paid and the weighted average price per share paid by existing shareholders and by investors purchasing shares in this offering at the assumed initial public offering price of \$ per share, which is the midpoint of the price range set forth on the cover page on this prospectus, before deducting estimated underwriting fees and commissions and estimated offering expenses payable by us:

	SHARES PURCHASED		TOTAL CONSIDERATION		AVERAGE PRICE PER SHARE
	NUMBER	PERCENT	AMOUNT	PERCENT	SHARE
Existing shareholders		%	\$	%	\$
New investors					
Total		100%		\$ 100%	

If the underwriters exercise their option to purchase additional shares in full, our existing shareholders would own % and our new investors would own % of the total number of our common shares outstanding upon the completion of this offering.

The foregoing discussion and tables are based on common shares outstanding as of December 31, 2019, which gives effect to the pro forma transactions described above and excludes:

- 21,248,158 common shares issuable upon the exercise of outstanding options as of December 31, 2019, at a weighted-average exercise price of \$0.34 per share;
- 3,449,250 common shares reserved for future issuance under our Existing Plan as of December 31, 2019, which shares will cease to be available for future issuance immediately prior to the time that our 2020 Plan becomes effective in connection with this offering;
- common shares reserved for future issuance under our 2020 Plan, which became effective immediately prior to the execution of the underwriting agreement related to this offering, as well as any future increases in the number of common shares reserved for issuance under our 2020 Plan; and
- common shares reserved for future issuance under our ESPP, which will become effective immediately prior to the execution of the underwriting agreement related to this offering, as well as any future increases in the number of common shares reserved for issuance under our ESPP.

To the extent that outstanding options are exercised, new options or other equity awards are issued under our equity incentive plans, or we issue additional shares in the future, there will be further dilution to investors purchasing shares in this offering. Assuming the exercise of all of our outstanding options as of December 31, 2019, the number of shares held by existing shareholders would increase to % of the total number of shares to be outstanding after this offering, and the number of shares held by investors participating in this offering would be reduced to % of the total number of shares to be outstanding after this offering. Additionally, the total consideration paid to us by existing shareholders would be \$ million, or % of the total consideration paid for our outstanding shares, and the total consideration paid to us by investors participating in this offering would be % of the total consideration paid for our outstanding shares. The weighted average price per share paid to us by existing shareholders would be \$ and the weighted average price per share paid to us by investors participating in this offering would not change. In addition, we may choose to raise additional capital because of market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. If we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our shareholders.

SELECTED CONSOLIDATED FINANCIAL DATA

The following tables set forth our selected consolidated statement of operations data for the years ended December 31, 2017, 2018 and 2019, and our selected consolidated balance sheet data as of December 31, 2018 and 2019, all of which has been derived from our audited consolidated financial statements appearing elsewhere in this prospectus. Our historical results are not necessarily indicative of the results that may be expected for any period in the future.

You should read the following selected consolidated financial data together with the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the related notes included elsewhere in this prospectus. The selected consolidated financial data included in this section are not intended to replace the consolidated financial statements and are qualified in their entirety by the consolidated financial statements and the related notes included elsewhere in this prospectus.

	YEAR ENDED DECEMBER 31,		
	2017	2018	2019
	(in thousands, except share and per share amounts)		
Summary of Consolidated Operations Data:			
Operating expenses:			
Research and development, net of tax credits	\$ 4,401	\$ 9,906	\$ 20,995
General and administrative	1,774	2,914	5,382
Total operating expenses	6,175	12,820	26,377
Loss from operations	(6,175)	(12,820)	(26,377)
Other (expense) income, net:			
Realized and unrealized (loss) gain on foreign exchange, net	(147)	(292)	712
Change in fair value of convertible notes	(1,615)	—	—
Change in fair value of series A preferred share tranche obligation	180	(1,130)	(1,350)
Other expense	(39)	(6)	(6)
Total other expense, net	(1,621)	(1,428)	(644)
Loss before income taxes	(7,796)	(14,248)	(27,021)
Income tax expense	—	(35)	(195)
Net loss and comprehensive loss	\$ (7,796)	\$ (14,283)	\$ (27,216)
Net loss per share: ⁽¹⁾			
Basic and diluted	\$ (0.84)	\$ (1.54)	\$ (2.94)
Weighted average shares used in computing net loss per share: ⁽¹⁾			
Basic and diluted	9,229,658	9,265,000	9,265,000
Pro forma net loss per share (unaudited): ⁽¹⁾			
Basic and diluted			\$ (0.27)
Weighted average shares outstanding used in computing pro forma net loss per share (unaudited):			
⁽¹⁾ Basic and diluted			95,722,801

(1) See Note 13 to our audited consolidated financial statements included elsewhere in this prospectus for an explanation of the calculations of our basic and diluted net loss per share, pro forma net loss per share and the weighted-average number of shares used in the computation of the per share amounts.

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	<u>AS OF DECEMBER 31,</u>	
	<u>2018</u>	<u>2019</u>
	<u>(in thousands)</u>	
Consolidated Balance Sheet Data:		
Cash	\$ 10,731	\$ 94,797
Working capital	10,143	94,326
Total assets	13,925	102,695
Convertible preferred shares	31,873	135,997
Accumulated deficit	(22,725)	(49,941)
Total shareholders' deficit	(22,384)	(46,129)

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with the "Selected Consolidated Financial Data" section of this prospectus and our audited consolidated financial statements and related notes appearing elsewhere in this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business and related financing, includes forward-looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth in the "Risk Factors" section of this prospectus, our actual results could differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a leading precision oncology medicine company enabled by our proprietary synthetic lethality insights for the discovery and development of novel therapeutics. Synthetic lethality, or SL, represents a clinically validated approach to drug development. We use our proprietary genome-wide, CRISPR-enabled SNIPRx platform to systematically discover and develop highly targeted cancer therapies focused on genomic instability, including DNA damage repair. SL arises when a deficiency in either of two genes is tolerated in cells, but simultaneous deficiencies in both genes cause cell death. Cancer cells that contain a mutation in one gene of a SL pair are thus susceptible to therapeutic intervention targeting the other gene pair.

Since our inception in September 2016, we have focused primarily on raising capital, organizing and staffing our company, conducting discovery and research activities, identifying potential SL gene pairs, establishing and protecting our intellectual property portfolio including for our proprietary SNIPRx platform, developing and progressing our product candidates through preclinical studies and preparing for clinical trials and establishing arrangements with third parties for the manufacture of initial quantities of our product candidates and component materials. We do not have any product candidates approved for sale and have not generated any revenue from product sales. Since our inception, we have funded our operations primarily through equity financings, and have raised an aggregate of approximately \$135.2 million of gross proceeds from the sale of our preferred shares. As of December 31, 2019, we had cash on hand of \$94.8 million.

Since inception, we have incurred significant operating losses. Our net losses were \$7.8 million, \$14.3 million and \$27.2 million for the years ended December 31, 2017, 2018 and 2019, respectively. As of December 31, 2019, we had an accumulated deficit of \$49.9 million. We expect to continue to incur significant and increasing expenses and operating losses for the foreseeable future, as we advance our product candidates, including RP-3500, through preclinical and clinical development and seek regulatory approvals, manufacture drug product and drug supply, maintain and expand our intellectual property portfolio, as well as hire additional personnel, pay for accounting, audit, legal, regulatory and consulting services, and pay costs associated with maintaining compliance with Nasdaq listing rules and the requirements of the U.S. Securities and Exchange Commission, or SEC, director and officer liability insurance, investor and public relations activities and other expenses associated with operating as a public company. Our net losses may fluctuate significantly from quarter-to-quarter and year-to-year, depending on the timing of our preclinical studies, our clinical trials and our expenditures on other research and development activities.

We do not have any products approved for sale. We will not generate revenue from product sales unless and until we successfully complete clinical development and obtain regulatory approval for our product candidates, if ever. In addition, if we obtain regulatory approval for our product candidates and do not enter into a third-party commercialization partnership, we expect to incur significant expenses related to developing our commercialization capability to support product sales, marketing, manufacturing and distribution activities. As a result, we will need substantial additional funding to support our continuing operations and pursue our growth strategy. Until we can generate significant revenue from product sales, if ever, we expect to finance our operations through a combination of public or private equity offerings and debt financings or other sources, such

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as potential collaboration agreements, strategic alliances and licensing arrangements. We may be unable to raise additional funds or enter into such other agreements or arrangements when needed on acceptable terms, or at all. Our failure to raise capital or enter into such agreements as, and when, needed, could have a negative effect on our business, results of operations and financial condition.

Components of Results of Operations

Revenue

To date, we have not recognized any revenue from any sources, including from product sales, and we do not expect to generate any revenue from the sale of products in the foreseeable future. If our development efforts for our product candidates are successful and result in regulatory approval, or license agreements with third parties, we may generate revenue in the future from product sales. However, there can be no assurance as to when we will generate such revenue, if at all.

Collaboration Agreement with Ono Pharmaceutical Company Ltd.

In January 2019, we entered into a research services, license and collaboration agreement with Ono Pharmaceutical Company Ltd., or Ono, pursuant to which we and Ono have agreed to collaborate in the research of potential product candidates targeting Polq and the development of our small molecule Polq inhibitor program. Pursuant to the terms of the agreement, we received initial upfront payments of approximately \$8.1 million. These upfront payments have been recorded as deferred revenue on our balance sheet as of December 31, 2019 as per our revenue recognition accounting policy and will be recognized as revenue at the point in time when a product candidate is licensed to Ono pursuant to the terms of the agreement. Refer to Notes 2 and 10 to our consolidated financial statements included elsewhere in this prospectus for additional information regarding our revenue recognition accounting policy and our collaboration agreement with Ono.

Operating Expenses

Research and Development Expenses

Research and development expenses consist primarily of costs incurred for our research activities, including our drug discovery efforts and the development of our product candidates. We expense research and development costs as incurred, which include:

- external research and development expenses incurred under agreements with contract research organizations, or CROs, as well as investigative sites and consultants that conduct our clinical trials, preclinical studies and other scientific development services;
- employee-related expenses, including salaries, bonuses, benefits, share-based compensation, other related costs for those employees involved in research and development efforts;
- costs related to manufacturing material for our preclinical studies and clinical trials, including fees paid to CMOs;
- laboratory supplies and research materials;
- upfront, milestone and maintenance fees incurred under license, acquisition and other third-party agreements;
- costs related to compliance with regulatory requirements; and
- facilities, depreciation, scientific advisory board and other allocated expenses, which include direct and allocated expenses for rent, maintenance of facilities and equipment, insurance, equipment and software.

Costs for certain activities are recognized based on an evaluation of the progress to completion of specific tasks using data such as information provided to us by our vendors and analyzing the progress of our preclinical studies or other services performed. Significant judgment and estimates are made in determining the accrued expense balances at the end of any reporting period.

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We characterize research and development costs incurred prior to the identification of a product candidate as discovery costs. We characterize costs incurred once a product candidate has been identified as development costs.

Our direct external research and development expenses consist primarily of fees paid to outside consultants, CROs, CMOs and research laboratories in connection with our preclinical development, process development, manufacturing and clinical development activities. Our direct external research and development expenses also include fees incurred under license, acquisition and option agreements. We track these external research and development costs on a program-by-program basis once we have identified a product candidate.

We do not allocate employee costs, costs associated with our discovery efforts, laboratory supplies, and facilities, including depreciation or other indirect costs, to specific programs because these costs are deployed across multiple programs and, as such, are not separately classified. We use internal resources primarily to conduct our research and discovery activities as well as for managing our preclinical development, process development, manufacturing and clinical development activities.

The following table summarizes our research and development costs:

	Year Ended December 31,		
	2017	2018	2019
Discovery costs			
Direct external costs	\$2,259	\$ 3,918	\$ 7,004
Laboratory supplies and research materials	687	1,788	3,154
Personnel related costs	1,129	3,155	4,476
Facilities related costs	64	399	363
Other costs	424	976	1,678
	<u>4,563</u>	<u>10,236</u>	<u>16,675</u>
Development			
RP-3500 program (direct external costs)	—	—	3,512
Personnel related costs	—	—	1,017
Facilities related costs	—	—	357
Other costs	—	—	—
	<u>—</u>	<u>—</u>	<u>4,886</u>
R&D tax credits	(162)	(330)	(566)
Total research and development costs	<u>\$4,401</u>	<u>\$ 9,906</u>	<u>\$20,995</u>

The successful development of our product candidates is highly uncertain. We plan to substantially increase our research and development expenses for the foreseeable future as we continue the development of our product candidates and manufacturing processes and conduct discovery and research activities for our preclinical programs. We cannot determine with certainty the timing of initiation, the duration or the completion costs of current or future preclinical studies and clinical trials of our product candidates due to the inherently unpredictable nature of preclinical and clinical development. Clinical and preclinical development timelines, the probability of success and development costs can differ materially from expectations. We anticipate that we will make determinations as to which product candidates to pursue and how much funding to direct to each product candidate on an ongoing basis in response to the results of ongoing and future preclinical studies and clinical trials, regulatory developments and our ongoing assessments as to each product candidate's commercial potential. We will need to raise substantial additional capital in the future. Our clinical development costs are expected to increase significantly as we commence clinical trials. We anticipate that our expenses will increase substantially, particularly due to the numerous risks and uncertainties associated with developing product candidates, including the uncertainty of:

- the scope, rate of progress, and expenses of our ongoing research activities as well as any preclinical studies, clinical trials and other research and development activities;

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- establishing an appropriate safety profile;
- successful enrollment in and completion of clinical trials;
- whether our product candidates show safety and efficacy in our clinical trials;
- receipt of marketing approvals from applicable regulatory authorities;
- establishing commercial manufacturing capabilities or making arrangements with third-party manufacturers;
- obtaining and maintaining patent and trade secret protection and regulatory exclusivity for our product candidates;
- commercializing product candidates, if and when approved, whether alone or in collaboration with others; and
- continued acceptable safety profile of products following any regulatory approval.

Any changes in the outcome of any of these variables with respect to the development of our product candidates in preclinical and clinical development could mean a significant change in the costs and timing associated with the development of these product candidates. We may never succeed in achieving regulatory approval for any of our product candidates. We may obtain unexpected results from our clinical trials. We may elect to discontinue, delay or modify clinical trials of some product candidates or focus on other product candidates. For example, if the FDA, EMA or another regulatory authority were to delay our planned start of clinical trials or require us to conduct clinical trials or other testing beyond those that we currently expect or if we experience significant delays in enrollment in any of our planned clinical trials, we could be required to expend significant additional financial resources and time on the completion of clinical development of that product candidate.

General and Administrative Expenses

General and administrative expense consists primarily of employee related costs, including salaries, bonuses, benefits, share-based compensation and other related costs, as well as expenses for outside professional services, including legal, accounting and audit services and other consulting fees, rent expense, and other general administrative expenses.

We anticipate that our general and administrative expenses will increase in the future as we increase our headcount to support our continued research activities and development of our product candidates. We also anticipate that we will incur significantly increased accounting, audit, legal, regulatory, compliance and director and officer insurance costs as well as investor and public relations expenses associated with operating as a public company.

Other (Expense) Income, Net

Other (expense) income, net consists primarily of changes in the fair value of convertible notes and Series A preferred share tranche obligations, as well as realized and unrealized gains and losses on foreign exchange and other expenses such as interest and bank charges.

Changes in the fair value of convertible notes consisted of losses on the re-measurement at fair value at each reporting date of the convertible notes liability as we elected the fair value option to account for our convertible notes. As of June 2017, in connection with our Series A preferred financing, the outstanding convertible notes were converted into shares of Series A preferred shares and as such, the convertible notes liability was extinguished.

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Changes in the fair value of the Series A preferred share tranche obligation consisted of gains and losses on the re-measurement at fair value at each reporting date of the tranche obligation, arising from the obligation and right to make future issuances of Series A preferred shares. As of September 2019, in connection with the issuance and sale of Series B preferred shares, the final Series A preferred tranche obligation was extinguished and recognized as additional paid-in-capital.

Realized and unrealized gains and losses on foreign exchange consist of realized and unrealized gains and losses from holding cash and restricted cash in foreign currency and foreign currency denominated research and development tax credits receivable, other receivables, accounts payable, accrued expenses and other current liabilities as well as operating lease liabilities.

Results of Operations

Comparison of the Years Ended December 31, 2018 and 2019

The following table summarizes our results of operations for the years ended December 31, 2018 and 2019:

	YEAR ENDED DECEMBER 31,		CHANGE
	2018	2019	
	(in thousands)		
Operating expenses:			
Research and development, net of tax credits	\$ 9,906	\$ 20,995	\$ 11,089
General and administrative	2,914	5,382	2,468
Total operating expenses	12,820	26,377	13,557
Loss from operations	(12,820)	(26,377)	(13,557)
Other (expense) income, net:			
Realized and unrealized gain (loss) on foreign exchange	(292)	712	1,004
Change in fair value of Series A preferred share tranche obligation	(1,130)	(1,350)	(220)
Other expense	(6)	(6)	—
Total other expense, net	(1,428)	(644)	784
Loss before income taxes	(14,248)	(27,021)	(12,773)
Income tax expense	(35)	(195)	(160)
Net loss and comprehensive loss	<u>\$ (14,283)</u>	<u>\$ (27,216)</u>	<u>\$ (12,933)</u>

Research and Development Expenses, Net of Tax Credits

Research and development expenses were \$21.0 million for the year ended December 31, 2019, compared to \$9.9 million for the year ended December 31, 2018. The increase of \$11.1 million was primarily due to a:

- \$6.6 million increase in direct external costs for both discovery and development activities as a result of our increased efforts towards identifying a product candidate and advancing the development of RP-3500;
- \$2.3 million increase in personnel related expenses in support of our increased discovery and development activities;
- \$1.4 million increase in lab supplies and research materials as a result of our increased efforts towards identifying a product candidate; and
- \$0.8 million net increase in other research and development costs in support of increased research and development activities.

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General and Administrative Expenses

General and administrative expenses were \$5.4 million for the year ended December 31, 2019, compared to \$2.9 million for the year ended December 31, 2018. The increase of \$2.5 million consisted of a \$1.1 million increase in payroll and personnel related costs, a \$0.7 million increase in legal and professional fees and a \$0.7 million increase in other general and administrative expenses, related to costs associated with operating activities and the preparations for becoming a public company.

Other Expense, Net

Other expense, net was \$0.6 million for the year ended December 31, 2019, compared to \$1.4 million for the year ended December 31, 2018. The decrease of \$0.8 million is primarily attributable to an increase of \$1.0 million in realized and unrealized gains on foreign exchange as a result of fluctuations in foreign exchange rates, as well as higher foreign currency-denominated cash balances held in 2019, partially offset by a \$0.2 million increase in changes in the fair value of our Series A preferred share tranche obligation year over year.

Income Tax Expense

Income tax expense was \$0.2 million for the year ended December 31, 2019. This expense was primarily attributed to withholding taxes on one of the upfront payments under our collaboration agreement with Ono as well as higher taxable income in our U.S. subsidiary. Income tax expense was \$0.03 million for the year ended December 31, 2018, reflecting taxable income in our U.S. subsidiary.

Net Loss

We had net losses of \$14.3 million and \$27.2 million for the years ended December 31, 2018 and 2019, respectively.

Comparison of the Years Ended December 31, 2017 and 2018

The following table summarizes our results of operations for the years ended December 31, 2017 and 2018:

	YEAR ENDED DECEMBER 31,		
	2017	2018	CHANGE
	(in thousands)		
Operating expenses:			
Research and development, net of tax credits	\$ 4,401	\$ 9,906	\$ 5,505
General and administrative	1,774	2,914	1,140
Total operating expenses	6,175	12,820	6,645
Loss from operations	(6,175)	(12,820)	(6,645)
Other (expense) income, net:			
Realized and unrealized gain (loss) on foreign exchange	(147)	(292)	(145)
Change in fair value of convertible notes	(1,615)	—	1,615
Change in fair value of Series A preferred share tranche obligation	180	(1,130)	(1,310)
Other expense	(39)	(6)	33
Total other expense, net	(1,621)	(1,428)	193
Loss before income taxes	(7,796)	(14,248)	(6,452)
Income tax expense	—	(35)	(35)
Net and comprehensive loss	<u>\$ (7,796)</u>	<u>\$ (14,283)</u>	<u>\$ (6,487)</u>

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Research and Development Expenses, Net of Tax Credits

Research and development expenses were \$9.9 million for the year ended December 31, 2018, compared to \$4.4 million for the year ended December 31, 2017. The \$5.5 million increase was primarily due to a:

- \$1.6 million increase in direct external costs for both discovery and development activities as a result of our increased efforts towards identifying a product candidate;
- \$2.1 million increase in personnel related expenses in support of our increased discovery and development activities;
- \$1.1 million increase in lab supplies and research materials as a result of our increased efforts towards identifying a product candidate; and
- \$0.7 million net increase in other research and development net costs in support of our increased research and development activities.

General and Administrative Expenses

General and administrative expenses were \$2.9 million for the year ended December 31, 2018, compared to \$1.8 million for the year ended December 31, 2017. The increase of \$1.1 million is primarily attributed to a \$0.7 million increase in payroll and personnel related costs, a \$0.3 million increase in legal and professional fees and a \$0.1 million increase in other general and administrative expenses, all in support of operating activities.

Other Expense, Net

Other expense, net was \$1.4 million for the year ended December 31, 2018, compared to \$1.6 million for the year ended December 31, 2017. The decrease of \$0.2 million is primarily attributable to a decrease of \$1.6 million in changes in the fair value of our convertible notes as a result of their conversion into Series A preferred shares in 2017, partially offset by an increase of \$1.3 million in changes in the fair value of our Series A preferred share tranche obligation and a \$0.1 million increase in realized and unrealized losses on foreign exchange as a result of fluctuations in foreign exchange rates.

Income Tax Expense

Income tax expense was \$0.03 million for the year ended December 31, 2018, reflecting taxable income in our U.S. subsidiary. No comparable income tax expense was incurred for the year ended December 31, 2017.

Net Loss

We had net losses of \$7.8 million and \$14.3 million for the years ended December 31, 2017 and 2018, respectively.

Liquidity and Capital Resources

Sources of Liquidity

Since our inception, we have not recognized any revenue and have incurred operating losses and negative cash flows from our operations. We have not yet commercialized any product and we do not expect to generate revenue from sales of any products for several years, if at all. Since our inception, we have funded our operations primarily through equity financings, and have raised an aggregate of approximately \$135.2 million of gross proceeds from the sale of our preferred shares. We have also partnered with Ono for our Polq inhibitor program and received initial upfront payments of approximately \$8.1 million. As of December 31, 2019, we had \$94.8 million of cash on hand.

Funding Requirements

As of December 31, 2019, our cash on hand was \$94.8 million. We believe that the net proceeds from this offering, together with our existing cash on hand, will enable us to fund our operating expenses and capital expenditure requirements into . We have based this estimate on assumptions that may prove to be wrong, and we could expend our capital resources sooner than we expect.

We expect to incur significant expenses and operating losses for the foreseeable future as we advance our product candidates through preclinical and clinical development, seek regulatory approval and pursue commercialization of any approved product candidates. We expect that our research and development and general and administrative costs will increase in connection with our planned research and development activities. In addition, upon the completion of this offering, we expect to incur additional costs associated with operating as a public company.

We believe that our existing cash on hand will be sufficient to fund our anticipated operating and capital expenditure requirements for at least the next 12 months from the date of this prospectus. We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our capital resources sooner than we expect. If we receive regulatory approval for any of our product candidates, we expect to incur significant commercialization expenses related to product manufacturing, sales, marketing and distribution, depending on where we choose to commercialize. We may also require additional capital to pursue in-licenses or acquisitions of other product candidates.

Because of the numerous risks and uncertainties associated with research, development and commercialization of our product candidates, we are unable to estimate the exact amount of our working capital requirements. Our future capital requirements will depend on many factors, including:

- the initiation, timing, costs, progress and results of our planned clinical trials of RP-3500;
- the progress of preclinical development and possible clinical trials of our current earlier-stage programs;
- the scope, progress, results and costs of our research programs and preclinical development of any additional product candidates that we may pursue;
- the development requirements of other product candidates that we may pursue;
- our headcount growth and associated costs as we expand our research and development and establish a commercial infrastructure;
- the timing and amount of milestone and royalty payments that we are required to make or eligible to receive under our current or future collaboration agreements;
- the outcome, timing and cost of meeting regulatory requirements established by the FDA, EMA and other regulatory authorities;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval;
- the cost of expanding, maintaining and enforcing our intellectual property portfolio, including filing, prosecuting, defending and enforcing our patent claims and other intellectual property rights;
- the cost of defending potential intellectual property disputes, including patent infringement actions brought by third parties against us or any of our product candidates;
- the effect of competing technological and market developments;
- the cost and timing of completion of commercial-scale manufacturing activities;

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- the extent to which we partner our programs, acquire or in-license other product candidates and technologies or enter into additional strategic collaborations;
- the revenue, if any, received from commercial sales of RP-3500 and any future product candidates for which we receive marketing approval; and
- the costs of operating as a public company.

Until such time, if ever, as we can generate substantial product revenues to support our cost structure, we expect to finance our cash needs through a combination of equity offerings, debt financings, collaborations and other similar arrangements. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our shareholders will be or could be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our common shareholders. Debt financing and equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise funds through collaborations, or other similar arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates or grant licenses on terms that may not be favorable to us and/or may reduce the value of our common shares. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market our product candidates even if we would otherwise prefer to develop and market such product candidates ourselves.

Cash Flows

Comparison of the Years Ended December 31, 2018 and 2019

The following table summarizes our cash flows for each of the years presented:

	YEAR ENDED DECEMBER 31,		Change
	2018	2019	
		(in thousands)	
Net cash used in operating activities	\$(12,618)	\$ (18,429)	\$ (5,811)
Net cash used in investing activities	(583)	(1,304)	(721)
Net cash provided by financing activities	—	103,243	103,243
Effect of exchange rate fluctuations on cash held	(259)	566	825
Net (decrease) increase in cash and cash equivalents	<u>\$(13,460)</u>	<u>\$ 84,076</u>	<u>\$ 97,536</u>

Operating Activities

Net cash used in operating activities was \$12.6 million for the year ended December 31, 2018, reflecting a net loss of \$14.3 million, a net change of \$0.4 million in our net operating assets and non-cash charges of \$2.1 million. The non-cash charges primarily consist of changes in the fair value of the Series A preferred share tranche obligation, depreciation expense, share-based compensation expense for option grants to employees as well as foreign exchange gains and losses. The change in our net operating assets and liabilities was primarily due to an increase of \$0.5 million for research and development tax credits receivable, other receivables and prepaid expenses, partially offset by a net increase of \$0.1 million in accrued expenses and other current liabilities.

Net cash used in operating activities was \$18.4 million for the year ended December 31, 2019, reflecting a net loss of \$27.2 million, offset by a net change of \$6.6 million in our net operating assets and non-cash charges of \$2.2 million. The non-cash charges primarily consist of changes in the fair value of the Series A preferred

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share tranche obligation, depreciation expense, share-based compensation expense for option grants to employees, non-cash lease expense as well as foreign exchange gains and losses. The change in our net operating assets and liabilities was primarily due to an increase of \$8.1 million in deferred revenue from the upfront payments received from Ono pursuant to the terms of our collaboration, an increase of \$1.7 million in accounts payable, accrued expenses and other current liabilities, partially offset by a decrease of \$0.4 million in operating lease liabilities and an increase of \$2.8 million for prepaid expenses, research and development tax credits receivable, other receivables and other non-current assets.

The \$5.8 million increase in cash used in operating activities for the year ended December 31, 2019 compared to December 31, 2018 is primarily due to an increase in research and development expenses and general and administrative expenses as a result of our increased efforts towards identifying product candidates and advancing the development of RP-3500, partially offset by the \$8.1 million in upfront payments received from Ono under the terms of our collaboration for our Polq inhibitor program.

Investing Activities

Net cash used in investing activities was \$0.6 million and \$1.3 million for the years ended December 31, 2018 and 2019, respectively, and resulted from the purchases of property and equipment.

Financing Activities

Net cash provided by financing activities was \$103.2 million for the year ended December 31, 2019, consisting of net proceeds from the issuance of Series A preferred shares in January 2019 and net proceeds from the issuance of Series B preferred shares in September 2019. We had no cash provided by financing activities in 2018.

Comparison of the Years Ended December 31, 2017 and 2018

The following table summarizes our cash flows for each of the years presented:

	YEAR ENDED DECEMBER 31,		Change
	2017	2018	
	(in thousands)		
Net cash used in operating activities	\$ (6,007)	\$ (12,618)	\$ (6,611)
Net cash used in investing activities	(1,156)	(583)	573
Net cash provided by financing activities	30,458	—	(30,458)
Effect of exchange rate fluctuations on cash held	7	(259)	(266)
Net increase (decrease) in cash and cash equivalents	<u>\$23,302</u>	<u>\$ (13,460)</u>	<u>\$ (36,762)</u>

Operating Activities

Net cash used in operating activities was \$6.0 million for the year ended December 31, 2017, reflecting a net loss of \$7.8 million, a net change of \$0.2 million in our net operating assets and non-cash charges of \$1.6 million. The non-cash charges primarily consist of changes in the fair value of the convertible notes and Series A preferred share tranche obligation, depreciation expense and share-based compensation expense for option grants to employees. The change in our net operating assets and liabilities was primarily attributable to an increase of \$1.1 million in accounts payables, accrued expenses and other current liabilities, as well as other liabilities, partially offset by an increase of \$0.8 million in prepaid expenses, research and development tax credits receivable, other receivables and other non-current assets.

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Net cash used in operating activities was \$12.6 million for the year ended December 31, 2018, reflecting a net loss of \$14.3 million, a net change of \$0.4 million in our net operating assets and non-cash charges of \$2.1 million. The non-cash charges primarily consist of changes in the fair value of the Series A preferred share tranche obligation, depreciation expense, share-based compensation expense for option grants to employees as well as foreign exchange gains and losses. The change in our net operating assets and liabilities was primarily due to an increase of \$0.5 million for research and development tax credits receivable, other receivables and prepaid expenses, partially offset by a net increase of \$0.1 million in accrued expenses and other current liabilities.

The \$6.6 million increase in cash used in operating activities for the year ended December 31, 2018 compared to December 31, 2017 was primarily due to an increase in research and development expenses and general and administrative expenses as a result of our increased efforts towards advancing our research and development program.

Investing Activities

Net cash used in investing activities was \$1.2 million and \$0.6 million for the years ended December 31, 2017 and 2018, respectively, and resulted from the purchases of property and equipment.

Financing Activities

Net cash provided by financing activities was \$30.5 million for the year ended December 31, 2017, consisting of net proceeds from the issuance of convertible notes in April 2017 and the net proceeds from the issuance of Series A preferred shares in June 2017. We had no cash provided by financing activities in 2018.

Contractual Obligations and Commitments

The following table summarizes our commitments to settle contractual obligations at December 31, 2019 (in thousands), other than leases which are recognized as operating lease liabilities in our balance sheet:

	Payments Due By Period				
	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 Years
Collaboration and research agreements	\$1,125	\$ 525	\$ 550	\$ 50	\$ —
Total	\$1,125	\$ 525	\$ 550	\$ 50	\$ —

The commitment amounts in the table above are associated with contracts that are enforceable and legally binding and that specify all significant terms, including fixed or minimum services to be used, fixed, minimum or variable price provisions, and the approximate timing of the actions under the contracts.

Collaboration and Research Agreements

Collaboration and research agreement obligations primarily related to the agreement we entered into with the Broad Institute Inc., or Broad, in February 2019, under which Broad will perform specialty screening services at our request over the course of a three-year term in exchange for payments of \$0.5 million per year, totaling \$1.5 million in the aggregate.

Not included in the table above is a strategic collaboration agreement that we entered into with the University of Texas M. D. Anderson Cancer Center, or MDACC, in March 2020. The collaboration will consist of preclinical studies and clinical trials designed by us and MDACC with the research to be completed by MDACC. We have agreed to commit \$10.0 million in the aggregate to fund the collaboration, with payments to be made over a period of five years.

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Purchase and Other Obligations

In the normal course of business, we enter into contracts with CROs and other third parties for preclinical studies and clinical trials, research and development supplies and other testing and manufacturing services. These contracts generally do not contain minimum purchase commitments and provide for termination on notice, and therefore are cancellable contracts. These payments are not included in the table above as the amount and timing of such payments are not known as of December 31, 2019.

We have also entered into license agreements under which we are obligated to make milestone and royalty payments and incur annual maintenance fees. We have not included future milestone or royalty payments under these agreements in the table above since the payment obligations are contingent upon future events, such as achieving certain clinical and commercial milestones or generating product sales. As of December 31, 2019, we were unable to estimate the timing or likelihood of achieving these clinical and commercial milestones or generating future product sales. See the section titled “—License and Collaboration Agreements” elsewhere in this prospectus as well as Note 6 to our consolidated financial statements appearing elsewhere in this prospectus for a description of our license agreements.

Critical Accounting Policies and Significant Judgments and Estimates

This management’s discussion and analysis is based on our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these consolidated financial statements requires us to make judgments and estimates that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of expenses during the reported periods. We base our estimates on historical experience, known trends and events, and various other factors that we believe to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions. On an ongoing basis, we evaluate our judgments and estimates in light of changes in circumstances, facts, and experience. The effects of material revisions in estimates, if any, will be reflected in the consolidated financial statements prospectively from the date of change in estimates.

While our accounting policies are described in more detail in the notes to our consolidated financial statements appearing elsewhere in this prospectus, we believe the following accounting policies used in the preparation of our consolidated financial statements require the most significant judgments and estimates. See Note 2 to our consolidated financial statements included elsewhere in this prospectus for a description of our other significant accounting policies.

Accrued Research and Development Expenses

As part of the process of preparing our consolidated financial statements, we are required to estimate our accrued research and development expenses as of each balance sheet date. This process involves reviewing open contracts and purchase orders, communicating with our personnel to identify services that have been performed on our behalf, and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of the actual cost. The majority of our service providers invoice us monthly in arrears for services performed or when contractual milestones are met. We make estimates of our accrued expenses as of each balance sheet date based on facts and circumstances known to us at that time. We periodically confirm the accuracy of our estimates with the service providers and make adjustments if necessary.

We base our expenses related to research and development activities on our estimates of the services received and efforts expended pursuant to quotes and contracts with vendors that conduct research and development on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. There may be instances in which payments made to our

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vendors will exceed the level of services provided and result in a prepayment of the research and development expense. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from our estimate, we adjust the accrual or prepaid balance accordingly. Non-refundable advance payments for goods and services that will be used in future research and development activities are expensed when the activity has been performed or when the goods have been received rather than when the payment is made.

Although we do not expect our estimates to be materially different from amounts incurred, if our estimates of the status and timing of services performed differ from the actual status and timing of services performed, it could result in us reporting amounts that are too high or too low in any particular period.

Preferred Share Tranche Obligation

The initial fair value of the preferred share tranche obligation recognized in connection with our issuance of Series A preferred shares in June 2017 was determined based on significant inputs not observable in the market, which represents a Level 3 measurement within the fair value hierarchy, which are detailed in Note 3 to our consolidated financial statements included elsewhere in this prospectus. The initial fair value of the obligation was estimated based on results of a third-party valuation. This obligation is remeasured prior to the issuance of subsequent tranches and at each subsequent reporting period. See Note 8 to our consolidated financial statements included elsewhere in this prospectus for additional information regarding our issuances of preferred shares.

Each tranche obligation is valued as a forward contract. The values are determined using a probability-weighted present value calculation. In determining the fair values of the tranche obligations, estimates and assumptions impacting fair value included the future value of our Series A preferred shares, discount rates, estimated years to liquidity, and probability of each tranche closing. We determined the per share future value of the Series A preferred shares by back-solving to the initial proceeds of the Series A financing. We remeasured each tranche obligation at each reporting period and prior to settlement.

Share-Based Compensation

We measure share-based compensation based on the grant date fair value of the share-based awards and recognize share-based compensation expense on a straight-line basis over the requisite service period of the awards, which is generally the vesting period of the respective award. For non-employee awards, compensation expense is recognized as the services are provided, which is generally ratably over the vesting period. On January 1, 2017, we adopted, using the modified retroactive approach, the guidance of *Accounting Standard Update, or ASU, 2018-07, Compensation — Stock Compensation (Topic 718) — Improvements to Nonemployee Share-Based Payment Accounting*, and account for awards to non-employees using the grant date fair value without subsequent periodic remeasurement. The adoption of ASU 2018-07 did not have a material effect on our consolidated financial statements.

Share-based compensation expense is classified in our consolidated statements of operations and comprehensive loss based on the function to which the related services are provided. We recognize share-based compensation expense for the portion of awards that have vested. Forfeitures are accounted for as they occur.

The fair value of each option grant is estimated on the date of grant using the Black-Scholes option-pricing model, which requires inputs based on certain subjective assumptions, including the expected share price volatility, the expected term of the option, the risk-free interest rate for a period that approximates the expected term of the option, and our expected dividend yield. The fair value of each restricted common shares award is estimated on the date of grant based on the fair value of our common share on that same date. As there is currently no public market for our common shares, we determined the volatility for awards granted based on an analysis of reported data for a group of guideline companies that issued options with substantially similar terms.

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The expected volatility has been determined using a weighted-average of the historical volatility measures of this group of guideline companies. We expect to continue to do so until we have adequate historical data regarding the volatility of the trading price of our common shares on Nasdaq. The expected term of our options granted to employees has been determined utilizing the “simplified” method for awards that qualify as “plain-vanilla” options. With the adoption of ASU 2018-07, we applied the nonpublic entity practical expedient for calculating the expected term of non-employee awards, using the midpoint between the vesting date and the contractual term, which is consistent with the method used for employee awards. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve in effect at the time of grant of the award for time periods approximately equal to the expected term of the award. We have not paid, and do not anticipate paying, dividends on our common shares; therefore, the expected dividend yield is assumed to be zero.

As there has been no public market for our common shares to date, the historical estimated fair value of our common shares has been approved by our board of directors, considering our most recently available independent third-party valuations of common shares. In accordance with the guidance outlined in the American Institute of Certified Public Accountants’ Accounting and Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*, a third-party valuation firm prepared valuations of our common shares using either an option pricing method, or OPM, or a hybrid method, both of which used market approaches to estimate our enterprise value. The OPM treats common shares and preferred shares as call options on the total equity value of a company, with exercise prices based on the value thresholds at which the allocation among the various holders of a company’s securities changes. Under this method, the common shares have value only if the funds available for distribution to shareholders exceeded the value of the preferred share liquidation preferences at the time of the liquidity event, such as a strategic sale or a merger. A discount for lack of marketability of the common shares is then applied to arrive at an indication of value for the common shares. The hybrid method is a probability-weighted expected return method, or PWERM, where the equity value in one or more scenarios is calculated using an OPM. The PWERM is a scenario-based methodology that estimates the fair value of common shares based upon an analysis of future values for the company, assuming various outcomes. The common share value is based on the probability-weighted present value of expected future investment returns considering each of the possible outcomes available as well as the rights of each share class. The future value of the common share under each outcome is discounted back to the valuation date at an appropriate risk-adjusted discount rate and probability weighted to arrive at an indication of value for the common share.

In addition to considering the results of the third-party valuations, our board of directors considered various objective and subjective factors to determine the fair value of our common shares as of each grant date, which may be a date later than the most recent third-party valuation date, including:

- the prices at which we sold preferred shares and the superior rights and preferences of the preferred shares relative to our common shares at the time of each grant;
- the progress of our research and development efforts, including the status of preclinical studies for our product candidates;
- the lack of liquidity of our equity as a private company;
- our stage of development and business strategy and the material risks related to our business and industry;
- the achievement of enterprise milestones, including entering into collaboration and license agreements;
- the valuation of publicly traded companies in the life sciences and biotechnology sectors, as well as recently completed mergers and acquisitions of peer companies;
- any external market conditions affecting the biotechnology industry, and trends within the biotechnology industry;

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- the likelihood of achieving a liquidity event for the holders of our preferred shares and holders of our common shares, such as an initial public offering, or IPO, or a sale of our company, given prevailing market conditions; and
- the analysis of IPOs and the market performance of similar companies in the biopharmaceutical industry.

There are significant judgments and estimates inherent in these valuations. These judgments and estimates include assumptions regarding our future operating performance, the stage of development of our product candidates, the timing of a potential IPO or other liquidity event and the determination of the appropriate valuation methodology at each valuation date. The assumptions underlying these valuations represent management's best estimates, which involve inherent uncertainties and the application of management judgment. As a result, if factors or expected outcomes change and we use significantly different assumptions or estimates, our share-based compensation expense could be materially different. Following the completion of this offering, the fair value of our common shares will be determined based on the quoted market price of our common shares.

The following table sets forth by grant date, the number of shares underlying options granted, the per share exercise price of options, the fair value of per common share on each grant date, and the per share estimated fair value of the options granted between January 1, 2017 and December 31, 2019. We did not grant any restricted common shares during this period.

<u>Grant Date</u>	<u>Number of Common Shares Subject to Options Granted</u>	<u>Exercise Price per Common Share (1)</u>	<u>Estimated Per-Share Fair Value of Options (2)</u>	<u>Estimated Fair Value per Common Share at Grant Date (3)</u>	<u>Type</u>
December 1, 2017	4,987,000	\$ 0.27	\$ 0.17	\$ 0.27	Options
November 30, 2018	336,000	\$ 0.27	\$ 0.23	\$ 0.34	Options
November 30, 2018	240,000	\$ 0.34	\$ 0.21	\$ 0.34	Options
March 29, 2019	6,144,700	\$ 0.34	\$ 0.16	\$ 0.27	Options
September 25, 2019	20,000	\$ 0.34	\$ 0.19	\$ 0.31	Options
September 25, 2019	280,000	\$ 0.29	\$ 0.20	\$ 0.31	Options
September 25, 2019	105,000	\$ 0.31	\$ 0.20	\$ 0.31	Options
November 21, 2019	2,130,000	\$ 0.31	\$ 0.20	\$ 0.31	Options
December 16, 2019	7,992,750	\$ 0.40	\$ 0.26	\$ 0.40	Options
December 16, 2019	65,000	\$ 0.40	\$ 0.25	\$ 0.40	Options

- (1) The exercise price per common share represents the fair value of our common shares on the date of grant, as determined by our board of directors.
- (2) The estimated per share fair value of options reflects the weighted average fair value of options granted on each grant date, determined using the Black-Scholes option-pricing model.
- (3) At the time of the option grants above, our board of directors determined that the values included under "Exercise Price per Common Share" reasonably reflected the per share fair value of our common shares as of the grant dates. However, for certain dates, the fair value of the common shares at the date of these grants was adjusted to the amounts included under "Estimated Fair Value per Common Share at Grant Date" in connection with retrospective fair value assessments for financial reporting purposes.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined in the rules and regulations of the SEC.

Recently Adopted Accounting Pronouncements

See Note 2 to our consolidated financial statements financial statements appearing elsewhere in this prospectus for a description of recent accounting pronouncements applicable to our financial statements.

Qualitative and Quantitative Disclosures about Market Risk

We are exposed to certain market risks in the ordinary course of our business. Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily the result of fluctuations in foreign currency exchange rates.

Interest Rate Risk

Interest-earning instruments carry a degree of interest rate risk. We have not historically earned interest on our cash balances and we do not enter into investments for trading or speculative purposes.

Foreign Currency Exchange Risk

Our reporting and functional currency is the U.S. dollar. Assets and liabilities denominated in currencies other than the U.S. dollar are translated into U.S. dollars at exchange rates in effect at each balance sheet date. Income items and expenses are translated using the average exchange rate in effect for the relevant period.

We incur a portion of our expenses in Canadian dollars, as well as other currencies to a lesser extent. A change in the relative value of the U.S. dollar to the Canadian dollar and other currencies may negatively affect revenue and other operating results as expressed in U.S. dollars. We have not engaged in the hedging of foreign currency transactions to date, although we may choose to do so in the future. We do, however, keep expected Canadian dollar cash requirements in Canadian dollars to form a natural hedge. We are exposed to currency risk through our cash, research and development tax credits receivable, other receivables, restricted cash, accounts payable, accrued expenses and other current liabilities, and operating lease liabilities denominated in Canadian dollars. Based on our December 31, 2019 Canadian dollar net exposure, and assuming all other variables remain constant, a 10% depreciation in the relative value of the U.S. dollar to the Canadian dollar would result in an increase of approximately \$2.3 million on our net loss.

We are also exposed to currency risk through our collaboration agreement with Ono as future payments receivable under our collaboration agreement, if any, are denominated in Japanese yen.

JOBS Act

In April 2012, the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, was enacted. The JOBS Act provides that, among other things, an “emerging growth company” can take advantage of the extended transition period for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to take advantage of the benefits of this extended transition period. Our financial statements may therefore not be comparable to those of companies that comply with such new or revised accounting standards. Until the date that we are no longer an “emerging growth company” or affirmatively and irrevocably opt out of the exemption provided by Section 7(a)(2)(B) of the Securities Act, upon issuance of a new or revised accounting standard that applies to our financial statements and that has a different date for public and private companies, we will disclose the date on which adoption is required for non-emerging growth companies and the date on which we will adopt the recently issued accounting standard.

In addition, we intend to rely on the other exemptions and reduced reporting requirements provided by the JOBS Act. Subject to certain conditions, as an emerging growth company, we are entitled to rely on certain of these exemptions, including without limitation, (i) providing an auditor’s attestation report on our system of internal controls over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act and (ii) complying with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor’s report providing additional information about the audit and the financial statements, known as the auditor discussion and analysis.

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We will remain an emerging growth company until the earlier to occur of (1) the last day of our fiscal year (a) following the fifth anniversary of the completion of this offering, (b) in which we have total annual gross revenues of at least \$1.0 billion or (c) in which we are deemed to be a “large accelerated filer” under the rules of the SEC, which means the market value of our common shares that is held by non-affiliates exceeds \$700 million as of the last day of the second quarter of our fiscal year, and (2) the date on which we have issued more than \$1.0 billion in non-convertible debt during the prior three-year period.

BUSINESS

Overview

We are a leading precision oncology company enabled by our proprietary synthetic lethality approach to the discovery and development of novel therapeutics. Synthetic lethality, or SL, represents a clinically validated approach to drug development. We use our proprietary, genome-wide, CRISPR-enabled SNIPRx platform to systematically discover and develop highly targeted cancer therapies focused on genomic instability, including DNA damage repair. SL arises when a deficiency in either of two genes is tolerated in cells, but simultaneous deficiencies in both genes cause cell death. Cancer cells that contain a mutation in one gene of a SL pair are susceptible to therapeutic intervention targeting the other gene pair. Using our SNIPRx platform, we are developing our pipeline of SL product candidates, including our lead product candidate, RP-3500, an oral small molecule inhibitor for the treatment of solid tumors with specific DNA damage repair-related genomic alterations. We anticipate filing an investigational new drug, or IND, application and initiating an open-label Phase 1/2 clinical trial of RP-3500 in .

We believe our powerful SL-based approach to the development of new precision oncology therapeutics has multiple potential benefits:

- **Ability to address previously untargetable tumor biology**, including, for example, loss of function mutations;
- **Enhanced benefit-risk profile**, by precisely targeting tumor cells with the defined mutation while sparing normal, non-cancerous cells;
- **Genetic stratification of patients**, potentially enabling higher response rates; and
- **Tumor-agnostic approach**, focusing on specific genetics and enabling the application to multiple tumor types.

A cornerstone of our company is our SNIPRx platform, which enables us to accurately identify SL gene pairs and the corresponding patients who are most likely to benefit from our therapies based on the genetic profile of their tumors. These differentiated patient selection insights have driven the development of our lead product candidate, RP-3500, which is designed as a selective inhibitor of the DNA repair protein ataxia telangiectasia and Rad3-related protein, or ATR, a kinase that is activated by DNA replication stress. Tumors containing alterations in genes encoding other DNA repair proteins, such as ataxia-telangiectasia mutated kinase, or ATM, are SL with ATR inhibition and were observed to be hypersensitive to RP-3500 in our preclinical models. We believe that the preclinical selectivity and pharmacokinetic properties of RP-3500 support the profile of a differentiated therapy with the potential to enhance anti-tumor activity as compared to third party ATR inhibitors currently in development. Based on our preclinical studies, we believe RP-3500 has the potential to provide therapeutic benefit to identified patient populations both as a monotherapy and in combination with other therapies such as poly (ADP-ribose) polymerase, or PARP, inhibitors.

In addition to RP-3500, we are developing a portfolio of product candidates based on targets identified using our SNIPRx platform to treat cancers with a high unmet medical need. We have a preclinical program that is focused on a novel target we discovered to be SL with amplification of cyclin E1, or CCNE1, in tumors such as gynecological and upper gastrointestinal malignancies. We anticipate advancing a clinical candidate for this potential first-in-class program into IND-enabling studies in . We are also developing an inhibitor of the gene polymerase theta, or Polq, which is SL with multiple gene deficiencies found in tumors, including BRCA1 or BRCA2. We anticipate advancing a clinical candidate and initiating IND-enabling studies for this program in .

The core of our SNIPRx platform is the ability to identify both known and novel SL targets. Our SNIPRx platform begins with a genome-wide CRISPR-based screening approach that utilizes our proprietary isogenic cell lines, which are cell lines that are identical with the exception of a single genomic alteration, to identify SL gene

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pairs. Our systematic and comprehensive screening approach has been optimized to significantly reduce false negatives, providing the opportunity to identify a larger and more accurate set of SL interactions as compared to what others have reported with CRISPR-based screening technologies.

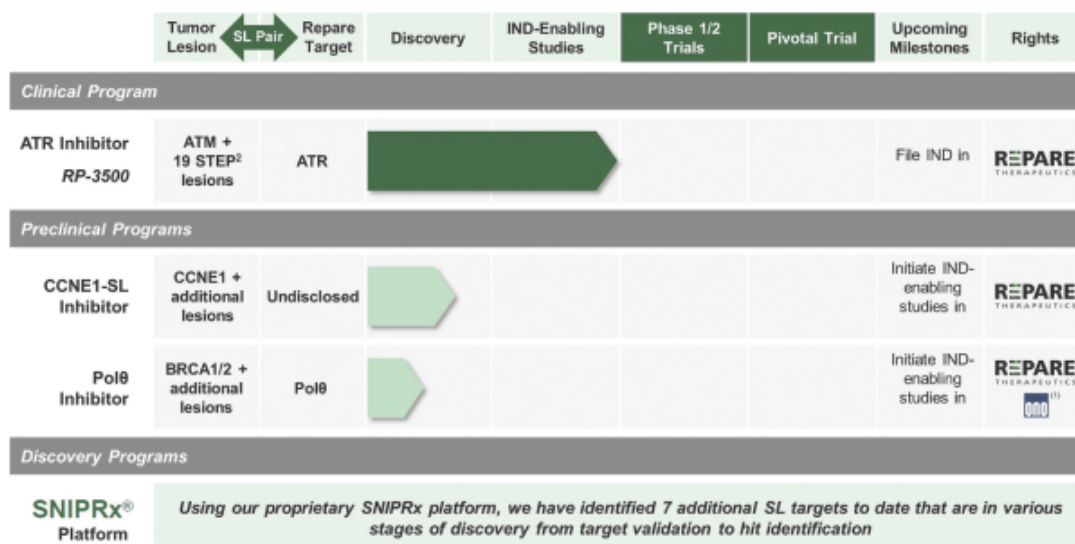
We have systematically analyzed genomic data from approximately 60,000 tumor samples and identified an initial set of 16 clinically relevant tumor genomic alterations, which we refer to as tumor lesions, that are linked to genomic instability. These 16 tumor lesions are present in approximately 30% of tumors. For each of these 16 tumor lesions, we have completed a SNIPRx screen campaign to identify both previously reported and unreported targets that are SL with the tumor lesion of the campaign. The majority of our SNIPRx screen campaigns have identified multiple potential targets, which allows us to prioritize and select targets based on their potential to be amenable to small molecule inhibitors with drug-like properties. Once a SL product candidate is identified, we perform our proprietary SNIPRx Targeted Expansion of Patient Populations, or STEP2, screens to identify additional genomic alterations that are SL to our product candidate. Using these screens, we are able to enrich the patient population in our clinical trials and expand the patient populations that may be addressable with our product candidates.

We are a leader in developing innovative SL therapies and have built our SNIPRx platform based on three primary pillars:

1. **Identify** novel SL targets using our proprietary, genome-wide, CRISPR-enabled screening technology against clinically relevant genomic alterations in tumors with high unmet medical need;
2. **Design and synthesize** potent and selective small molecule inhibitors of these targets; and
3. **Expand** beyond the initial target population based on the additional genomic alterations identified by our proprietary STEP2 screens that are SL with our inhibitors.

Our Pipeline

We are leveraging our proprietary SNIPRx platform to discover, validate and build a robust pipeline of SL-based therapeutics. Our current pipeline is represented in the diagram below.



- (1) Ono Pharmaceutical has development and commercialization rights in Japan, South Korea, Taiwan, Hong Kong, Macau and certain other Southeast Asian countries. We retained all other rights outside of those

countries. See “Business—Research Services, License and Collaboration Agreement with Ono Pharmaceutical Co.” for additional information.

Our Corporate History and Team

Our company was founded in 2016 by field-leading academics and Versant Ventures to systematically employ SL insights and platforms and develop new precision oncology medicines. Our co-founder, Daniel Durocher, Ph.D., a principal investigator at the Lunenfeld-Tanenbaum Research Institute, was an early pioneer of genome-wide, SL screening using CRISPR, which formed the framework for our SNIPRx platform. Our other co-founders, Agnel Sfeir, Ph.D. at NYU-Langone Medical Center and Frank Sicheri, Ph.D. at the Lunenfeld-Tanenbaum Research Institute, also played a key role in the development of our company.

Our Scientific Advisory Board, comprised of Samuel Aparicio, Ph.D. at the University of British Columbia; Jim Carmichael, M.D. at the Protein Homeostasis Thematic Center of Excellence at Celgene Corp.; Ronny Drapkin, M.D., Ph.D. at the Penn Ovarian Cancer Research Center; Laurie Glimcher, M.D., president and chief executive officer of the Dana-Farber Cancer Institute; Mark Pegram, M.D. at the Stanford Women’s Cancer Center; Richard Wood, Ph.D. at MD Anderson Cancer Center; and Timothy Yap, M.B.B.S., Ph.D. at MD Anderson Cancer Center, as well as ad hoc advisors, provide critical insights and further capabilities in the fields of SL, genomic instability and DNA damage repair.

We have assembled a highly qualified management team with broad experience in drug discovery and development to execute on our mission to develop novel precision oncology therapies based on SL. Our scientific co-founders and members of our management team collectively have extensive experience in oncology drug discovery and development and are pioneers in the SL field. Our management team includes industry veterans with prior experience at companies such as Pfizer, AstraZeneca, Merck, Bicycle Therapeutics and Clementia Pharmaceuticals. We have an experienced research and development team focused on leveraging our deep expertise and differentiated know-how across genomic target identification, target prioritization and selection, drug discovery chemistry and clinical development to develop highly potent and selective small molecule inhibitors based on SL for the treatment of cancer. Since our inception, we have raised an aggregate of approximately \$135.2 million of gross proceeds from the sale of our preferred shares. Our investors include Versant Ventures, MPM Capital, Cowen Healthcare Investments, OrbiMed, BVF Partners, Redmile Group, Logos Capital, Celgene/Bristol Myers Squibb, Fonds de Solidarité FTQ, and Amplitude Ventures.

Our Strategy

Our goal is to be the leading biopharmaceutical company developing precision oncology, small molecule therapies based on SL. The key elements of our strategy are to:

- **Advance our lead product candidate, RP-3500, through clinical development by leveraging our differentiated STEP2 patient selection approach.** We designed RP-3500 to have a highly selective and potent profile that may enable it to be a best-in-class inhibitor of ATR. We intend to initiate an open-label Phase 1/2 clinical trial of RP-3500 in [redacted] in patients with advanced tumors that have alterations in the ATM gene or any of the 19 genes identified through our STEP2 screens. We believe this clinical trial design element will enrich the patient population in our trials with those who are most likely to respond to RP-3500. In parallel with the monotherapy dose-escalation portion of the trial, we intend to initiate a combination therapy arm to evaluate the safety and efficacy of RP-3500 in combination with an approved PARP inhibitor in the same patient subgroups. We expect preliminary safety and efficacy data for the monotherapy and combination therapy dose escalation phase of the trial in [redacted], which may inform the design, including the targeted patient population, of a future pivotal trial.
- **Continue to advance our preclinical programs into clinical development.** In addition to RP-3500, we have two programs in advanced preclinical development. One of these programs is focused on a [redacted]

novel target we discovered using our SNIPRx platform to be SL with CCNE1 amplification in tumors such as gynecological and upper gastrointestinal malignancies. We anticipate advancing a clinical candidate for this potential first-in-class program into IND-enabling studies in . We are also developing an inhibitor of Polq, which is SL with multiple gene deficiencies found in tumors, including BRCA1 or BRCA2. We anticipate advancing a clinical candidate and initiating IND-enabling studies for this program in .

- **Extend our leading position in SL drug discovery.** We have systematically analyzed genomic data from approximately 60,000 tumor samples and have identified an initial set of 16 tumor lesions that are linked to genomic instability. This initial set of tumor lesions provides us with the opportunity to be among the first to mine this substantial, largely non-overlapping genomic space for new SL gene pairs and develop a robust portfolio of novel targeted therapeutics. We intend to continue leveraging our leading position in the identification of novel oncology SL gene pairs and systematically applying our STEP² screens to expand the addressable patient populations for each of our product candidates. We believe our approach will allow us to continue to build a sustainable and long-term pipeline of novel product candidates for the targeted treatment of cancers with high unmet medical need.
- **Opportunistically pursue strategic partnerships to maximize the full potential of our pipeline and SNIPRx platform.** The large number of pre-existing mutations affecting genomic stability in tumors combined with the high throughput of our SNIPRx platform has the potential to provide us with an abundance of novel targets. We believe this provides the opportunity to selectively enter into strategic partnerships and leverage our partners' complementary capabilities. We intend to selectively evaluate partnerships to maximize the long-term value of our research and development portfolio.

Background

Targeted Oncology Therapeutics

The first-generation of approved targeted therapies were predominately directed at driver mutations, which target specific types of receptor tyrosine kinases, such as, bcr-abl, EGFR and HER2. This initial class of precision therapies generated approximately \$20.0 billion of worldwide sales in 2019 and has largely represented the focus of the targeted oncology sector for the last 20 years. A rapid evolution in the understanding of tumor biology coupled with an improved ability to segment subsets of tumors based on genomic alterations have led to the development of new generations of targeted cancer therapies for a variety of additional tumor-specific genomic abnormalities.

A new generation of targeted oncology therapeutics has recently emerged that transcends single tumor, organ or histology-targeted cancers. These new therapies are tumor agnostic and are instead targeted at specific genomic alterations that underlie more complex tumor cell vulnerabilities. This has led to the approval of therapies that address specific genomic features of tumors, such as nTRK kinase inhibitors, including larotrectinib, for the treatment of tumors with nTRK gene fusions, and PD1 inhibitors, including pembrolizumab, for the treatment of tumors with microsatellite instability. This emerging trend for tumor-agnostic indications represents a breakthrough in drug development, clinical trial designs, drug approval patterns and speed to market. This new generation of targeted therapies requires diagnostic tools for patient selection but offers substantial benefit to patients across many tumor types.

The speed at which science has uncovered genetic changes associated with tumors has outpaced the discovery and development of precision medicines that can target those alterations. Oncology drug development has been primarily focused on genes with readily druggable alterations that confer new or enhanced protein activity, known as gain of function targets, such as EGFR, which represent only 29% of targets in oncology. The remaining 71% of targets have historically been considered undruggable. These include both gain of function alterations (approximately 17%), such as CCNE1, as well as loss of function alterations (approximately 54%), such as BRCA1. In June 2019, the New England Journal of Medicine referred to SL as a particularly attractive

means to target the complex and gene-network oriented relationships associated with this previously undiscovered domain of oncology targets.

The more recent ability to identify a tumor’s genetic vulnerabilities and networks of genes responsible for more complex gene functions underlying many cancers has been enabled through new and disruptive technical breakthroughs in the field including:

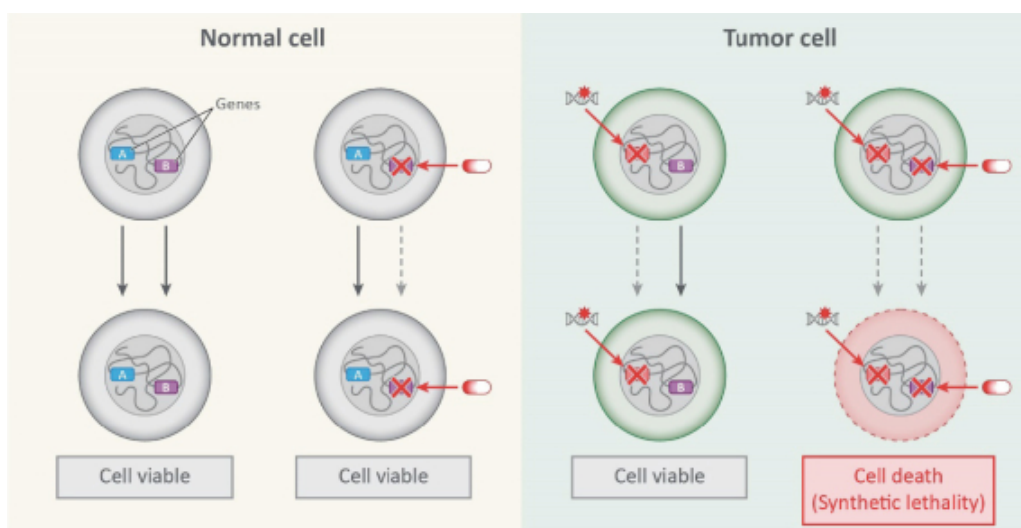
- **Clinically-relevant tumor genomic data:** the increasing adoption and regulatory acceptance of molecular tumor testing, enabling the accurate profiling of patient tumors;
- **Consolidated and annotated databases:** the availability of multiple new and publicly accessible databases that consolidate, analyze and synthesize new genetic data on tens of thousands of tumors; and
- **Tools to apply emerging genetic knowledge:** the emergence of new tools and methodologies, including CRISPR/Cas9, enabling large-scale studies of genetic networks underlying cancer biology.

The Synthetic Lethality Opportunity and Challenge

Synthetic lethality is a powerful approach and opportunity in oncology drug development that combines two key principles in treating patients with cancer through precision oncology: (1) identifying and selecting patient subgroups with specific genomic alterations in tumors that are most likely to benefit from these therapies and (2) improving tolerability and reducing toxicity by not affecting normal, non-cancerous cells.

SL arises when deficiencies in a pair of genes occur simultaneously to result in cell death, but if that deficiency exists in only one gene, the cell will survive. As depicted below, cancer cells that contain an alteration in one gene of a SL pair are susceptible to therapeutic intervention targeting the other gene pair, resulting in cell death, whereas normal cells are not affected by the inhibition of the targeted gene and remain viable.

Illustration of Synthetic Lethality Approach



The first clinically-validated SL gene pair was PARP-BRCA1/2, and based on the efficacy of PARP inhibitors, the SL approach to treating cancer has achieved substantial commercial validation. PARP enzymes regulate critical DNA repair pathways that cancer cells rely on as they grow and divide. PARP inhibition blocks

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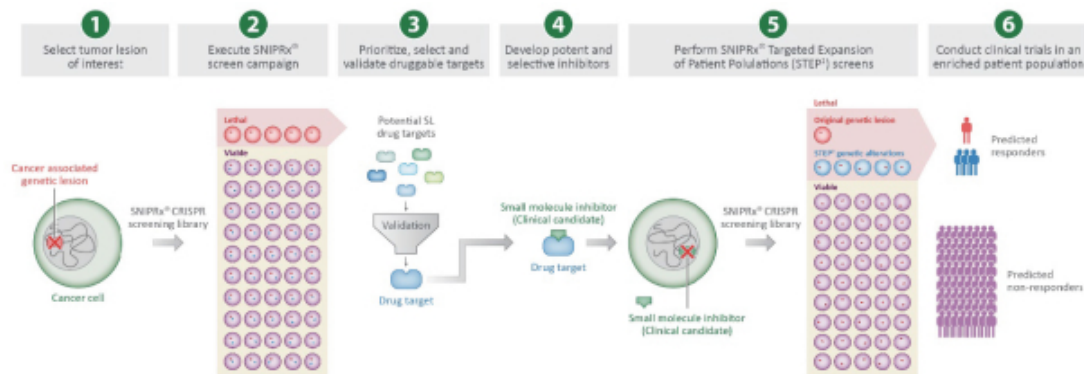
these pathways, preventing DNA repair in cancer cells with a BRCA1/2 alteration and resulting in cancer cell death while sparing normal cells. Multiple PARP inhibitors, including olaparib (AstraZeneca), niraparib (GlaxoSmithKline), talazoparib (Pfizer) and rucaparib (Clovis), have been approved for the treatment of tumors with BRCA and other DNA damage repair alterations, including ovarian, breast and pancreatic cancers. These four drugs generated over \$1.6 billion in worldwide sales in 2019 and are expected to reach over \$6.1 billion in worldwide sales by 2024.

While SL offers a new route to uncover important gene targets for the treatment of cancers, identifying these SL gene pairs has been a challenge due to the lack of systematic, prospective and large-scale methods to capture and exploit these gene-gene relationships for new drug discovery and development.

Our Approach: An Overview of Our Drug Discovery and Development Platform

Our SNIPRx platform integrates our deep expertise and differentiated know-how across genomic target identification, target prioritization and selection, drug discovery chemistry and clinical development. Our approach can be divided into six steps, as depicted in the graphic below.

Our Integrated Approach to Drug Discovery and Development



1. Select tumor lesion of interest.

Apply our deep understanding of tumor lesions with a bias for alterations associated with genomic instability and cancers with high unmet medical need.

Since 2016, we have systematically analyzed genomic data from approximately 60,000 tumor samples. We consult with leading oncology clinicians and key advisors to identify cancer types and subtypes where the current standard of care is not adequately improving patient survival. We then prioritize genetic lesions based on various criteria including mutation frequency and the feasibility of identifying lesion-positive patients. Of those, we focus on lesions that are known to directly or indirectly impact processes involved in genomic instability, such as DNA repair and cell cycle regulation.

We have identified an initial set of 16 largely mutually exclusive tumor lesions that comprise approximately 30% of tumors. These lesions are all linked to genomic instability.

2. Execute SNIPRx screen campaign.

Utilize our SNIPRx screening technology to identify target gene candidates that induce SL in the context of our initial set of 16 tumor lesions.

For each of the initial 16 tumor lesions we identified, each of which we refer to as an original tumor lesion, we have completed a screen campaign utilizing CRISPR technology and other tools to create proprietary isogenic

cell lines, which are pairs of cell lines that are identical with the exception of a single genomic alteration. This allows us to identify, on a genome-wide basis, both known and novel targets that are SL with each original tumor lesion. Our SNIPRx platform has been optimized to both sensitivity and reproducibility, resulting in a significant decrease in false negatives compared to what has been reported with other CRISPR-based screening technologies.

3. Prioritize, select and validate druggable targets.

Evaluate the multiple SL targets identified for each original tumor lesion.

Our screen campaigns result in the identification of multiple SL targets for each original tumor lesion. We prioritize and select targets to advance into drug discovery based on a systematic and proprietary set of criteria, which include thresholds for biological validation, cellular function, known and likely toxicity, druggability with small molecules, patentability and the potential for clinical impact versus alternative therapies. Our processes include extensive *in vitro*, genetic and *in vivo* animal validation of targets and comprehensive development of tool compounds for initial pharmacological corroboration.

4. Develop potent and selective inhibitors.

Develop small molecule product candidates that are highly potent and selective and advance them from lead discovery through the identification of a clinical candidate.

We have assembled an internal research team that has extensive experience in small molecule drug discovery with a proven track record of identifying development candidates and delivering them into and through the clinic. Our team has deep in-house capabilities in cell biology, molecular biology, biochemistry, enzymology, medicinal chemistry, computational chemistry and molecular modeling. We also have proven capabilities in drug metabolism, pharmacokinetic/pharmacodynamics, and absorption, distribution, metabolism and excretion evaluation, as well as pharmacology, including dedicated *in vivo* animal facilities to internally drive translational studies for human clinical trials. We believe these capabilities were demonstrated in the discovery and development of RP-3500.

5. Perform SNIPRx Targeted Expansion of Patient Populations (STEP²) screens.

Expand our potential patient populations beyond those identified by the original SL pair.

Once we have identified a clinical candidate, our STEP² screens utilize a set of cell lines that, when treated with our clinical candidate, elucidate genes that, when knocked down, cause (hyper) sensitivity to our selected inhibitor. These screens not only confirm the SL relationship with the original tumor lesion, but also identify additional genomic alterations that confer a response to our product candidates and are mutually exclusive from the original tumor lesion. We believe the identification of these new SL pairs allows us to rationally expand our targeted patient populations by enabling us to potentially treat patients with tumors across multiple genomic alterations with the same product candidate.

6. Conduct clinical trials in an enriched patient population.

Design our clinical trials for efficient clinical development.

For our clinical trials, we plan to enroll patients with tumors that contain either the original tumor lesion or any one of the genomic alterations identified by our STEP² screens. We believe this strategy will allow us to enroll only those patients who are most likely to achieve clinical benefit from our product candidates. In addition, we are prioritizing tumor types for which there are no effective therapies currently available. We plan to evaluate multiple cohorts of patients based on specific genomic alterations, which may enable us to pursue an accelerated regulatory approval pathway for certain targeted patient populations.

Our SNIPRx Platform

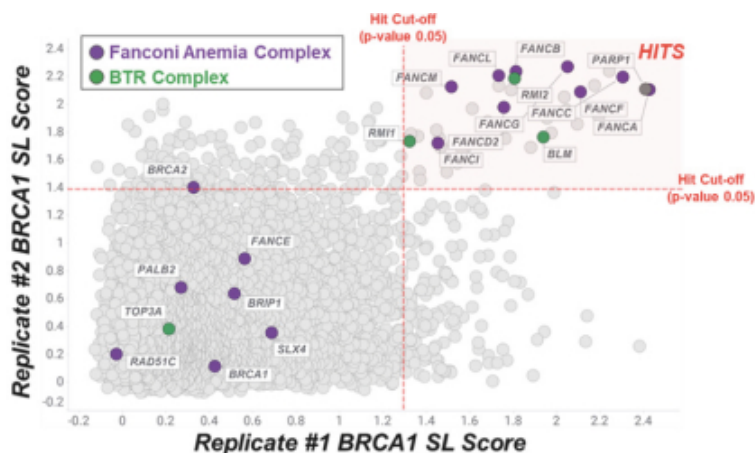
The core of our SNIPRx platform is the ability to identify both known and novel SL targets. We believe that our platform and approach provide many key advantages as highlighted below.

- **Designed to Address Previously Untargetable Tumor Biology.** Oncology drug development has been primarily focused on genes with readily druggable alterations that confer new or enhanced protein activity, known as gain of function targets, such as EGFR, which represent only 29% of targets in oncology. The remaining 71% of targets have historically been considered undruggable. These include both gain of function alterations (approximately 17%), such as CCNE1, as well as loss of function alterations (approximately 54%), such as BRCA1. Our SNIPRx platform has demonstrated an ability to identify novel SL relationships, including those that address previously untargetable tumor biology.
- **Applies Our Proprietary Genome-wide Library.** Genome-scale screens often identify many genes coding for the same protein complex or cellular pathway, thereby increasing confidence in those hits. These screens allow us to screen the entire genome to determine the top hits across all genes, as compared to the more limited druggable gene libraries. In addition, because the definition of what is druggable is continuously evolving, by using genome-scale screens, we are able to mine the results of our existing screens as new therapeutic modalities emerge. Our genome-wide libraries, together with our industrialized and optimized screening approach and technology, result in a significant reduction in false negative hits.
- **Utilizes Isogenic Cell Lines.** We believe a key differentiator of our SNIPRx platform is the utilization of thoroughly characterized, proprietary isogenic cell lines for our CRISPR-based genome-wide SL screen campaigns. We use normal, non-cancerous cell lines to engineer our isogenic cell models, which enable us to mine for SL interactions between two genes in models with clean genetic backgrounds that have minimal mutations and normal chromosome numbers. We have also developed a proprietary computational algorithm that is specifically designed to identify SL interactions from our isogenic screens. We believe using isogenic cell lines gives us a significant competitive advantage since most SL screening approaches used by others are based on cancer cell line panels, which we believe are less accurate due to their propensity to result in variable data.
- **Focuses on Niche of Genomic Instability.** Based on the well-established network of SL interactions in DNA synthesis and repair across model organisms, we have found and believe we will continue to find clear and reproducible SL interactions through our SNIPRx platform. Genomic instability is an early event that underlies all cancer, and many of the genes we screen represent early hits in cancer that may have less heterogeneity in later stage tumors. The genomic instability space is enriched with genes encoding enzymatic activity, which provides us with ample opportunity to identify novel druggable genes for development into small molecule precision oncology therapies. We believe developing product candidates that target genomic instability may lead to durable responses with resulting clinical benefits for patients.

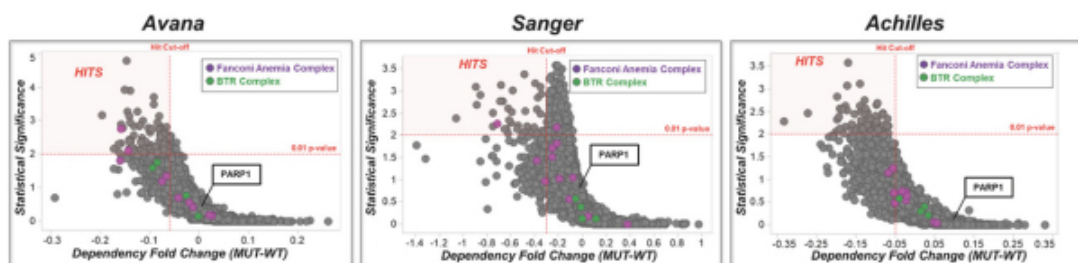
One example that illustrates the power of our SNIPRx platform is a SL screen campaign that we conducted in an isogenic pair of cell lines in which one cell line had a BRCA1 mutation and the other cell line was normal for BRCA1. The results of this screen campaign are graphically depicted below. The top-right quadrant of Graphic A highlights the SL hits resulting from our screen and shows that we were able to identify PARP1 as a SL hit with BRCA1. In addition, two additional sets of genes were identified to be SL with BRCA1: (1) the genes encoding the Fanconi Anemia pathway, which are depicted in purple, and (2) the genes coding for the BLM-RMI1-RMI2 complex, which are depicted in green. The independent identification by our SNIPRx screen campaign of multiple genes within a pathway or complex greatly increases confidence that those are true SL hits. In contrast, external cell panel screens that look for SL hits by comparing a panel of cancer cell lines that have either BRCA1-mutant or normal BRCA1 cell lines do not identify these validated BRCA1 SL genes. As shown in Graphic B below, multiple cancer cell line panel screens utilizing CRISPR or shRNA all failed to identify PARP1 as a SL hit with BRCA1.

SNIPRx Screen Campaign Identifies Both Known and Novel SL Pairs Undetected by Cancer Cell Line Panels

A. SNIPRx BRCA1 Isogenic SL Screen



B. External BRCA1 Cell Panel SL Screens



Our Clinical Program, RP-3500

Overview

Our lead product candidate, RP-3500, is a potent and selective oral small molecule inhibitor of ATR that we are developing for the treatment of tumors with mutations in ATM, which is a SL pair with ATR. ATR is a critical DNA damage response, or DDR, protein that acts as both the master regulator of the response to DNA replication stress, as well as a central effector of the DNA damage checkpoint. Based on the previously published SL relationship between ATR and ATM, ATR has been the target of prior drug discovery efforts, and ATR inhibitors in development have demonstrated promising, durable clinical responses in a small number of patients in early clinical trials. Through our STEP² screens, we believe that we have more precisely identified and expanded the patient populations that would benefit from RP-3500, which allows us to differentiate and enrich our clinical development strategy as well as address multiple types of solid tumors.

RP-3500 has demonstrated an optimized anti-tumor effect, selectivity and pharmacokinetics profile in preclinical studies that we believe supports the potential for it to be a best-in-class ATR inhibitor. These data led to our decision to advance RP-3500 into IND-enabling studies. We also conducted multiple STEP² screens in which we confirmed the SL relationship between ATR and ATM and identified an additional 19 genes that are also SL with ATR, potentially expanding the patient populations that may benefit from our product candidate.

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We anticipate filing an IND application and initiating an open-label Phase 1/2 clinical trial of RP-3500 in . We have designed our Phase 1/2 clinical trial to enroll patients based on the presence of alterations in ATM or any of the 19 STEP2-identified genes. Based on the observed synergistic activity in preclinical models with ATM and STEP2-identified genes, we also intend to include a combination arm in this trial to evaluate the anti-tumor activity of RP-3500 with an approved PARP inhibitor. We expect to report preliminary safety and efficacy data for the monotherapy and combination therapy dose escalation phase of the trial in .

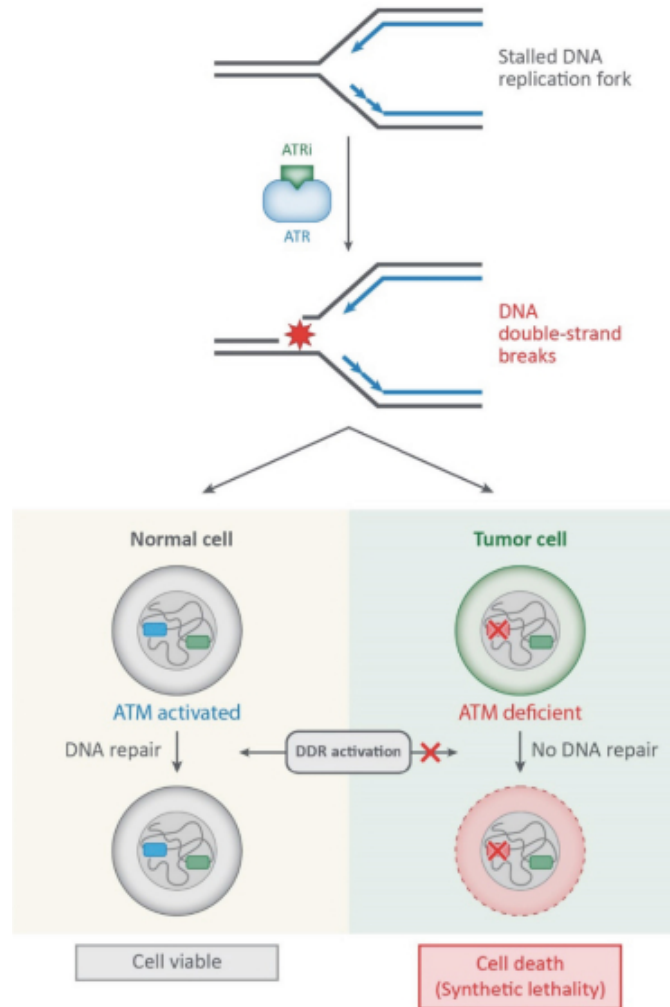
Mechanism of Action

ATR is a protein kinase that acts at multiple levels of the DDR network. It is activated when problems with ongoing DNA replication are identified, a phenomenon known as DNA replication stress. It uses its kinase activity to stabilize the DNA replication machinery locally and to suppress the initiation of DNA replication globally. As a consequence, ATR prevents the formation of DNA damage when DNA replication is stressed. In addition to these roles, ATR also restrains cell cycle progression when it is activated, a phenomenon known as the DNA damage checkpoint. When ATR is inhibited, cells with DNA damage or incomplete DNA replication can undergo cell division. ATR is one member of an extensive network of proteins that serve to recognize early stages of DNA damage, prevent replication from proceeding through these damaged sites and repair the damage. Cancer cells with alterations in genes encoding this network of DDR proteins are highly dependent on ATR for survival. ATR's central role in the regulation of replication stress has led to the development of multiple ATR inhibitors that have demonstrated durable responses in early clinical trials.

The ATM-ATR Synthetic Lethality

ATM is a DDR protein related to ATR that is responsible for sensing and signaling DNA double-strand breaks. Our ATM SNIPRx screen campaign confirmed that ATM-deficient cells rely on ATR activity for survival. ATM orchestrates the response to double-strand break repair and thus, ATM-deficient tumors have an impaired response to DNA breaks. Inhibition of ATR compromises the stabilization of DNA replication forks and is associated with increases in DNA double-strand breaks that would normally be detected and signaled for repair by ATM. SL screens conducted by us and others have identified that ATR is SL with ATM, making cancer cells that are deficient in ATM highly sensitive to killing by ATR inhibitors. An overview of the ATM-ATR SL relationship is illustrated below.

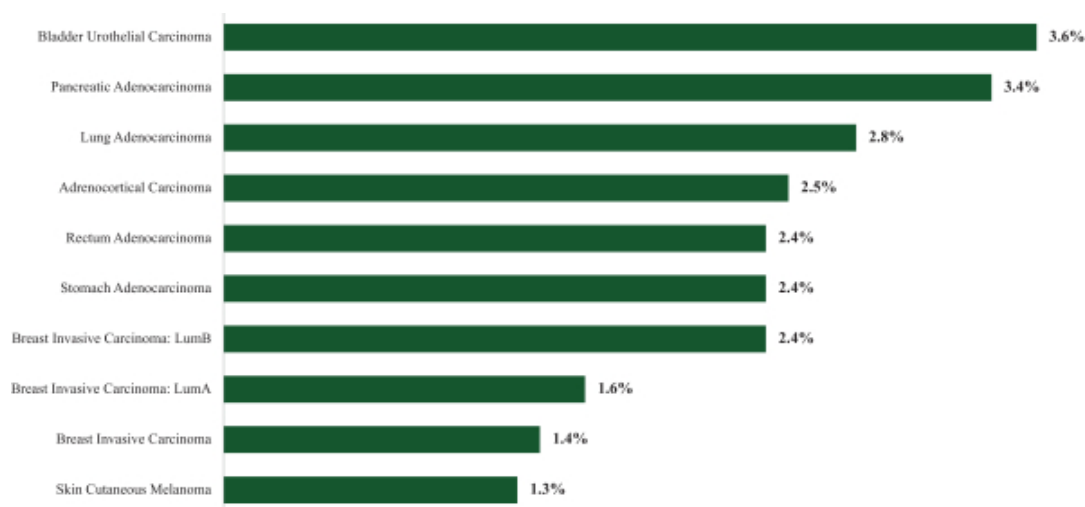
Mechanism of ATM-ATR Synthetic Lethality



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The gene encoding for ATM is frequently mutated in cancer. An analysis of sequence data collected as part of The Cancer Genome Atlas, or TCGA, found that between 1% and 4% of solid tumors, such as breast, bladder, pancreatic and lung cancers, have deficiencies in ATM, as depicted in the graph below.

Top 10 Tumor Types with Highest Prevalence of ATM Deficiency



Clinical Validation of ATR Inhibitors in ATM-Deficient Tumors

Three ATR inhibitors in development by third parties have been evaluated in clinical trials either as a monotherapy or in combination with DNA-damaging chemotherapy drugs, ionizing radiation, immune checkpoint blockers or PARP inhibitors, in advanced solid tumors and hematological malignancies. Data published to date from these trials support the preclinical observations of the SL of ATR inhibitors in ATM-deficient cancers. For example, in a clinical trial conducted by Merck Serono of its ATR inhibitor, a patient with colorectal cancer containing a mutation in ATM reported a complete response. Additional proof-of-concept for the clinical relevance of the SL link between ATR and ATM was reported in June 2019 with data from Bayer's Phase 1 clinical trial of its ATR inhibitor. This dose-escalation trial evaluated Bayer's ATR inhibitor as a monotherapy in patients with advanced metastatic solid tumors that were resistant or refractory to standard treatment. Of thirteen evaluable patients who received Bayer's ATR inhibitor at doses of 40mg or greater twice a day, four patients, all of whom had tumors with mutations in ATM, had a durable tumor response. Additional clinical evidence indicates that the patient population that could benefit from an ATR inhibitor is not limited to ATM deficiency. For example, AstraZeneca conducted a clinical trial, which evaluated ATR inhibition as a monotherapy without any patient selection based on genomic tumor alterations. Results from this trial demonstrated that the three responding patients had normal ATM protein expression, which suggests that additional genomic tumor alterations may also be sensitive to ATR inhibition.

Our Solution, RP-3500

We identified ATR as one of the SL targets through our SNIPRx screen campaign of ATM and selected ATR as the target for our lead product candidate, RP-3500, based on:

- (i) existing third party clinical and preclinical support for the potential of ATR inhibition as a precision oncology therapy;
- (ii) our ability to design an ATR inhibitor with enhanced chemical properties, such as potency and selectivity; and

- (iii) the results of our STEP² screens, which identified 19 additional genomic alterations beyond ATM deficiency to be SL with ATR, facilitating the expansion of the addressable patient populations.

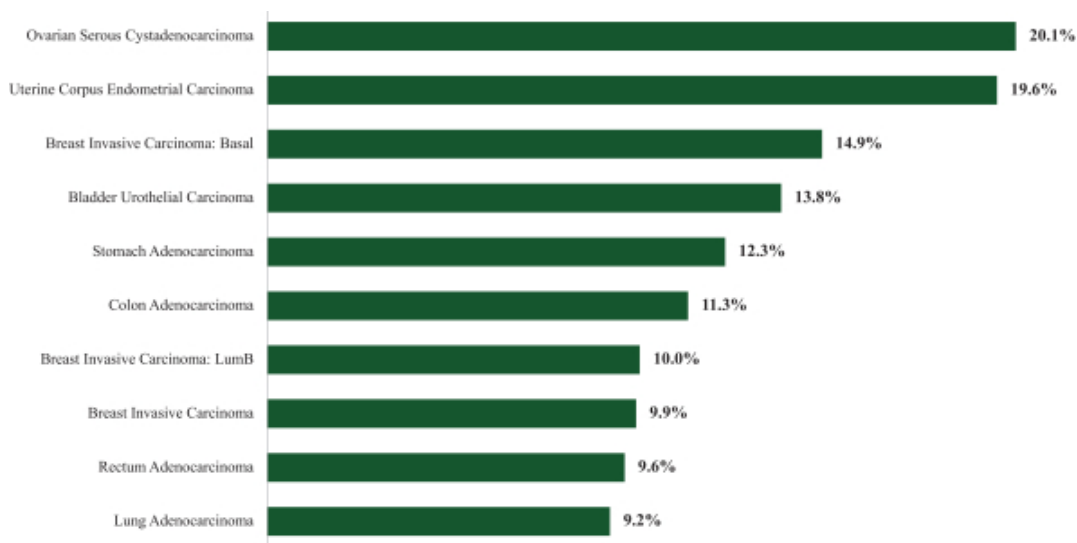
We designed RP-3500 as an oral small molecule ATR inhibitor with increased potency and a similar or improved selectivity profile compared to other known ATR inhibitors. RP-3500 has demonstrated a favorable pharmacokinetic profile in multiple preclinical models, including rodent and canine, and a distribution, metabolism and excretion profile that suggests a low potential for drug-drug interactions in the clinic.

Our STEP² screens have generated proprietary patient selection insights that we believe provide the rationale to expand the potential patient populations addressable by RP-3500 beyond patients with tumors carrying ATM genetic defects. We have identified 19 genomic alterations, in addition to ATM deficiency, that confer sensitivity to RP-3500. This 19 gene set, which we refer to as our STEP²-identified genes, includes several novel genes that have not been previously reported as rendering sensitivity to ATR inhibitors. In addition, many of the genes we have selected do not overlap with previously identified genes in the homologous recombination defect panel, which is utilized to identify patients for treatment with PARP inhibitors and is currently used by others to test for sensitivity to ATR inhibitors. Furthermore, our STEP² screens demonstrated that two genes previously reported by others to be sensitive to ATR inhibition were not sensitive and hence, those genes were excluded from our set of STEP²-identified genes.

The sensitivity and accuracy of our STEP² screens enable the identification of several novel gene alterations, including certain genes that are not yet included in commercially available Next Generation Sequencing cancer panels or CLIA-validated panels used in large academic centers. As such, for our planned Phase 1/2 trial, we have identified and partnered with multiple large, leading clinical centers globally where tumor sequencing is a component of standard of care. These centers' panels are validated and sufficiently large to accommodate screening for alterations in ATM or our 19 STEP²-identified genes. We believe that these panels will include the majority, if not all, of these 20 genes. For genes that are not available on certain panels at a particular clinical site, we have identified surrogate genes that are co-deleted with the STEP² genes and have an approximately 50% to 80% probability of concomitant loss, which we believe will provide sufficient enrichment for our clinical trial. By working in collaboration with our clinical partners to access their existing patient databases, we believe that we will be able to efficiently identify existing and new patients who may be eligible for our clinical trial.

Based on the prevalence of ATM deficiencies and our STEP2-identified genomic alterations across various solid tumors, as shown in the graph below, we believe that RP-3500 has the potential to benefit a significant number of patients representing a large unmet medical need.

Top 10 Tumor Types with Highest Prevalence of ATM Deficiency or STEP2 Genomic Alterations

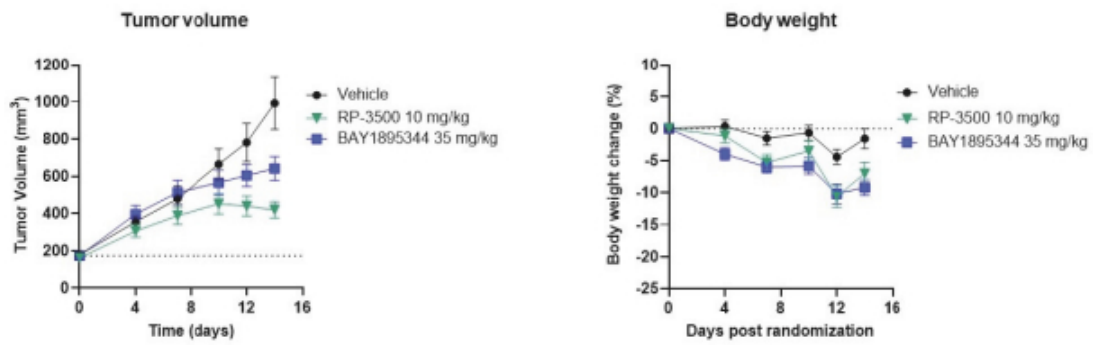


As part of our development strategy for RP-3500, we are evaluating the potential anti-tumor activity of RP-3500 in combination with an approved PARP inhibitor based on the synergies we have observed in our preclinical studies. PARP inhibitors lead to the stabilization of PARP-DNA complexes that block the progression of replication forks. ATR activity stabilizes the DNA replication forks that are destabilized by PARP inhibition and inhibition of ATR causes stalled replication forks to collapse and form cytotoxic DNA double-strand breaks. As a consequence, ATR inhibition can potentiate the cytotoxic effects of PARP inhibitors. We note that this phenomenon is particularly prominent under conditions where some cancer-relevant DDR genes, such as those identified through our STEP2 screens, are inactivated, thereby creating a potential therapeutic window.

Preclinical Data: Monotherapy

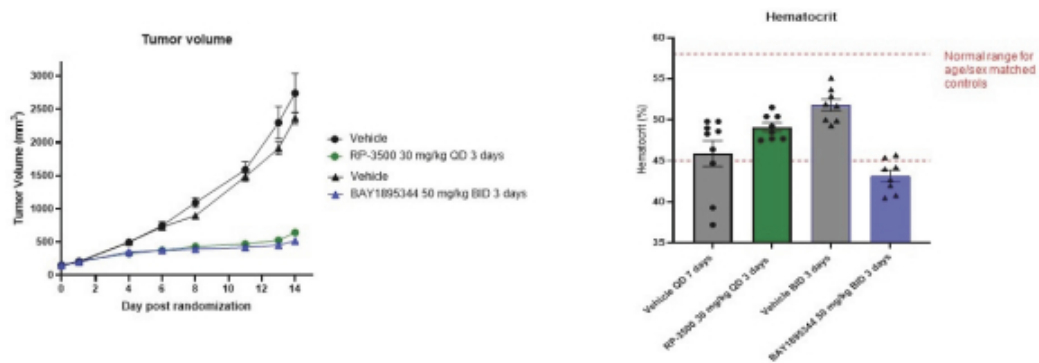
We observed RP-3500 to have a favorable safety, tolerability and pharmacokinetics profile across multiple preclinical studies and animal models, which we believe supports advancing the product candidate into clinical trials. In a preclinical study, we evaluated continuous daily dosing of RP-3500 in a colon cancer xenograft model with CW-2 cancer cells, which contain an inactivating mutation in ATM that confers sensitivity to ATR inhibition. In this study, we injected mice with tumor cells and waited for tumor growth to approximately 200 mm³ before initiating daily dosing over a period of 14 days with vehicle, RP-3500 at its maximum tolerated dose, or MTD, of 10 mg/kg/day, or Bayer's ATR inhibitor product candidate, BAY1895344, at what we determined to be its MTD of 35 mg/kg/day (n=10 mice per group). Both RP-3500 and BAY1895344 demonstrated statistically significant suppression of tumor growth as compared to vehicle. Importantly, we observed statistically significant higher suppression of tumor growth with RP-3500 as compared to BAY1895344 (p=0.018). Body weight loss as a measurement of tolerability was similar for both compounds in this study.

Statistically Significant Tumor Growth Suppression in Colon Cancer Model



In another preclinical study using an intermittent dosing schedule, we evaluated RP-3500 in comparison to BAY1895344 in a Granta-519 mantle cell lymphoma xenograft model. Similar to CW-2 cancer cells, Granta-519 cancer cells also contain an inactivating mutation in ATM that confers sensitivity to ATR inhibition. In this study, we injected mice with tumor cells and waited for tumor growth to approximately 150 mm³ before initiating intermittent dosing with vehicle or either treatment (n=9 mice per group). We observed that both RP-3500 and BAY1895344 exhibited tolerability at higher doses when administered on a three days per week schedule than their respective MTDs from the daily dosing CW-2 colon cancer study. The MTDs utilizing this intermittent dosing schedule were determined to be 30 mg/kg daily for RP-3500 and 50 mg/kg twice-daily for BAY1895344. Both agents demonstrated similar and significant suppression of tumor growth in this model without body weight loss. However, significant anemia, or hematocrit reduction, was observed in mice treated with BAY1895344 (p=0.0002), whereas we did not observe these tolerability issues with RP-3500, which we believe supports our hypothesis of a favorable safety profile for RP-3500.

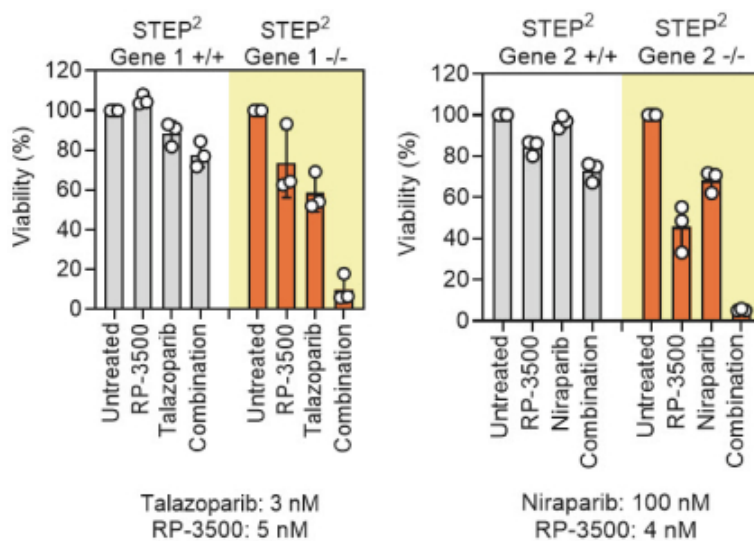
RP-3500 Exhibits Tumor Growth Suppression Without Significant Anemia Measured as Hematocrit in Mantle Cell Lymphoma Model



Preclinical Data: Combination Therapy with PARP

Of our 19 STEP²-identified genes for RP-3500 as a monotherapy, we have identified a subset of genes that are particularly sensitive to the combination of RP-3500 and PARP inhibitors. The graphs below illustrate two examples of this subset of genes where synergy was demonstrated between RP-3500 and PARP inhibitors.

Significant Synergy Demonstrated by Combination of RP-3500 and PARP Inhibitors



+/+ : Wild Type

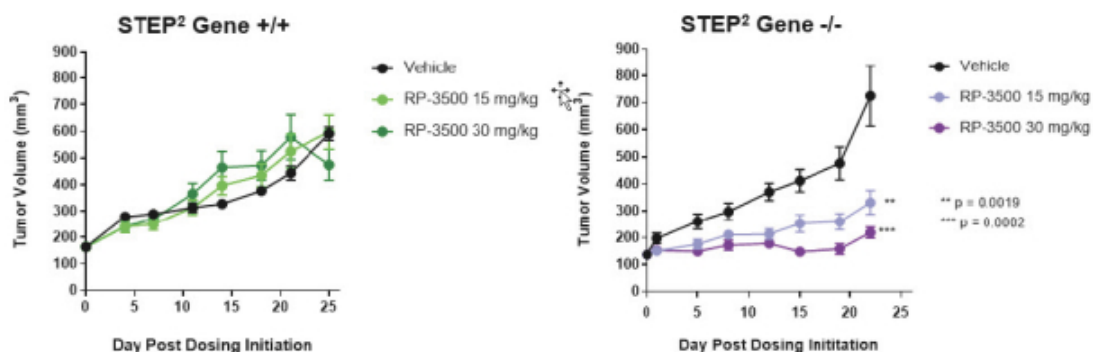
-/- : Genomically altered

We observed *in vitro* killing of cells carrying this subset of genomic alterations at low concentrations of both compounds, whereas only a minimal effect was seen on control wild-type cells. Based on this finding, we believe that the combination of RP-3500 with lower doses of PARP inhibitors could lead to efficient anti-tumor activity while potentially addressing the tolerability issues observed with PARP inhibitors, where a majority of patients in clinical trials of niraparib and talazoparib required a dose reduction or interruption in dosing. We are currently exploring the ATR-PARP inhibitor synergy in additional ongoing studies in xenograft models.

Preclinical Validation of STEP2 Screens

Through our STEP2 screens of ATR inhibitors, we confirmed the SL relationship between ATR and ATM and identified an additional 19 genomic alterations that confer sensitivity to RP-3500. In follow-up studies with cancer cell line pairs, in which the only difference is the inactivation of the target genes, we are confirming the sensitivity of these genomic alterations to RP-3500, and this extensive validation effort is still being expanded. We are also creating xenograft models using both the parent cell lines and the inactivated cell line. In such a model using one of the STEP2-identified genes, RP-3500 led to statistically significant suppression of tumor growth, whereas it had no anti-tumor effect in tumors created with wild-type parent cells, as shown in the model below.

Tumor Growth Suppression in a STEP2 Gene Deficient (-/-) Xenograft Model vs. No Effect in Tumor with Wild-Type (+/+) STEP2 Gene



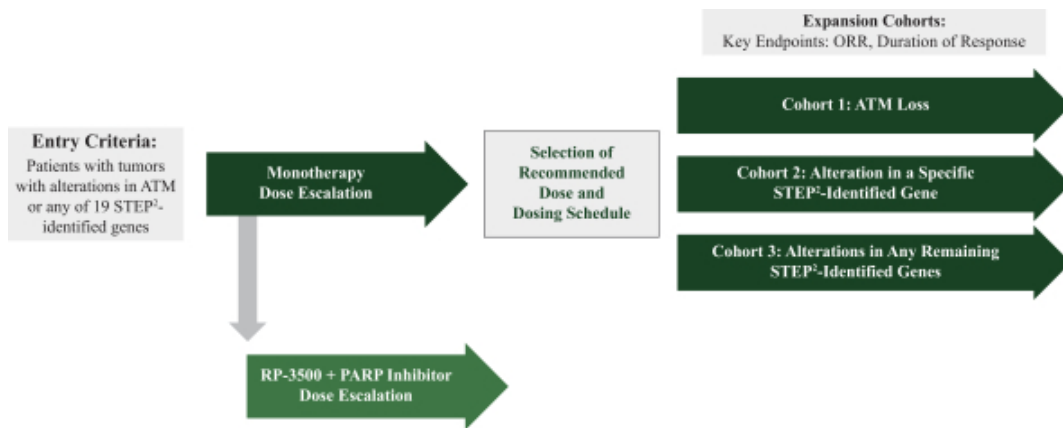
Planned Phase 1/2 Trial

Our open-label Phase 1/2 clinical trial is designed to evaluate the oral administration of RP-3500 in patients with advanced recurrent tumors of different histologies with ATM loss of function or any of the 19 STEP2-identified genomic alterations.

In the initial monotherapy dose escalation phase of our trial, we plan to evaluate the dosing regimen and safety of RP-3500 to establish the recommended dose for the expansion phase of the trial. In three expansion cohorts, each of which will enroll patients based on ATM loss of function or different STEP2-identified genomic alterations, we will assess the preliminary efficacy of RP-3500 at the recommended dose. In parallel with the monotherapy dose escalation phase, we will enroll a separate arm to evaluate RP-3500 in combination with an approved PARP inhibitor. An efficacy evaluation will be performed every six weeks for the first five months and every nine weeks thereafter. We anticipate filing an IND application and initiating an open-label Phase 1/2 clinical trial of RP-3500 as both a monotherapy and in combination with an approved PARP inhibitor in . We expect to report preliminary safety and efficacy data for the monotherapy and combination therapy dose escalation phase of the trial in , which may inform the design, including the targeted patient population, of a future pivotal trial.

The design of our Phase 1/2 clinical trial is summarized in the diagram below.

Proposed Design of Phase 1/2 Clinical Trial of RP-3500



Our Preclinical Programs

CCNE1-SL Inhibitor Program

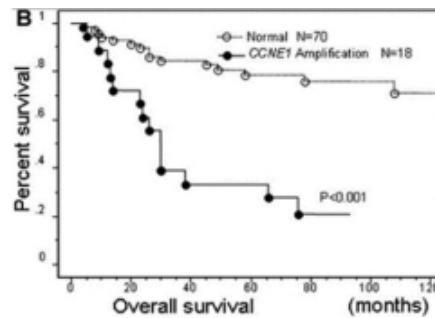
Our CCNE1-SL inhibitor program is a proprietary drug discovery program for tumors with amplification of CCNE1. We have identified an undisclosed gene and corresponding protein, which we have found to be SL with amplifications in the gene for CCNE1. Amplification of CCNE1 is found in many tumor types, including gynecological and upper gastrointestinal malignancies, and these CCNE1-amplified tumors typically do not respond well to platinum or PARP inhibitor treatment. Through our SNIPRx screen campaign for targets that are SL with CCNE1 amplification, we have identified and validated a SL target that we believe has the characteristics of a therapeutic target. We have developed novel and selective inhibitors against the target that have repeatedly demonstrated compelling anti-tumor activity. We anticipate advancing our advancing a clinical candidate for this potential first-in-class program into IND-enabling studies in .

The gene targeted by our CCNE1-SL inhibitor program has not previously been published as a SL gene pair with CCNE1, and we are not aware of any advanced drug discovery efforts against this target. In preclinical studies, we observed that the deletion of this gene was well tolerated in wild-type cells, but it caused lethality in isogenic cancer cells that overexpressed CCNE1.

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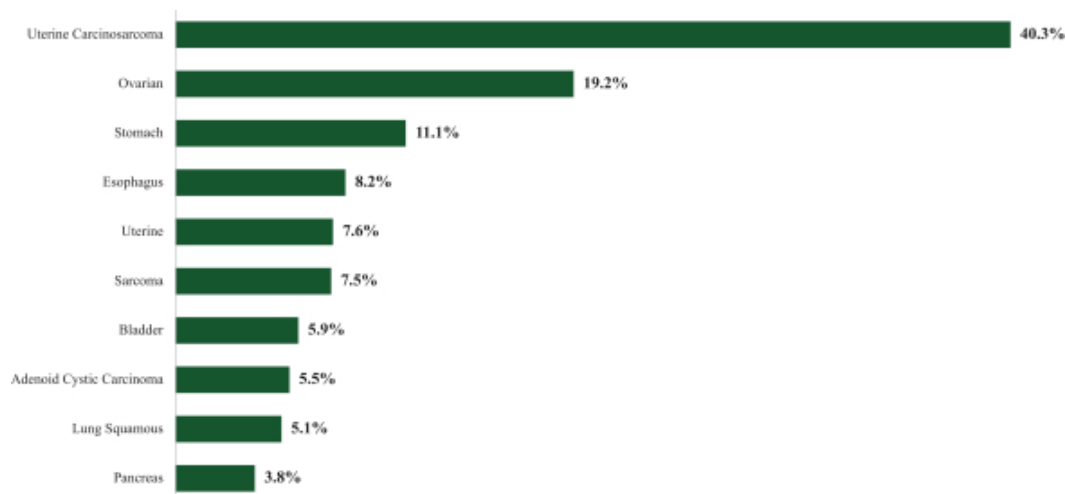
High levels of CCNE1 protein, an activating subunit of cyclin dependent kinase 2, or CDK2, are often observed in patients across multiple tumor types. Deregulation of cell cycle control is thought to be a prerequisite for tumor development, and several studies have demonstrated accelerated entry of cells into the S phase, or DNA synthesis phase, of the cell cycle, due to constitutive, or “always-on,” expression of CCNE1. Such an accelerated entry of cells into the S phase is a common sign of unregulated, cancerous growth. CCNE1 can induce chromosome instability, another sign of cancer, by contributing to inappropriate initiation of DNA replication. Several studies have demonstrated that CCNE1 amplification or constitutive expression is associated with disease progression in various malignancies as well as poor clinical prognosis in patients across multiple cancers, including ovarian, breast, bladder and colorectal cancer. For example, clinical data from patients with ovarian cancer indicate that those with CCNE1-amplified tumors have significantly shorter overall survival than those with tumors without CCNE1 amplification, as shown below.

CCNE1 Amplification is Associated with Significantly Shorter Overall Survival in Patients with Ovarian Cancer



CCNE1 amplification is found in 4% of tumors in the pan-cancer TCGA studies. Over 40% of uterine carcinosarcoma cancers and 10% to 20% of ovarian and stomach cancers harbor CCNE1 amplification. Together, these cancers lead to over 40,000 deaths each year in the United States. Additional cancer types also harbor CCNE1 amplification at a lower frequency, including up to 3% to 8% of esophagus, bladder, lung and pancreatic cancers, as shown below.

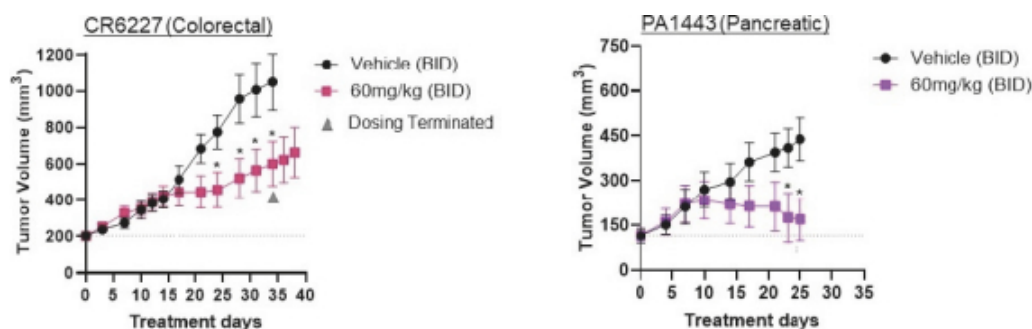
Top 10 Tumor Types with Highest Frequency of CCNE1 Amplification



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In preclinical studies, our CCNE1-SL inhibitor candidates demonstrated early *in vivo* anti-tumor activity in two patient-derived xenograft, or PDX, models with CCNE1 amplification. In the colorectal PDX model, we observed statistically significant tumor growth suppression with an unoptimized version of our CCNE1-SL inhibitor, as shown on the left below. In the pancreatic PDX model, which has a higher level of CCNE1 over-expression, tumor regression was observed with the same compound, as shown on the right below.

CCNE1-SL Inhibitor Demonstrates Tumor Growth Suppression in Patient-Derived Xenograft Models



Future Development Activities

We are currently evaluating additional genes identified through our STEP2 screens for our CCNE1-SL inhibitor candidates that we believe may be SL with our target. Some of the STEP2-identified genes are altered in 5% to 20% of certain cancers, including lung and prostate cancers, which we believe is indicative of a potential opportunity to address large patient populations with our CCNE1-SL inhibitor. We anticipate advancing a clinical candidate for this potential first-in-class program into IND-enabling studies program in .

Polymerase Theta (Polq) Program

We are developing a small molecule inhibitor of the gene polymerase theta, or Polq, a SL target associated with BRCA mutations as well as other genomic alterations. This program was initially added to our portfolio through a collaboration with our co-founder, Dr. Agnel Sfeir at NYU-Langone Medical Center, who initially published her early observations on the SL between BRCA and Polq in Nature in 2016.

Polymerase theta enzyme, or POLQ, is a DNA polymerase enzyme that participates in the repair of double-strand breaks in DNA. Mutations in genes such as BRCA1 and BRCA2 increase the frequency of these breaks, resulting in SL with Polq. Preclinical studies have shown that inactivation of Polq both on its own and in combination with PARP inhibitors reduces survival in BRCA-mutated cells, but not in BRCA wild-type cells. BRCA1 and BRCA2 mutations are routinely identified in multiple genetic profiling tests and observed in approximately 1% to 7% of patients with breast and ovarian cancer. However, the frequency of mutations in one of these BRCA genes increases in women with a family history of disease and in certain subpopulations. For example, up to 37% of patients with breast cancer with low estrogen and progesterone receptor expression have BRCA mutations.

BRCA 1 and BRCA 2 mutations have also been shown in clinical trials to be SL with PARP inhibitors in multiple tumors, such as breast and ovarian cancer. While PARP inhibitors have proven effective in BRCA-mutant tumors, no statistically significant survival benefit has been reported in breast or pancreatic cancer to date, highlighting the potential for other SL targets, such as Polq, to demonstrate meaningful efficacy as a monotherapy or in combination with PARP inhibitors. We anticipate advancing a clinical candidate and initiating IND-enabling studies for this program in .

Intellectual Property

We strive to protect and enhance the proprietary technologies, inventions and improvements that we believe are important to our business, including seeking, maintaining and defending patent rights, whether developed internally or licensed from third parties. Our policy is to seek to protect our proprietary position by, among other methods, pursuing and obtaining patent protection in the United States and in jurisdictions outside of the United States related to our proprietary technology, inventions, improvements, platforms and our product candidates that are important to the development and implementation of our business.

As of April 3, 2020, our patent portfolio consisted of four pending U.S. provisional patent applications and one pending international, or PCT, application.

Our solely owned PCT application has composition of matter and method of treatment and use claims covering RP-3500 and its use. Any application, if issued, claiming priority to this PCT application is expected to expire in 2039, not including any patent term adjustment.

Individual patents extend for varying periods depending on the date of filing of the patent application or the date of patent issuance and the legal term of patents in the countries in which they are obtained. Generally, patents issued for regularly filed applications in the United States are granted a term of 20 years from the earliest effective non-provisional filing date. In addition, in certain instances, a patent term can be extended to recapture a portion of the U.S. Patent and Trademark Office, or the USPTO, delay in issuing the patent as well as a portion of the term effectively lost as a result of the FDA regulatory review period. However, as to the FDA component, the restoration period cannot be longer than five years and the total patent term including the restoration period must not exceed 14 years following FDA approval. The duration of foreign patents varies in accordance with provisions of applicable local law, but typically is also 20 years from the earliest effective filing date. However, the actual protection afforded by a patent varies on a product by product basis, from country to country and depends upon many factors, including the type of patent, the scope of its coverage, the availability of regulatory-related extensions, the availability of legal remedies in a particular country and the validity and enforceability of the patent.

In addition, we rely upon trade secrets and know-how and continuing technological innovation to develop and maintain our competitive position. We seek to protect our proprietary information, in part, using confidentiality agreements with our collaborators, employees and consultants and invention assignment agreements with our employees. We also have confidentiality agreements or invention assignment agreements with our collaborators and consultants. These agreements are designed to protect our proprietary information and, in the case of the invention assignment agreements, to grant us ownership of technologies that are developed through a relationship with a third party. These agreements may be breached, and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors. To the extent that our collaborators, employees and consultants use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions.

Our commercial success will also depend in part on not infringing upon the proprietary rights of third parties. It is uncertain whether the issuance of any third-party patent would require us to alter our development or commercial strategies, or our product candidates or processes, obtain licenses or cease certain activities. Our breach of any license agreements or failure to obtain a license to proprietary rights that we may require to develop or commercialize our future product candidates may have an adverse impact on us. For more information, please see “Risk Factors—Risks Related to Intellectual Property.”

Collaborations and License Agreements

Research Services, License and Collaboration Agreement with Ono Pharmaceutical Co.

All payments by Ono to us are presented in U.S. dollars. Future payments as disclosed in this summary have been converted to U.S. dollars at the December 31, 2019 exchange rate of \$1.00 = 109.05 Japanese yen.

In January 2019, we entered into a research services, license and collaboration agreement, or the Ono Agreement, with Ono Pharmaceutical Co., Ltd., or Ono, pursuant to which we and Ono have agreed to collaborate in the research of potential product candidates targeting Polq and the development of our small molecule Polq inhibitor program. We are primarily responsible for carrying out research activities to identify a product candidate for the program, to be licensed to Ono, in accordance with a mutually agreed upon research plan until the first submission of an IND in the United States or Japan. In the event that Ono elects to collaborate on the subsequent development and commercialization of a proposed product candidate, Ono will then be responsible for such activities in Japan, South Korea, Taiwan, Hong Kong, Macau and certain other Southeast Asian countries, and we will be responsible for such activities in the rest of the world. The collaboration will be overseen by a joint research committee through development candidate selection and a joint steering committee thereafter. Except as set forth below, each party will bear its own expenses in connection with research, development and commercialization activities under the Ono Agreement.

Under the terms of the Ono Agreement, Ono paid us an initial upfront fee payment of ¥110 million (approximately \$1.0 million). Additionally, in connection with the research activities to be conducted by us pursuant to the Ono Agreement, Ono paid us an initial upfront research service payment of ¥790 million (approximately \$7.1 million) and has agreed to make research service payments up to an aggregate of ¥750 million (approximately \$6.9 million) upon (i) certain specified research triggers and (ii) the election by Ono to collaborate on the development and commercialization of a proposed product candidate. Upon election by Ono to collaborate on a proposed product candidate, Ono shall be responsible for a specified percentage of research and development costs for the IND-enabling studies of the selected product candidate.

Under the Ono Agreement, we are also entitled to receive up to ¥5.11 billion (approximately \$46.9 million) in the aggregate for certain specified development and regulatory milestones, ¥12.1 billion (approximately \$111.0 million) in the aggregate for certain specified commercial milestones and a tiered percentage royalty on annual net sales in Ono's territory ranging from high-single digit to low-double digit, subject to certain specified reductions. Royalties are payable by Ono on a licensed product-by-licensed product and country-by-country basis until the later of the expiration of the last valid claim covering the licensed product in such country and the tenth anniversary of the first commercial sale of such licensed product in such country.

During the term of the Ono Agreement, we, alone and with third parties, are prohibited from researching, developing, manufacturing and commercializing products that inhibit or modulate Polq as a mechanism of action in Ono's territory (as such term is defined in the Ono Agreement). During the term of the Ono Agreement, Ono, alone and with third parties, is prohibited from researching, developing, manufacturing and commercializing products, other than licensed products, that inhibit or modulate Polq as a mechanism of action in Ono's territory.

The collaboration and research obligations of the Ono Agreement may be terminated upon the mutual written consent of both parties on or before the two-year anniversary of the Ono Agreement. The Ono Agreement expires on the date of expiration of all royalty obligations. Either party may terminate the Ono Agreement earlier upon an uncured material breach of the agreement by the other party, the insolvency of the other party, or the initiation of an action challenging the validity or enforceability of a party's patents. Additionally, Ono may terminate the Ono Agreement for any or no reason on a product-by-product and country-by-country basis upon specified written notice, as well as on a product-by-product basis for safety or efficacy reasons upon abbreviated written notice. Moreover, in the event that we are acquired by a third party and after any such acquisition the acquirer initiates a competing program in Ono's territory, Ono will have the right to treat such initiation as a material breach.

License Agreement with New York University

In December 2016, we entered into a license agreement with New York University pursuant to which we obtained a worldwide, royalty-bearing, exclusive license under certain current and/or future patents and know-how of New York University to research, develop and commercialize products that are covered by such licensed patents or otherwise modulate Polq. Upon initial entry into the license agreement, we issued New York University 365,000 common shares in December 2016 as consideration for the license.

In July 2018, we subsequently amended and restated our license agreement with NYU, which we refer to, as amended and restated, as the NYU Agreement. Pursuant to the terms of the NYU Agreement, we are obligated to use reasonable diligence in connection with the research, development and commercialization of the licensed products (as such term is defined in the NYU Agreement), including specified minimum annual spends on research and development.

Under the terms of the NYU Agreement, we are obligated to pay New York University annual license maintenance fees in the low five figures that are creditable against any milestone payments payable in such year. Additionally, in connection with development, regulatory and commercial activities, we have agreed to make milestone payments of (i) \$2.6 million in the aggregate for a product covered by a licensed patent that achieves specified development and sales milestones for the first indication, (ii) \$1.3 million in the aggregate for a product covered by a licensed patent that achieves specified development and sales milestones for a second indication, (iii) \$575,000 in the aggregate for a product covered by a licensed patent that achieves specified development and sales milestones for each of a third and fourth indication, (iv) \$1.3 million in the aggregate for a product that is not covered by a licensed patent that achieves specified development and sales milestones for the first indication, (v) \$650,000 in the aggregate for a product that is not covered by a licensed patent that achieves specified development and sales milestones for a second indication, (vi) \$287,500 in the aggregate for a product that is not covered by a licensed patent that achieves specified development and sales milestones for each of a third and fourth indication. We have the right to reduce these milestone payments by a specified amount of any milestones payable to a third party for a license required for the commercialization of a product candidate.

We are also obligated to pay New York University a low single digit royalty on net sales of any product covered by a licensed patent and a lower single digit royalty on net sales of any product that is not covered by a licensed patent, in each case subject to reduction by a specified amount of any royalties payable to a third party for a license to unblocking intellectual property. Moreover, we are obligated to pay New York University a percentage of any non-royalty consideration received by us from a sublicensee ranging in the low double digits.

Ono is considered a sublicensee under the terms of the NYU Agreement. Accordingly, we have paid New York University a specified percentage of the approximately \$1.0 million initial upfront fee payment we received from Ono and we will be required to pay New York University a specified percentage of any future milestone payments received under the Ono Agreement from Ono for pre-IND development milestones; a specified percentage of any future milestone payments received for post-IND development, regulatory and commercial milestones and low single digit royalties on annual net sales in Ono's territory.

Payments in respect of net sales or sublicense in a country shall remain in force on a product-by-product, country-by-country basis, with respect to (i) products that are not covered by a licensed patent, for ten years from the date of first commercial sale in such country and (ii) products that are covered by a licensed patent, until the expiration date of the last to expire of the licensed patents covering such product or its manufacture or use in the applicable country.

The NYU Agreement expires on the date of expiration of all royalty obligations. Either party may terminate the NYU Agreement earlier upon an uncured material breach of the agreement by the other party or the insolvency of the other party.

Sales and Marketing

Given our stage of development, we have not yet established a commercial organization or distribution capabilities. We have established a wholly-owned U.S. subsidiary, Repare Therapeutics USA Inc., a Delaware corporation with operations in Cambridge, Massachusetts, to support our clinical development program and our potential commercialization efforts in the United States.

Manufacturing

We currently rely, and expect to continue to rely for the foreseeable future, on third-party contract manufacturing organizations, or CMOs, to produce our product candidates for preclinical and clinical testing, as well as for future commercial manufacture of any products that we may commercialize.

We require all of our CMOs to conduct manufacturing activities in compliance with current good manufacturing practice, or cGMP, requirements. We have assembled a team of experienced employees and consultants to provide the necessary technical, quality and regulatory oversight over our CMOs. Currently, we have manufacturing and supply agreements with our CMOs for the manufacture of RP-3500 and our preclinical candidates, including the synthesis of the active pharmaceutical ingredient, or API, as well as drug product.

All of our product candidates are small molecules and are manufactured in synthetic processes from available starting materials. The chemistry underlying our product candidates appears amenable to scale up and does not currently require unusual equipment in the manufacturing process. We expect to continue to develop product candidates that can be produced cost-effectively at contract manufacturing facilities.

We plan to continue to rely on third-party manufacturers for any future trials and commercialization of RP-3500 and any future product candidates, if approved. We anticipate that these CMOs will have capacity to support commercial scale production, but we do not have any formal agreements in place at this time given our early stages of development. If needed, we believe we can identify and establish additional CMOs to provide API and finished drug product without significant disruption to our business or clinical development timelines.

Competition

The biotechnology and pharmaceutical industries are characterized by the rapid evolution of technologies and understanding of disease etiology, intense competition and a strong emphasis on intellectual property. We believe that our approach, strategy, scientific capabilities, know-how and experience provide us with competitive advantages. However, we expect substantial competition from multiple sources, including major pharmaceutical, specialty pharmaceutical, and existing or emerging biotechnology companies, academic research institutions and governmental agencies and public and private research institutions worldwide. Many of our competitors, either alone or with their collaborations, have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved products than we do. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient enrollment in clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs. As a result, our competitors may discover, develop, license or commercialize products before or more successfully than we do.

We face competition from segments of the pharmaceutical, biotechnology and other related markets that pursue the development of precision oncology therapies for patients with genetically-defined cancers. Several biopharmaceutical companies, including Loxo Oncology, Inc. (recently acquired by Eli Lilly and Company), Blueprint Medicines Corporation, Agios Pharmaceuticals, Inc., SpringWorks Therapeutics, Inc., Black Diamond Therapeutics, Inc., Deciphera Pharmaceuticals, Inc. and Turning Point Therapeutics, Inc., are developing

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precision oncology medicines. In addition, we may face competition from companies developing product candidates that are based on SL, including AstraZeneca, GlaxoSmithKline, Pfizer, Bayer, Merck Serono, Artios Pharma Ltd. and IDEAYA Biosciences, Inc.

Furthermore, we also face competition more broadly across the oncology market for cost-effective and reimbursable cancer treatments. The most common methods of treating patients with cancer are surgery, radiation and drug therapy, including chemotherapy, hormone therapy, biologic therapy, such as monoclonal and bispecific antibodies, immunotherapy, cell-based therapy and targeted therapy, or a combination of any such methods. There are a variety of available drug therapies marketed for cancer. In many cases, these drugs are administered in combination to enhance efficacy. While our product candidates, if any are approved, may compete with these existing drugs and other therapies, to the extent they are ultimately used in combination with or as an adjunct to these therapies, our product candidates may not be competitive with them. Some of these drugs are branded and subject to patent protection, and others are available on a generic basis. Insurers and other third-party payors may also encourage the use of generic products or specific branded products. As a result, obtaining market acceptance of, and gaining significant share of the market for, any of our product candidates that we successfully introduce to the market may pose challenges. In addition, many companies are developing new oncology therapeutics, and we cannot predict what the standard of care will be as our product candidates progress through clinical development.

With respect to our lead product candidate, RP-3500, several companies are developing ATR inhibitors with multiple monotherapy and/or combination trials ongoing, including AstraZeneca (AZD6738), Bayer (BAY1895344) and Merck Serono (M4344). In addition, companies such as Artios Pharma and Atrin Pharmaceuticals have ATR inhibitors in preclinical development.

For our CCNE1-SL inhibitor program, we are not aware of any companies or institutions with programs in development for this target.

For our preclinical Polq program, both Artios Pharma and IDEAYA Biosciences have Polq programs in the preclinical stages of development.

We could see a reduction or elimination in our commercial opportunity if our competitors develop and commercialize drugs that are safer, more effective, have fewer or less severe side effects, are more convenient to administer, are less expensive or with a more favorable label than our product candidates. Our competitors also may obtain FDA or other regulatory approval for their drugs more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. The key competitive factors affecting the success of all of our product candidates, if approved, are likely to be their efficacy, safety, convenience, price, the level of generic competition and the availability of reimbursement from government and other third-party payors.

Government Regulation

The FDA and comparable regulatory agencies in state and local jurisdictions and in foreign countries impose substantial requirements upon the clinical development, manufacture and marketing of pharmaceutical products. These agencies and other federal, state and local entities regulate research and development activities and the testing, manufacture, quality control, safety, effectiveness, labeling, storage, packaging, recordkeeping, tracking, approval, import, export, distribution, advertising and promotion of our products.

U.S. Government Regulation of Drug Products

In the United States, the FDA regulates drugs under the Federal Food, Drug, and Cosmetic Act, or FDCA, and its implementing regulations. The process of obtaining regulatory approvals and the subsequent compliance with applicable federal, state, local and foreign statutes and regulations requires the expenditure of substantial

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time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or after approval, may subject an applicant to a variety of administrative or judicial sanctions, such as the FDA's refusal to approve a pending New Drug Application, or NDA, withdrawal of an approval, imposition of a clinical hold, issuance of warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, restitution, disgorgement or civil or criminal penalties.

The process required by the FDA before product candidates may be marketed in the United States generally involves the following:

- nonclinical laboratory and animal tests that must be conducted in accordance with good laboratory practices, or GLPs;
- submission to the FDA of an investigational new drug application, or IND, which must become effective before clinical trials may begin;
- approval by an independent institutional review board, or IRB, for each clinical site or centrally before each trial may be initiated;
- adequate and well-controlled human clinical trials to establish the safety and efficacy of the proposed product candidate for its intended use, performed in accordance with good clinical practices, or GCPs;
- submission to the FDA of an NDA and payment of user fees;
- satisfactory completion of an FDA advisory committee review, if applicable;
- pre-approval inspection of manufacturing facilities and selected clinical investigators for their compliance with cGMP and good clinical practices, or GCPs;
- satisfactory completion of FDA audits of clinical trial sites to assure compliance with GCPs and the integrity of the clinical data;
- FDA review and approval of an NDA to permit commercial marketing for particular indications for use; and
- compliance with any post-approval requirements, including the potential requirement to implement a Risk Evaluation and Mitigation Strategy, or REMS, and the potential requirement to conduct post-approval studies.

The testing and approval process requires substantial time, effort and financial resources.

Preclinical Studies

Preclinical studies include laboratory evaluation of drug substance chemistry, pharmacology, toxicity and drug product formulation, as well as animal studies to assess potential safety and efficacy. Prior to commencing the first clinical trial with a product candidate, a sponsor must submit the results of the preclinical tests and preclinical literature, together with manufacturing information, analytical data and any available clinical data or literature, among other required information, to the FDA as part of an IND. Some preclinical studies may continue even after the IND is submitted. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises safety concerns or questions about the conduct of the clinical trial and imposes a clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. As a result, submission of an IND may not result in FDA authorization to commence a clinical trial.

Clinical Trials

Clinical trials involve the administration of the investigational new drug to human subjects under the supervision of qualified investigators in accordance with GCP requirements. A separate submission to the

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existing IND must be made for each successive clinical trial conducted during product development, as well as amendments to previously submitted clinical trials. Further, an independent IRB for each institution participating in the clinical trial must review and approve the plan for any clinical trial, its informed consent form and other communications to study subjects before the clinical trial commences at that site. The IRB must continue to oversee the clinical trial while it is being conducted, including any changes to the study plans.

Regulatory authorities, an IRB or the sponsor may suspend or discontinue a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk, the clinical trial is not being conducted in accordance with the FDA's or the IRB's requirements, or if the drug has been associated with unexpected serious harm to subjects. Some studies also include a data safety monitoring board, which receives special access to unblinded data during the clinical trial and may advise the sponsor to halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy.

In general, for purposes of NDA approval, human clinical trials are typically conducted in three sequential phases that may overlap.

- Phase 1—Studies are initially conducted to test the product candidate for safety, dosage tolerance, structure-activity relationships, mechanism of action, absorption, metabolism, distribution and excretion in healthy volunteers or subjects with the target disease or condition. If possible, Phase 1 clinical trials may also be used to gain an initial indication of product effectiveness.
- Phase 2—Controlled studies are conducted with groups of subjects with a specified disease or condition to provide enough data to evaluate the preliminary efficacy, optimal dosages and dosing schedule and expanded evidence of safety. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expansive Phase 3 clinical trials.
- Phase 3—These clinical trials are generally undertaken in larger subject populations to provide statistically significant evidence of clinical efficacy and to further test for safety in an expanded subject population at multiple clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the product and provide an adequate basis for product labeling. These clinical trials may be done at trial sites outside the United States as long as the global sites are also representative of the U.S. population and the conduct of the study at global sites comports with FDA regulations and guidance, such as compliance with GCPs.

The FDA may require, or companies may pursue, additional clinical trials after a product is approved. These so-called Phase 4 studies may be made a condition to be satisfied after approval. The results of Phase 4 studies can confirm the effectiveness of a product candidate and can provide important safety information.

Clinical trials must be conducted under the supervision of qualified investigators in accordance with GCP requirements, which include the requirements that all research subjects provide their informed consent in writing for their participation in any clinical trial, and the review and approval of the study by an IRB. Investigators must also provide information to the clinical trial sponsors to allow the sponsors to make specified financial disclosures to the FDA. Clinical trials are conducted under protocols detailing, among other things, the objectives of the trial, the trial procedures, the parameters to be used in monitoring safety and the efficacy criteria to be evaluated and a statistical analysis plan. Information about some clinical trials, including a description of the trial and trial results, must be submitted within specific timeframes to the National Institutes of Health for public dissemination on their ClinicalTrials.gov website. Progress reports detailing the results of the clinical trials must be submitted at least annually to the FDA and more frequently if serious adverse events occur.

The manufacture of investigational drugs for the conduct of human clinical trials is subject to cGMP requirements. Investigational drugs and active pharmaceutical ingredients imported into the United States are also subject to regulation by the FDA relating to their labeling and distribution. Further, the export of

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investigational drug products outside of the United States is subject to regulatory requirements of the receiving country as well as U.S. export requirements under the FDCA. Progress reports detailing the results of the clinical trials must be submitted at least annually to the FDA and the IRB and more frequently if serious adverse effects occur.

Concurrent with clinical trials, companies usually complete additional animal studies and must also develop additional information about the chemistry and physical characteristics of the product candidate as well as finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, must develop methods for testing the identity, strength, quality and purity of the final product. Additionally, appropriate packaging must be selected and tested, and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

Special FDA Expedited Review and Approval Programs

The FDA has various programs, including fast track designation, breakthrough therapy designation, accelerated approval, and priority review, which are intended to expedite or simplify the process for the development and FDA review of drugs that are intended for the treatment of serious or life threatening diseases or conditions and demonstrate the potential to address unmet medical needs. The purpose of these programs is to provide important new drugs to patients earlier than under standard FDA review procedures.

Under the fast track program, the sponsor of a new drug candidate may request that FDA designate the drug candidate for a specific indication as a fast track drug concurrent with, or after, the filing of the IND for the drug candidate. To be eligible for a fast track designation, the FDA must determine, based on the request of a sponsor, that a product is intended to treat a serious or life threatening disease or condition and demonstrates the potential to address an unmet medical need. The FDA will determine that a product will fill an unmet medical need if it will provide a therapy where none exists or provide a therapy that may be potentially superior to existing therapy based on efficacy or safety factors. Fast track designation provides additional opportunities for interaction with the FDA's review team and may allow for rolling review of NDA components before the completed application is submitted, if the sponsor provides a schedule for the submission of the sections of the NDA, the FDA agrees to accept sections of the NDA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the NDA. However, the FDA's time period goal for reviewing an application does not begin until the last section of the NDA is submitted. The FDA may decide to rescind the fast track designation if it determines that the qualifying criteria no longer apply.

In addition, a sponsor can request breakthrough therapy designation for a drug if it is intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. Drugs designated as breakthrough therapies are eligible for intensive guidance from the FDA on an efficient drug development program, organizational commitment to the development and review of the product including involvement of senior managers, and, like fast track products, are also eligible for rolling review of the NDA. Both fast track and breakthrough therapy products may be eligible for accelerated approval and/or priority review, if relevant criteria are met.

Under the FDA's accelerated approval regulations, the FDA may approve a drug for a serious or life threatening illness that provides meaningful therapeutic benefit to patients over existing treatments based upon a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. A drug candidate approved on this basis is

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subject to rigorous post marketing compliance requirements, including the completion of Phase 4 or post approval clinical trials to confirm the effect on the clinical endpoint. Failure to conduct required post approval studies, or confirm a clinical benefit during post marketing studies, will allow the FDA to withdraw the drug from the market on an expedited basis. All promotional materials for drug candidates approved under accelerated approval regulations are subject to prior review by the FDA.

Once an NDA is submitted for a product intended to treat a serious condition, the FDA may assign a priority review designation if FDA determines that the product, if approved, would provide a significant improvement in safety or effectiveness. A priority review means that the goal for the FDA to review an application is six months, rather than the standard review of ten months under the Prescription Drug User Fee Act, or PDUFA, guidelines. Under the current PDUFA performance goals, these six and ten month review periods are measured from the 60-day filing date rather than the receipt date for NDAs for new molecular entities, which typically adds approximately two months to the timeline for review from the date of submission.

Even if a product qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened. In addition, the manufacturer of an investigational drug for a serious or life threatening disease is required to make available, such as by posting on its website, its policy on responding to requests for expanded access. Furthermore, fast track designation, breakthrough therapy designation, accelerated approval and priority review do not change the standards for approval and may not ultimately expedite the development or approval process.

NDA Submission and Review by the FDA

Assuming successful completion of the required clinical and preclinical testing, among other items, the results of product development, including chemistry, manufacture and controls, nonclinical studies and clinical trials are submitted to the FDA, along with proposed labeling, as part of an NDA. The submission of an NDA requires payment of a substantial user fee to the FDA. These user fees must be filed at the time of the first submission of the application, even if the application is being submitted on a rolling basis. Fee waivers or reductions are available in some circumstances. One basis for a waiver of the application user fee is if the applicant employs fewer than 500 employees, including employees of affiliates, the applicant does not have an approved marketing application for a product that has been introduced or delivered for introduction into interstate commerce, and the applicant, including its affiliates, is submitting its first marketing application.

In addition, under the Pediatric Research Equity Act, an NDA or supplement to an NDA for a new active ingredient, indication, dosage form, dosage regimen or route of administration must contain data that are adequate to assess the safety and efficacy of the drug for the claimed indications in all relevant pediatric subpopulations, and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective.

The FDA may, on its own initiative or at the request of the applicant, grant deferrals for submission of some or all pediatric data until after approval of the product for use in adults or full or partial waivers from the pediatric data requirements.

The FDA must refer applications for drugs that contain active ingredients, including any ester or salt of the active ingredients, that have not previously been approved by the FDA to an advisory committee or provide in an action letter a summary of the reasons for not referring it to an advisory committee. The FDA may also refer drugs which present difficult questions of safety, purity or potency to an advisory committee. An advisory committee is typically a panel that includes clinicians and other experts who review, evaluate and make a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

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The FDA reviews applications to determine, among other things, whether a product is safe and effective for its intended use and whether the manufacturing controls are adequate to assure and preserve the product's identity, strength, quality and purity. Before approving an NDA, the FDA will inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities, including contract manufacturers and subcontracts, are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving an NDA, the FDA will typically inspect one or more clinical trial sites to assure compliance with GCPs.

Once the FDA receives an application, it has 60 days to review the NDA to determine if it is substantially complete to permit a substantive review, before it accepts the application for filing. Once the submission is accepted for filing, the FDA begins an in-depth review of the NDA. Under the goals and policies agreed to by the FDA under PDUFA, the FDA has set the review goal of 10 months from the 60-day filing date to complete its initial review of a standard NDA for a new molecular entity, or NME, and make a decision on the application. For priority review applications, the FDA has set the review goal of reviewing NME NDAs within six months of the 60-day filing date. Such deadlines are referred to as the PDUFA date. The PDUFA date is only a goal and the FDA does not always meet its PDUFA dates. The review process and the PDUFA date may also be extended if the FDA requests or the NDA sponsor otherwise provides additional information or clarification regarding the submission during the review period that amends the original application.

Once the FDA's review of the application is complete, the FDA will issue either a Complete Response Letter, or CRL, or approval letter. A CRL indicates that the review cycle of the application is complete and the application is not ready for approval. A CRL generally contains a statement of specific conditions that must be met in order to secure final approval of the NDA and may require additional clinical or preclinical testing, or other information or analyses in order for the FDA to reconsider the application in the future. Even with the submission of additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval. If and when those conditions have been met to the FDA's satisfaction, the FDA may issue an approval letter. An approval letter authorizes commercial marketing of the drug with specific prescribing information for specific indications.

The FDA may delay or refuse approval of an NDA if applicable regulatory criteria are not satisfied, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety or efficacy of a product, or impose other conditions, including distribution restrictions or other risk management mechanisms. For example, the FDA may require a REMS as a condition of approval or following approval to mitigate any identified or suspected serious risks and ensure safe use of the drug. The FDA may prevent or limit further marketing of a product, or impose additional post-marketing requirements, based on the results of post-marketing studies or surveillance programs. After approval, some types of changes to the approved product, such as adding new indications, manufacturing changes and additional labeling claims, are subject to further testing requirements, FDA notification and FDA review and approval. Further, should new safety information arise, additional testing, product labeling or FDA notification may be required.

If regulatory approval of a product is granted, such approval may entail limitations on the indicated uses for which such product may be marketed or may include contraindications, warnings or precautions in the product labeling, which has resulted in a boxed warning. A boxed warning is the strictest warning put in the labeling of prescription drugs or drug products by the FDA when there is reasonable evidence of an association of a serious hazard with the drug. The FDA also may not approve the inclusion of all labeling claims sought by an applicant. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing regulatory standards is not maintained or if problems occur after the product reaches the marketplace. In addition, the FDA may require Phase 4 post-marketing studies to monitor the effect of approved products, and may limit further marketing of the product based on the results of these post-marketing studies.

U.S. Post-Approval Requirements

Any products manufactured or distributed by us pursuant to FDA approvals are subject to continuing regulation by the FDA, including periodic reporting, product sampling and distribution, advertising, promotion, drug shortage reporting, compliance with any post-approval requirements imposed as a conditional of approval such as Phase 4 clinical trials, REMS and surveillance, recordkeeping and reporting requirements, including adverse experiences.

After approval, most changes to the approved product, such as adding new indications or other labeling claims are subject to prior FDA review and approval. There also are continuing, annual program fee requirements for approved products, as well as new application fees for supplemental applications with clinical data. Drug manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies and to list their drug products, and are subject to periodic announced and unannounced inspections by the FDA and these state agencies for compliance with cGMPs and other requirements, which impose procedural and documentation requirements.

Changes to the manufacturing process are strictly regulated and often require prior FDA approval before being implemented, or FDA notification. FDA regulations also require investigation and correction of any deviations from cGMPs and specifications, and impose reporting and documentation requirements upon the sponsor and any third-party manufacturers that the sponsor may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain cGMP compliance.

Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in withdrawal of marketing approval, mandatory revisions to the approved labeling to add new safety information or other limitations, imposition of post-market studies or clinical trials to assess new safety risks, or imposition of distribution or other restrictions under a REMS program, among other consequences.

The FDA closely regulates the marketing and promotion of drugs. A company can make only those claims relating to safety and efficacy that are consistent with the FDA approved labeling. Physicians, in their independent professional medical judgement, may prescribe legally available products for uses that are not described in the product's labeling and that differ from those tested by us and approved by the FDA. However, manufacturers and third parties acting on their behalf are prohibited from marketing or promoting drugs in a manner inconsistent with the approved labeling. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses and a company that is found to have improperly promoted off-label uses may be subject to significant liability.

Failure to comply with any of the FDA's requirements could result in significant adverse enforcement actions. These include a variety of administrative or judicial sanctions, such as refusal to approve pending applications, license suspension or revocation, withdrawal of an approval, imposition of a clinical hold or termination of clinical trials, warning letters, untitled letters, modification of promotional materials or labeling, product recalls, product seizures or detentions, refusal to allow imports or exports, total or partial suspension of production or distribution, debarment, injunctions, fines, consent decrees, corporate integrity agreements, refusals of government contracts and new orders under existing contracts, exclusion from participation in federal and state healthcare programs, restitution, disgorgement or civil or criminal penalties, including fines and imprisonment. It is also possible that failure to comply with the FDA's requirements relating to the promotion of prescription drugs may lead to investigations alleging violations of federal and state healthcare fraud and abuse and other laws, as well as state consumer protection laws. Any of these sanctions could result in adverse publicity, among other adverse consequences.

U.S. Marketing Exclusivity

The FDA provides periods of non-patent regulatory exclusivity, which provides the holder of an approved NDA limited protection from new competition in the marketplace for the innovation represented by its approved drug for a period of three or five years following the FDA's approval of the NDA. Five years of exclusivity are available to new chemical entities, or NCEs. An NCE is a drug that contains no active moiety that has been approved by the FDA in any other NDA. An active moiety is the molecule or ion, excluding those appended portions of the molecule that cause the drug to be an ester, salt, including a salt with hydrogen or coordination bonds, or other noncovalent, or not involving the sharing of electron pairs between atoms, derivatives, such as a complex (i.e., formed by the chemical interaction of two compounds), chelate (i.e., a chemical compound), or clathrate (i.e., a polymer framework that traps molecules), of the molecule, responsible for the therapeutic activity of the drug substance. During the exclusivity period, the FDA may not accept for review or approve an Abbreviated New Drug Application, or ANDA, or a 505(b)(2) NDA submitted by another company that contains the previously approved active moiety. An ANDA or 505(b)(2) application, however, may be submitted one year before NCE exclusivity expires if a Paragraph IV certification is filed.

Regulation outside the United States

We will be subject to similar foreign laws and regulations concerning the development of our product candidates outside of the United States.

Other Healthcare Laws and Regulations

Our business activities, including but not limited to, research, sales, promotion, distribution, medical education and other activities are subject to regulation by numerous regulatory and law enforcement authorities in the United States in addition to the FDA, including the Department of Justice, the Department of Health and Human Services, or HHS, and its various divisions, including Centers for Medicare & Medicaid Services, or CMS, and the Health Resources and Services Administration, the Department of Veterans Affairs, the Department of Defense and state and local governments. Our business activities must comply with numerous healthcare laws and regulations, including those described below.

The federal Anti-Kickback Statute prohibits, among other things, any person or entity, from knowingly and willfully offering, paying, soliciting or receiving any remuneration, directly or indirectly, overtly or covertly, in cash or in kind, to induce or reward, or in return for, the referral of an individual for, or purchasing, leasing, ordering, or arranging for the purchase, lease or order of, any good, facility, item or service reimbursable under Medicare, Medicaid or other federal healthcare programs. The Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers, and formulary managers on the other hand. The term remuneration has been interpreted broadly to include anything of value. There are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution. The exceptions and safe harbors are drawn narrowly and require strict compliance in order to offer protection. Practices that involve remuneration that may be alleged to be intended to induce prescribing, purchasing or recommending may be subject to scrutiny if they do not qualify for an exception or safe harbor. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct per se illegal under the federal Anti-Kickback Statute. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all of its facts and circumstances. Additionally, the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, or collectively the ACA, amended the intent requirement of the federal Anti-Kickback Statute, and other healthcare criminal fraud statutes, so that a person or entity no longer needs to have actual knowledge of the federal Anti-Kickback Statute, or the specific intent to violate it, to have violated the statute. The ACA also provided that a violation of the federal Anti-Kickback Statute is grounds for the government or a whistleblower to assert that a claim for payment of items or services resulting from such violation constitutes a false or fraudulent claim for purposes of the federal civil False Claims Act, or FCA.

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The federal civil and criminal false claims laws, including the FCA, prohibit, among other things, any person or entity from knowingly presenting, or causing to be presented, a false claim for payment to, or approval by, the U.S. federal government, including the Medicare and Medicaid programs, or knowingly making, using, or causing to be made or used a false record or statement material to a false or fraudulent claim or to avoid, decrease or conceal an obligation to pay money to the federal government. As a result of a modification made by the Fraud Enforcement and Recovery Act of 2009, a claim includes “any request or demand” for money or property presented to the U.S. government. In addition, manufacturers can be held liable under the FCA even when they do not submit claims directly to government payors if they are deemed to “cause” the submission of false or fraudulent claims. The FCA also permits a private individual acting as a “whistleblower” to bring actions on behalf of the federal government alleging violations of the FCA and to share in any monetary recovery. FCA liability is potentially significant in the healthcare industry because the statute provides for treble damages and mandatory penalties. Government enforcement agencies and private whistleblowers have investigated pharmaceutical companies for or asserted liability under the FCA for a variety of alleged promotional and marketing activities, such as providing free products to customers with the expectation that the customers would bill federal programs for the products; providing consulting fees and other benefits to physicians to induce them to prescribe products; engaging in promotion for “off-label” uses; and submitting inflated best price information to the Medicaid Rebate Program.

The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, created additional federal criminal statutes that prohibits, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of whether the payor is public or private, knowingly and willfully embezzling or stealing from a health care benefit program, willfully obstructing a criminal investigation of a health care offense and knowingly and willfully falsifying, concealing or covering up by any trick, scheme or device a material fact or making any materially false, fictitious or fraudulent statements in connection with the delivery of, or payment for, healthcare benefits, items or services relating to healthcare matters. Additionally, the ACA amended the intent requirement of some of these criminal statutes under HIPAA so that a person or entity no longer needs to have actual knowledge of the statute, or the specific intent to violate it, to have committed a violation.

Additionally, the federal Open Payments program pursuant to the Physician Payments Sunshine Act, created under Section 6002 of the ACA and its implementing regulations, requires certain manufacturers of drugs, devices, biologicals and medical supplies for which payment is available under Medicare, Medicaid or the Children’s Health Insurance Program (with specified exceptions) to report annually information related to specified payments or other transfers of value provided to physicians, as defined by such law, and teaching hospitals, or to entities or individuals at the request of, or designated on behalf of, the physicians and teaching hospitals and to report annually specified ownership and investment interests held by physicians and their immediate family members. Failure to submit timely, accurately and completely the required information for all payments, transfers of value and ownership or investment interests may result in civil monetary penalties.

In addition, we may be subject to data privacy and security regulation by both the federal government and the states in which we conduct our business. HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and their implementing regulations, impose requirements relating to the privacy, security and transmission of individually identifiable health information held by covered entities and their business associates. Among other things, HITECH makes HIPAA’s security standards directly applicable to business associates, defined as independent contractors or agents of covered entities that create, receive, maintain or transmit protected health information in connection with providing a service for or on behalf of a covered entity. HITECH also created new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys’ fees and costs associated with pursuing federal civil actions.

Many states have also adopted laws similar to each of the above federal laws, which may be broader in scope and apply to items or services reimbursed by any third-party payor, including commercial insurers. We may also be subject to state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government, and/or state laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures and pricing information, state and local laws that require the registration of pharmaceutical sales representatives, and state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts.

Ensuring that our internal operations and business arrangements with third parties comply with applicable healthcare laws and regulations will likely be costly. It is possible that governmental authorities will conclude that our business practices do not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations were found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, possible exclusion from government funded healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, additional reporting obligations and oversight if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with these laws, and curtailment of our operations, any of which could substantially disrupt our operations. If the physicians or other providers or entities with whom we expect to do business are found not to be in compliance with applicable laws, they may be subject to significant criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs.

Coverage and Reimbursement

Our ability to commercialize any products successfully will also depend in part on the extent to which coverage and adequate reimbursement for the procedures utilizing our product candidates, performed by health care providers, once approved, will be available from government health administration authorities, private health insurers and other organizations. Government authorities and other third-party payors, such as private health insurers and health maintenance organizations, determine which procedures, and the products utilized in such procedures, they will cover and establish reimbursement levels. Assuming coverage is obtained for procedures utilizing a given product by a third-party payor, the resulting reimbursement payment rates may not be adequate or may require co-payments that patients find unacceptably high. Patients who undergo procedures for the treatment of their conditions, and their treating physicians, generally rely on third-party payors to reimburse all or part of the costs associated with the procedures which utilize our products. Treating physicians are unlikely to use and order our products unless coverage is provided and the reimbursement is adequate to cover all or a significant portion of the cost of the procedures which utilize our products. Therefore, coverage and adequate reimbursement for procedures which utilize new products is critical to the acceptance of such new products. Coverage decisions may depend upon clinical and economic standards that disfavor new products when more established or lower cost therapeutic alternatives are already available or subsequently become available.

Government authorities and other third-party payors are developing increasingly sophisticated methods of cost containment, such as including price controls, restrictions on coverage and reimbursement and requirements for substitution of less expensive products and procedures. Government and other third-party payors are increasingly challenging the prices charged for health care products and procedures, examining the cost effectiveness of procedures, and the products used in such procedures, in addition to their safety and efficacy, and limiting or attempting to limit both coverage and the level of reimbursement. Further, no uniform policy requirement for coverage and reimbursement exists among third-party payors in the United States, which causes significant uncertainty related to the insurance coverage and reimbursement of newly approved products, and the procedures which may utilize such newly approved products. Therefore, coverage and reimbursement can differ significantly from payor to payor and health care provider to health care provider. As a result, the coverage

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determination process is often a time-consuming and costly process that requires the provision of scientific and clinical support for the use of new products to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance.

There may be significant delays in obtaining coverage and reimbursement for newly approved products, and coverage may be more limited than the purposes for which the product is approved by the FDA. Moreover, eligibility for coverage and reimbursement does not imply that a product, or the procedures which utilize such product, will be paid for in all cases or at a rate which the health care providers who purchase those products will find cost effective. Additionally, we expect pricing pressures in connection with the sale of any of our product candidates due to the trend toward managed healthcare, the increasing influence of health maintenance organizations, and additional legislative changes.

We cannot be sure that coverage and reimbursement will be available for any product that we commercialize, or the procedures which utilize such product, and, if reimbursement is available, what the level of reimbursement will be. Coverage and reimbursement may impact the demand for, or the price of, any product candidate for which we obtain marketing approval. If coverage and reimbursement are not available or reimbursement is available only to limited levels, we may not successfully commercialize any product candidate for which we obtain marketing approval.

Healthcare Reform Measures

The United States and some foreign jurisdictions are considering or have enacted a number of legislative and regulatory proposals designed to change the healthcare system. Among policy-makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives.

For example, the pharmaceutical industry in the United States has been affected by the passage of ACA, which, among other things: imposed new fees on entities that manufacture or import certain branded prescription drugs; expanded pharmaceutical manufacturer obligations to provide discounts and rebates to certain government programs; implemented a licensure framework for follow-on biologic products; expanded health care fraud and abuse laws; revised the methodology by which rebates owed by manufacturers to the state and federal government under the Medicaid Drug Rebate Program are calculated for certain drugs and biologics, including products that are inhaled, infused, instilled, implanted or injected; imposed an additional rebate similar to an inflation penalty on new formulations of drugs; extended the Medicaid Drug Rebate Program to utilization of prescriptions of individuals enrolled in Medicaid managed care organizations; expanded the 340B program which caps the price at which manufacturers can sell covered outpatient pharmaceuticals to specified hospitals, clinics and community health centers; and provided incentives to programs that increase the federal government's comparative effectiveness research.

There remain judicial and Congressional challenges to certain aspects of the ACA, as well as efforts by the Trump administration to repeal or replace certain aspects of the ACA. Since January 2017, President Trump has signed Executive Orders and other directives designed to delay the implementation of certain provisions of the ACA or otherwise circumvent some of the requirements for health insurance mandated by the ACA. Concurrently, Congress has considered legislation that would repeal or repeal and replace all or part of the ACA. While Congress has not passed comprehensive repeal legislation, several bills affecting the implementation of certain taxes under the ACA have been signed into law. The Tax Cuts and Jobs Act of 2017, or Tax Act, included a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate". Additionally, the 2020 federal spending package permanently eliminated, effective January 1, 2020, the ACA-mandated "Cadillac" tax on high-cost employer-sponsored health

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coverage and medical device tax and, effective January 1, 2021, also eliminates the health insurer tax. Further, the Bipartisan Budget Act of 2018, or the BBA, among other things, amended the ACA, effective January 1, 2019, to increase from 50 percent to 70 percent the point-of-sale discount that is owed by pharmaceutical manufacturers who participate in Medicare Part D and to close the coverage gap in most Medicare drug plans, commonly referred to as the “donut hole”. On December 14, 2018, a Texas U.S. District Court Judge ruled that the ACA is unconstitutional in its entirety because the “individual mandate” was repealed by Congress as part of the Tax Act. On December 18, 2019, the U.S. Court of Appeals for the 5th Circuit upheld the District Court ruling that the individual mandate was unconstitutional and remanded the case back to the District Court to determine whether the remaining provisions of the ACA are invalid as well. On March 2, 2020, the United States Supreme Court granted the petitions for writs of certiorari to review this case, and has allotted one hour for oral arguments, which are expected to occur in the fall. It is unclear how such litigation and other efforts to repeal and replace the ACA will impact the ACA.

Other legislative changes have been proposed and adopted in the United States since the ACA was enacted. In August 2011, the Budget Control Act of 2011, among other things, included aggregate reductions of Medicare payments to providers of 2.0% per fiscal year, which went into effect in April 2013, and due to subsequent legislative amendments, including the BBA, will remain in effect through 2029, unless additional U.S. Congressional action is taken. These Medicare sequester reductions will be suspended from May 1, 2020 through December 31, 2020 due to the COVID-19 pandemic. In addition, in January 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, which, among other things, reduced Medicare payments to several categories of healthcare providers and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. Additionally, the Medicare Access and CHIP Reauthorization Act of 2015, or MACRA, ended the use of the statutory formula for clinician payment and established a quality payment incentive program, also referred to as the Quality Payment Program. This program provides clinicians with two ways to participate, including through the Advanced Alternative Payment Models, or APMs, and the Merit-based Incentive Payment System, or MIPS. In November 2019, CMS issued a final rule finalizing the changes to the Quality Payment Program. At this time, it is unclear how the introduction of the Quality Payment Program will impact overall physician reimbursement under the Medicare program. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors.

In addition, there has been particular and increasing legislative and enforcement interest in the United States with respect to drug pricing practices in recent years, particularly with respect to drugs that have been subject to relatively large price increases over relatively short time periods. Specifically, there have been several recent U.S. Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, reduce the cost of prescription drugs under Medicare and reform government program reimbursement methodologies for pharmaceutical products. The Trump administration’s budget proposal for fiscal year 2021 includes a \$135 billion allowance to support legislative proposals seeking to reduce drug prices, increase competition, lower out-of-pocket drug costs for patients, and increase patient access to lower-cost generic and biosimilar drugs. On March 10, 2020, the Trump administration sent “principles” for drug pricing to Congress, calling for legislation that would, among other things, cap Medicare Part D beneficiary out-of-pocket pharmacy expenses, provide an option to cap Medicare Part D beneficiary monthly out-of-pocket expenses, and place limits on pharmaceutical price increases. Further, the Trump administration previously released a “Blueprint” to lower drug prices and reduce out of pocket costs of drugs that contained proposals to increase drug manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products, and reduce the out of pocket costs of drug products paid by consumers. HHS has solicited feedback on some of these measures and has implemented others under its existing authority. For example, in May 2019, CMS issued a final rule to allow Medicare Advantage plans the option to use step therapy for Part B drugs beginning January 1, 2020. This final rule codified CMS’s policy change that was effective January 1, 2019. Although a number of these and other measures may require additional authorization to become effective, Congress and the Trump administration have each indicated that it

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will continue to seek new legislative and/or administrative measures to control drug costs. In addition, individual states in the United States have become increasingly active in passing legislation and implementing regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. In the future, there will likely continue to be proposals relating to the reform of the U.S. healthcare system, some of which could further limit coverage and reimbursement of products.

The Foreign Corrupt Practices Act

The Foreign Corrupt Practices Act, or FCPA, prohibits any U.S. individual or business from paying, offering or authorizing payment or offering of anything of value, directly or indirectly, to any foreign official, political party or candidate for the purpose of influencing any act or decision of the foreign entity in order to assist the individual or business in obtaining or retaining business. The FCPA also obligates companies whose securities are listed in the United States to comply with accounting provisions requiring the companies to maintain books and records that accurately and fairly reflect all transactions of the companies, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations.

Employees

As of December 31, 2019, we had 58 full-time employees, including 27 who hold an M.D. or Ph.D. degree. Of these full-time employees, 47 were primarily engaged in research and development activities and 11 were primarily engaged in management or general and administrative activities. None of our employees is represented by a labor union and we consider our employee relations to be good.

Facilities

Our headquarters is currently located in Montréal, Québec, Canada and consists of 9,045 square feet of leased laboratory and office space under a lease that expires in July 2021. We also have a U.S. subsidiary in Cambridge, Massachusetts. We believe that our facilities are adequate to meet our current needs.

Legal Proceedings

From time to time, we may become involved in legal proceedings arising in the ordinary course of our business. We are not currently a party to any material legal proceedings, and we are not aware of any pending or threatened legal proceeding against us that we believe could have an adverse effect on our business, operating results or financial condition.

MANAGEMENT

The following table sets forth information regarding our executive officers and directors, including their ages as of March 31, 2020.

<u>Name</u>	<u>Age</u>	<u>Position(s)</u>
Executive Officers		
Lloyd M. Segal	56	President, Chief Executive Officer and Director
Steve Forte	41	Executive Vice President, Chief Financial Officer
Maria Koehler, M.D., Ph.D.	63	Executive Vice President, Chief Medical Officer
Michael Zinda, Ph.D.	49	Executive Vice President, Chief Scientific Officer
Non-Employee Directors		
Jerel Davis, Ph.D.	43	Chairman of the Board of Directors
David Bonita, M.D.	44	Director
Todd Foley	48	Director
Samarth Kulkarni, Ph.D.	41	Director
Briggs Morrison, M.D.	61	Director
Kevin J. Raidy ⁽¹⁾	51	Director
Carol A. Schafer	56	Director

(1) Mr. Raidy intends to resign from our board of directors prior to the effectiveness of the registration statement of which this prospectus forms a part.

Executive Officers

Lloyd M. Segal has served as our President and Chief Executive Officer and as a member of our board of directors since our incorporation in September 2016. From February 2010 to January 2016, he was a Managing Partner with Persistence Capital Partners, a Canadian-based healthcare private equity investor. Previously, Mr. Segal was a consultant with McKinsey & Company, and served as chief executive officer of several emerging biotechnology companies including Advanced Bioconcept Inc., Caprion Pharmaceuticals Inc. (now Caprion Biosciences), which he co-founded, and Thallion Pharmaceuticals Inc. He serves as a member of the board of directors of GBC American Fund, a U.S. growth-focused mutual fund. Mr. Segal also previously served as Chairman of LMC Diabetes & Endocrinology, Canada's leading national endocrinology practice. From June 2016 to March 2020, Mr. Segal served as Entrepreneur-in-Residence with Versant Ventures. He was honored in 2013 by the *Financial Times* as Outstanding Director of the Year for public companies and also previously served on the boards of directors of several public and private U.S. and Canadian companies, including Valeant Pharmaceuticals International and its predecessor company, Biovail Corporation. He holds a B.A. in politics from Brandeis University and an M.B.A. from Harvard Business School. Our board of directors believes that Mr. Segal's extensive experience in the biotechnology industry in addition to his corporate governance and executive leadership experience qualify him to serve on our board of directors.

Steve Forte has served as our Executive Vice President, Chief Financial Officer since October 2019. Prior to joining us, he served as Chief Financial Officer of Clementia Pharmaceuticals Inc. from August 2018 through June 2019, during which time Clementia was acquired by Ipsen S.A. From September 2015 to August 2018, Mr. Forte served as Chief Financial Officer of Thinking Capital Financial Corporation, a Canadian financial technology firm, where he ultimately led the firm through a sale to Purpose Investments. From September 2014 to September 2015, he served as Executive Director of Finance of CST Canada Co. From 2005 to 2014, Mr. Forte held positions of increasing responsibility at Aptalis Pharma Inc., including most recently holding the position of Vice President, Financial Reporting where he was responsible for the overall corporate controllership

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function of the company. He currently serves on the board of directors of Profound Medical Corp., where he is also a member of the audit committee. Mr. Forte received his Bachelor of Commerce in accountancy from Concordia University and is a Certified Professional Accountant in the Province of Québec and a Certified Information Systems Auditor (non-practicing) with ISACA.

Maria Koehler, M.D., Ph.D. has served as our Executive Vice President, Chief Medical Officer since May 2019. Prior to joining us, from September 2017 to April 2019, Dr. Koehler served as the Chief Medical Officer of Bicycle Therapeutics Limited. From March 2009 to September 2017, Dr. Koehler served as Vice President of Strategy, Innovation and Collaborations for the Oncology Business Unit at Pfizer Inc. Prior to joining Pfizer, Dr. Koehler was the group leader for the Medicine Development Center of GlaxoSmithKline Oncology. Prior to that, Dr. Koehler was a Senior Medical Director for oncology research and development at AstraZeneca plc. Dr. Koehler has also served as the clinical director of Bone Marrow Transplantation at University Hospital in Pittsburgh as well as the director of the Bone Marrow Transplant Program and associate professor at St. Christopher's Hospital in Philadelphia. Dr. Koehler is a board-certified hematology/oncology physician. Dr. Koehler received her M.D. and Ph.D. from Silesian School of Medicine in Katowice, Poland.

Michael Zinda, Ph.D. has served as our Executive Vice President, Chief Scientific Officer since May 2019 and previously served as Executive Vice President, Head of Research and Development of our U.S. subsidiary, Repare Therapeutics USA Inc., from June 2017 to May 2019. Prior to joining us, he spent 16 years at AstraZeneca from 2001 to May 2017, where he obtained the position of Executive Director, Head of Cancer Bioscience. In this role, Dr. Zinda served on the global science leadership team, oncology research board and the Acerta research and early development teams accountable for strategy, key collaborations/partnerships and delivery of an innovative portfolio of patient-centric drug discovery programs. Dr. Zinda holds a B.Sc. in biology from Minnesota State University Moorhead and a Ph.D. in molecular biology from Vanderbilt University. He received his post-doctoral training at Princeton University and Eli Lilly & Company.

Non-Employee Directors

Jerel Davis, Ph.D. has served as chairman of our board of directors since our incorporation in September 2016. Since June 2011, Dr. Davis has been at Versant Venture Management, LLC, a healthcare investment firm, where he has held the position of managing director since 2015. He has played a critical role in Versant's company creation strategies and has served on the boards of directors of many public and private biotech companies including BlueRock Therapeutics, Turnstone Biologics, Chinook Therapeutics, Inception 5 and Northern Biologics. Prior to joining Versant, Dr. Davis was an associate principal at McKinsey & Company in various healthcare markets including the United States, Canada, Europe and China. He received a B.S. in mathematics and biology from Pepperdine University and a Ph.D. in population genetics from Stanford University. Our board of directors believes that Dr. Davis's broad and extensive experience in the life sciences industry as both an investor of and launching numerous life sciences companies qualifies him to serve on our board of directors.

David Bonita, M.D. has served as a member of our board of directors since September 2019. Dr. Bonita is a member of OrbiMed Advisors LLC, an investment firm, where he has held various positions since joining in June 2004. He currently serves on the boards of directors of Tricida, Inc. and Imara Inc. Dr. Bonita previously served on the boards of directors of several other public and private companies, including Ambit Biosciences Corporation, Clementia Pharmaceuticals Inc., Loxo Oncology, Inc., SI-BONE, Inc. and ViewRay Inc. Prior to joining OrbiMed, he worked as a corporate finance analyst in the healthcare investment banking groups of Morgan Stanley and UBS. Dr. Bonita has published scientific articles in peer-reviewed journals based on signal transduction research performed at Harvard Medical School. He received his B.A. in biology from Harvard University and his joint M.D./M.B.A. from Columbia University. Our board of directors believes that Dr. Bonita's extensive investment experience in the healthcare industry and his experience on the boards of directors of several public and private companies qualify him to serve on our board of directors.

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Todd Foley has served as a member of our board of directors since June 2017. Since 1999, Mr. Foley has worked at MPM Capital LLC, a healthcare-focused venture capital firm, where he currently serves as a Managing Director focusing on investments in biotech companies. He currently serves on the board of directors of Chiasma, Inc. and Rhythm Pharmaceuticals, Inc. and also serves as on the boards of directors of several other privately-held life sciences and pharmaceutical companies. Mr. Foley received a B.S. in chemistry from the Massachusetts Institute of Technology and an M.B.A from Harvard Business School. Our board of directors believes that Mr. Foley's financial expertise and experience as both an investor of and a member of the board of directors of numerous life sciences companies qualify him to serve on our board of directors.

Samarth Kulkarni, Ph.D. has served as a member of our board of directors since November 2019. Dr. Kulkarni is the Chief Executive Officer of CRISPR Therapeutics AG, a position he has held since 2017. He initially joined CRISPR in August 2015 as Chief Business Officer, and then served as CRISPR's President and Chief Business Officer from May 2017 to November 2017. Prior to joining CRISPR, Dr. Kulkarni was a partner within the pharmaceuticals and biotechnology practice at McKinsey & Company, a global consulting firm, where he held various positions of increasing responsibility after joining in 2006. He also serves on the board of directors of Black Diamond Therapeutics, Inc. Dr. Kulkarni received a Ph.D. in bioengineering and nanotechnology from the University of Washington and a B. Tech. from the Indian Institute of Technology. Our board of directors believes that Dr. Kulkarni's extensive management and industry experience qualify him to serve on our board of directors.

Briggs Morrison, M.D. has served as a member of our board of directors since June 2017. Dr. Morrison currently serves as the Chief Executive Officer of Syndax Pharmaceuticals, Inc., a position he has held since June 2015, and as a member of its board of directors since July 2015. Prior to joining Syndax, Dr. Morrison served as Executive Vice President, Global Medicines Development and Chief Medical Officer at AstraZeneca plc from January 2012 to June 2015, leading the company's global, late-stage development organization and serving as a member of the AstraZeneca senior executive team. From October 2007 to December 2011, Dr. Morrison held a number of positions of increasing responsibility at Pfizer Inc., culminating in his appointment as Head, Medical Affairs, Safety and Regulatory Affairs for Pfizer's human health business. Dr. Morrison served as chairman of the board of TransCelerate BioPharma Inc. from 2014 to 2015, a member of the executive committee of the Clinical Trials Transformation Initiative sponsored by FDA, and is on the board of the Alliance for Clinical Research Excellence and Safety. In addition to Syndax, Dr. Morrison currently serves on the boards of directors of two other public companies, Arvinas, Inc. and NextCure, Inc. as well as on the boards of directors of several private companies. He is also currently an executive partner at MPM Capital LLC, a healthcare-focused venture capital firm, a position he has held since June 2015. Dr. Morrison received a B.S. in biology from Georgetown University and an M.D. from the University of Connecticut Medical School. He completed residency training in internal medicine at Massachusetts General Hospital and a fellowship in medical oncology at the Dana-Farber Cancer Institute. Our board of directors believes that Dr. Morrison's extensive executive leadership experience, his medical background and training and his service on the boards of other public and private biopharmaceutical and biotechnology companies qualify him to serve on our board of directors.

Kevin J. Raidy has served as a member of our board of directors since September 2019. Since November 2017, Mr. Raidy has served as Managing Partner and Portfolio Manager of Cowen Healthcare Investments. Previously, from 2012 to 2017, he served as Head of Investment Banking at Cowen and Company, and from 2010 to 2012, he served as the co-head of Cowen's equity capital markets group, which is responsible for the origination and execution of all equity capital-raising transactions. Prior joining Cowen, Mr. Raidy was a managing director at Ramius LLC, where he was portfolio manager for direct investments and convertible bonds, managing a portfolio in excess of \$1 billion. Mr. Raidy also was the founder of H4 Capital Management LLC. His sell-side experience includes ten years at Shipley Raidy Capital Partners LP, a boutique investment banking firm that he co-founded, where he was responsible for sourcing, evaluating and structuring numerous debt and equity financings and also performed M&A advisory services. Mr. Raidy holds a B.S. in economics with a concentration in finance from the Wharton School of the University of Pennsylvania. Our board of directors believes that Mr. Raidy's extensive financial and investment expertise qualify him to serve on our board of

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directors. Mr. Raidy intends to resign from our board of directors prior to the effectiveness of the registration statement of which this prospectus forms a part.

Carol A. Schafer has served as a member of our board of directors since March 2019. Ms. Schafer is currently a consultant in the biotech industry and has more than 25 years of experience in investment banking, equity capital markets, corporate finance and business development in the biopharmaceutical sector. From April 2007 to September 2018, she held various positions of increasing responsibility at Wells Fargo Securities, most recently serving as Vice Chair, Equity Capital Markets. From December 2003 to February 2007, Ms. Schafer served as Vice President of Finance and Business Development at Lexicon Pharmaceuticals. Prior to that, Ms. Schafer worked at J.P. Morgan, where she held positions of increasing responsibility, most recently serving as a managing director in equity capital markets. Ms. Schafer currently serves on the boards of directors of Idera Pharmaceuticals, Inc. and Five Prime Therapeutics, Inc. Ms. Schafer received a B.A. from Boston College and an M.B.A from New York University. Our board of directors believes that Ms. Schafer's extensive financial background and experience providing investment banking, equity capital markets and strategic support to companies within the healthcare sector qualify her to serve on our board of directors.

Board Composition

Our board of directors currently consists of eight members. All of our directors currently serve on the board of directors pursuant to the provisions of our second amended and restated unanimous shareholders' agreement, or the shareholders' agreement, dated September 3, 2019, between us and all of our shareholders. The shareholders' agreement will terminate upon the closing of this offering, after which there will be no further contractual obligations regarding the election of our directors.

Our amended and restated bylaws that will become effective immediately prior to the closing of this offering will provide that our board of directors is to consist of a minimum of one director and a maximum of ten directors as determined from time to time by the directors. Under the Canada Business Corporations Act, or CBCA, a director may be removed with or without cause by a resolution passed by a majority of the votes cast by shareholders present in person or by proxy at a meeting and who are entitled to vote. The directors are appointed at the annual general meeting of shareholders and the terms of office for each of the directors will expire at the time of our next annual shareholders meeting. Under the CBCA, at least one quarter of our directors must be resident Canadians as defined in the CBCA. Our amended articles of incorporation will provide that, between annual general meetings of our shareholders, the directors may appoint one or more additional directors, but the number of additional directors may not at any time exceed one third of the number of directors elected at the previous annual meeting of shareholders.

Director Independence

Under listing rules of the Nasdaq Stock Market LLC, or the Nasdaq Listing Rules, independent directors must comprise a majority of our board of directors within one year of listing as a public company.

Our board of directors has undertaken a review of its composition, the composition of its committees and the independence of each director. Based upon information requested from and provided by each director concerning his or her background, employment and affiliations, including family relationships, our board of directors has determined that all of our directors except _____, representing _____ of our eight directors, do not have any relationships that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is "independent" as that term is defined under the applicable rules and regulations of the SEC and the Nasdaq Listing Rules. In making this determination, our board of directors considered the current and prior relationships that each non-employee director has with our company and all other facts and circumstances our board of directors deemed relevant in determining their independence, including the beneficial ownership of our share capital by each non-employee director.

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There are no family relationships among our directors and executive officers.

Role of the Board in Risk Oversight

One of the key functions of our board of directors is informed oversight of our risk management process. Our board of directors does not have a standing risk management committee, but rather administers this oversight function directly through the board of directors as a whole, as well as through various standing committees of our board of directors that address risks inherent in their respective areas of oversight. In particular, our board of directors is responsible for monitoring and assessing strategic risk exposure and our audit committee has the responsibility to consider and discuss our major financial risk exposures and the steps our management has taken to monitor and control these exposures, including guidelines and policies to govern the process by which risk assessment and management is undertaken. The audit committee also monitors compliance with legal and regulatory requirements.

Board Committees

Our board of directors has established an audit committee and a compensation committee, each of which will be reconstituted prior to the completion of this offering. We will also establish a nominating and corporate governance committee prior to the completion of this offering. The composition and functions of each committee are described below. Members serve on these committees until their resignation or until otherwise determined by our board of directors.

Audit Committee

Upon the completion of this offering, our audit committee will consist of _____, _____ and _____. The chair of our audit committee is _____. Our board of directors has determined that all members are independent under the Nasdaq Listing Rules and Rule 10A-3(b)(1) of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Our board of directors has determined that each member of our audit committee meets the financial literacy requirements as set forth in the Nasdaq Listing Rules. Our board of directors has also determined that _____ is an “audit committee financial expert” as such term is currently defined in Item 407(d)(5) of Regulations S-K. In arriving at these determinations, the board of directors has examined each audit committee member’s scope of experience and the nature of their employment in the corporate finance sector.

The audit committee is responsible for assisting our board of directors in its oversight of the integrity of our consolidated financial statements, the qualifications and independence of our independent auditors and our internal financial and accounting controls. The principal duties and responsibilities of our audit committee include, among other things:

- selecting a qualified firm to serve as the independent registered public accounting firm to audit our financial statements;
- helping to ensure the independence and performance of the independent registered public accounting firm;
- discussing the scope and results of the audit with the independent registered public accounting firm, and reviewing, with management and the independent accountants, our interim and year-end operating results;
- developing procedures for employees to submit concerns anonymously about questionable accounting or audit matters;
- reviewing our policies on risk assessment and risk management;
- reviewing related party transactions;

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- obtaining and reviewing a report by the independent registered public accounting firm at least annually, that describes our internal quality-control procedures, any material issues with such procedures, and any steps taken to deal with such issues when required by applicable law; and
- approving (or, as permitted, pre-approving) all audit and all permissible non-audit services, other than de minimis non-audit services, to be performed by the independent registered public accounting firm.

Our audit committee will operate under a written charter, to be effective immediately prior to the closing of this offering, which satisfies the applicable rules and regulations of the SEC and the Nasdaq Listing Rules.

Compensation Committee

Upon the completion of this offering, our compensation committee will consist of _____, _____ and _____. The chair of our compensation committee is _____. Our board of directors has determined that all members are independent under the Nasdaq Listing Rules and are “non-employee directors” as defined in Rule 16b-3 promulgated under the Exchange Act. The chair of our compensation committee is _____.

The compensation committee oversees the compensation objectives for the company and the compensation of the chief executive officer and other executives. The principal duties and responsibilities of our compensation committee include, among other things:

- reviewing and recommending to our board of directors the compensation of our executive officers, including evaluating the performance of our chief executive officer and, with his assistance, that of our other executive officers;
- reviewing and recommending to our board of directors the compensation of our directors;
- reviewing and approving, or recommending that our board of directors approve, the terms of compensatory arrangements with our executive officers;
- administering our equity and non-equity incentive plans;
- reviewing and approving, or recommending that our board of directors approve, incentive compensation and equity plans; and
- reviewing and establishing general policies relating to compensation and benefits of our employees and reviewing our overall compensation philosophy.

Our compensation committee will operate under a written charter, to be effective immediately prior to the closing of this offering, which satisfies the applicable rules and regulations of the SEC and Nasdaq Listing Rules.

Nominating and Corporate Governance Committee

Upon the completion of this offering, our nominating and corporate governance committee will consist of _____, _____ and _____. The chair of our nominating and corporate governance committee is _____. Each member of the nominating and corporate governance committee is a non-employee director within the meaning of Rule 16b-3 of the rules promulgated under the Exchange Act, an independent director as defined by the Nasdaq Listing Rules and is free from any relationship that would interfere with the exercise of his or her independent judgment, as determined by the board of directors in accordance with the applicable Nasdaq Listing Rules.

The nominating and corporate governance committee oversees our corporate governance policies and evaluates the composition of our board of directors and candidates for director. The nominating and corporate governance committee’s responsibilities include, among other things:

- identifying, evaluating and selecting, or recommending that our board of directors approve, nominees for election to our board of directors and its committees;

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- evaluating the performance of our board of directors and of individual directors;
- considering and making recommendations to our board of directors regarding the composition of our board of directors and its committees;
- reviewing developments in corporate governance practices;
- evaluating the adequacy of our corporate governance practices and reporting;
- developing and making recommendations to our board of directors regarding corporate governance guidelines and matters; and
- overseeing an annual evaluation of the board's performance.

Our nominating and governance committee will operate under a written charter, to be effective immediately prior to the closing of this offering, which satisfies the applicable rules and regulations of the SEC and the Nasdaq Listing Rules.

Code of Business Conduct and Ethics

In connection with this offering, we intend to adopt a Code of Business Conduct and Ethics, or the Code of Ethics, applicable to all of our employees, executive officers and directors. Following the closing of this offering, the Code of Ethics will be available on our website at www.reparerx.com. The nominating and corporate governance committee will be responsible for overseeing the Code of Ethics and must approve any waivers of the Code of Ethics for our employees, executive officers and directors. We expect that any amendments to the Code of Ethics, or any waivers of its requirements, will be disclosed on our website. Information contained in, or accessible through, our website does not constitute a part of, and is not incorporated into, this prospectus.

In accordance with the CBCA, directors and officers must disclose the nature and extent of any interest he or she has in a material contract or material transaction, whether made or proposed, with us, if the director or officer: (a) is a party to the contract or transaction; (b) is a director or officer, or an individual acting in a similar capacity, of a party to the contract or transaction; or (c) has a material interest in a party to the contract or transaction. Subject to certain limited exceptions under the CBCA, no director may vote on a resolution to approve a material contract or transaction which is subject to such disclosure requirement. In addition, it is our policy that an interested director recuse himself or herself from the decision-making process pertaining to a material contract or transaction in which he or she has an interest.

Compensation Committee Interlocks and Insider Participation

None of the members of the compensation committee is currently, or has been at any time, one of our executive officers or employees. None of our executive officers currently serves, or has served during the last year, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving as a member of our board of directors or on our compensation committee.

Non-Employee Director Compensation

Historically, we have not had a formal compensation policy with respect to service on our board of directors. We have reimbursed and will continue to reimburse our non-employee directors for their reasonable out-of-pocket expenses incurred in attending board and committee meetings, and occasionally granted share options as compensation for service. Our board of directors will adopt a formal director compensation policy for non-employee directors to be effective following the completion of this offering.

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Director Compensation Table

The following table sets forth information regarding the compensation earned for service on our board of directors by our non-employee directors and for their service as a consultant to us, if applicable, during the year ended December 31, 2019. Mr. Segal is also member of our board of directors, but did not receive any additional compensation for his service as a director and therefore is not included in the table below. The compensation for Mr. Segal is set forth under “Executive Compensation—Summary Compensation Table.”

<u>Name</u>	<u>Fees Earned or Paid in Cash (\$)</u>	<u>Option Awards \$(1)(2)</u>	<u>Total (\$)</u>
David Bonita	—	—	—
Jerel Davis	—	—	—
Todd Foley	—	—	—
Samarth Kulkarni	7,500	111,800	119,300
Briggs Morrison	50,000	71,200	121,200
Kevin J. Raidy	—	—	—
Carol A. Schafer	25,000	88,800	113,800

- (1) In accordance with SEC rules, this column reflects the aggregate grant date fair value of the option awards granted during fiscal year 2019 computed in accordance with ASC 718. Assumptions used in the calculation of these amounts are included in the notes to our audited consolidated financial statements included elsewhere in this prospectus. These amounts do not reflect the actual economic value that will be realized by our non-employee directors upon the vesting of the share options, the exercise of the share options or the sale of the common shares underlying such share options.
- (2) The following table provides information regarding the number of common shares underlying share options granted to our non-employee directors that were outstanding as of December 31, 2019:

<u>Name</u>	<u>Option Awards Outstanding at Year-End</u>
David Bonita	—
Jerel Davis	—
Todd Foley	—
Samarth Kulkarni	430,000
Briggs Morrison	550,000
Kevin J. Raidy	—
Carol A. Schafer	430,000

EXECUTIVE COMPENSATION

Compensation Overview

The following table shows the total compensation awarded to, earned by, or paid to during the year ended December 31, 2019 to (1) our principal executive officer, (2) our two next most highly compensated executive officers who earned more than \$100,000 during the fiscal year ended December 31, 2019 and were serving as executive officers as of such date, and (3) any individual who would otherwise be included in (2) above but for the fact that such individual was not serving as an executive officer of ours as of December 31, 2019. We refer to these individuals in this prospectus as our named executive officers.

Our named executive officers for 2019 who appear in the Summary Compensation Table are:

- Lloyd M. Segal, our President and Chief Executive Officer;
- Michael Zinda, Ph.D., our Executive Vice President, Chief Scientific Officer;
- Maria Koehler, M.D., Ph.D., our Executive Vice President, Chief Medical Officer; and
- Katina Dorton, our former Executive Vice President, Chief Financial Officer.

Summary Compensation Table

NAME AND PRINCIPAL POSITION	YEAR	SALARY (\$) ⁽¹⁾	OPTION AWARDS (\$) ⁽²⁾	NON-EQUITY INCENTIVE PLAN COMPENSATION (\$) ⁽³⁾	ALL OTHER COMPENSATION (\$)	TOTAL (\$)
Lloyd M. Segal ⁽⁴⁾ <i>President and Chief Executive Officer</i>	2019	430,000	1,031,000	124,700	1,362 ⁽⁵⁾	1,587,062
Michael Zinda, Ph.D. ⁽⁶⁾ <i>Executive Vice President, Chief Scientific Officer</i>	2019	325,000	403,200	70,000	34,355 ⁽⁷⁾	832,555
Maria Koehler, M.D., Ph.D. ⁽⁸⁾ <i>Executive Vice President, Chief Medical Officer</i>	2019	272,596	363,500	76,146	15,466 ⁽⁹⁾	727,708
Katina Dorton ⁽¹⁰⁾ <i>Former Executive Vice President, Chief Financial Officer</i>	2019	175,000	216,000	–	388,452 ⁽¹¹⁾	779,452

- (1) Salary amounts represent actual amounts paid during 2019. See “—Narrative to the Summary Compensation Table—Annual Base Salary” below.
- (2) In accordance with SEC rules, this column reflects the aggregate grant date fair value of the option awards granted during fiscal year 2019 computed in accordance with ASC 718 for share-based compensation transactions. Assumptions used in the calculation of these amounts are included in Note 11 to our audited consolidated financial statements included elsewhere in this prospectus. These amounts do not reflect the actual economic value that will be realized by the named executive officer upon the vesting of the share options, the exercise of the share options or the sale of the common shares underlying such share options.
- (3) Reflects performance-based cash bonuses awarded to our named executive officers. See “—Non-Equity Incentive Plan Compensation” below for a description of the material terms of the program pursuant to which this compensation was awarded.
- (4) Mr. Segal also serves as a member of our board of directors but does not receive any additional compensation for his service as a director.
- (5) Includes life insurance premiums in the amount of \$51 paid by us on behalf of Mr. Segal.
- (6) Dr. Zinda was appointed as our Executive Vice President, Chief Scientific Officer in May 2019. His salary was increased from \$285,000 to \$325,000 in connection with his promotion.

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- (7) Represents (i) contributions to a retirement account in the amount of \$24,375 and (ii) reimbursements paid with respect to medical insurance premiums for Dr. Zinda in the aggregate amount of \$9,980.
- (8) Dr. Koehler commenced employment with us on May 1, 2019.
- (9) Represents (i) a travel allowance in the amount of \$12,800 and (ii) the employee portion of Dr. Koehler's medical and dental insurance premiums that we pay on her behalf in the amount of \$2,666.
- (10) Ms. Dorton commenced employment with us on April 15, 2019. Ms. Dorton's employment was terminated by us effective October 10, 2019.
- (11) Represents (i) a housing allowance in the amount of \$26,000, (ii) severance payments totaling \$345,375 (of which \$86,344 was paid as of December 31, 2019 and the remainder will be paid in equal monthly payments through June 2020, pursuant to the terms of her separation agreement), (iii) consulting fees in the amount of \$9,000 pursuant to the terms of her severance agreement and (iv) a cash payment for unused accrued vacation through her separation date in the amount of \$8,077.

Narrative to the Summary Compensation Table

Our board of directors reviews compensation annually for all employees, including our named executive officers. In setting executive base salaries and bonuses and granting equity incentive awards, we consider compensation for comparable positions in the market, the historical compensation levels of our executives, individual performance as compared to our expectations and objectives, our desire to motivate our employees to achieve short- and long-term results that are in the best interests of our shareholders and a long-term commitment to our company.

The board of directors has historically determined the compensation of our executives, upon recommendation of the compensation committee. The compensation committee has reviewed and recommended to the board for approval the compensation and other terms of employment of our chief executive officer, and evaluates the chief executive officer's performance in light of relevant corporate goals and objectives. Our chief executive officer has typically discussed his recommendations for all other executives (other than himself) with the compensation committee and the board. Based on those discussions and its discretion, the compensation committee has recommended the compensation of each executive officer to the board, and the board of directors has then approved.

Annual Base Salary

The annual base salaries of our named executive officers are generally determined, approved and reviewed periodically by our compensation committee in order to compensate our named executive officers for the satisfactory performance of duties to our company. Annual base salaries are intended to provide a fixed component of compensation to our named executive officers, reflecting their skill sets, experience, roles and responsibilities. Base salaries for our named executive officers have generally been set at levels deemed necessary to attract and retain individuals with superior talent.

The following table sets forth the annual base salaries for each of our named executive officers for 2019 and 2020.

NAME	2019 BASE SALARY (\$)	2020 BASE SALARY (\$)
Lloyd M. Segal	430,000	450,000
Michael Zinda, Ph.D ⁽¹⁾	325,000	350,000
Maria Koehler, M.D. Ph.D.	405,000	410,960
Katina Dorton ⁽²⁾	350,000	N/A

(1) Dr. Zinda was appointed as our Executive Vice President, Chief Scientific Officer in May 2019. His salary was increased from \$285,000 to \$325,000 in connection with his promotion.

(2) Ms. Dorton's employment was terminated by us effective October 10, 2019.

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Non-Equity Incentive Plan Compensation

In accordance with the terms of their respective employment agreements, our named executive officers are eligible to receive discretionary annual bonuses of up to a percentage of each executive's gross base salary based on individual performance, company performance or as otherwise determined appropriate, as determined by the compensation committee of our board of directors.

NAME	2019 BONUS TARGET (%)	2020 BONUS TARGET (%)
Lloyd M. Segal	30	40
Michael Zinda, Ph.D.	20	(1)
Maria Koehler, M.D., Ph.D.	30	(1)
Katina Dorton (2)	35	N/A

- (1) The bonus targets will be approved by the board of directors prior to the effectiveness of the registration statement of which this prospectus forms a part.
- (2) Ms. Dorton's employment was terminated by us effective October 10, 2019.

During fiscal year 2019, Mr. Segal and Drs. Zinda and Koehler earned bonuses as set forth in the 2019 Summary Compensation Table above based on specified company and individual performance metrics which were approved by the board of directors.

Equity-Based Incentive Awards

Our equity-based incentive awards granted to our named executive officers are designed to align our interests and those of our shareholders with those of our employees and consultants, including our executive officers. As of the date of this prospectus, share option awards were the only form of equity awards we have granted to any of our executive officers.

We have historically used share options as an incentive for long-term compensation to our executive officers because the share options allow our executive officers to profit from this form of equity compensation only if our share price increases relative to the share option's exercise price, which exercise price is set at the fair market value of our common shares on the date of grant. Vesting of equity awards is generally tied to each officer's continuous service with us and serves as an additional retention measure. We may grant equity awards at such times as our board of directors or compensation committee determines appropriate. Our executives generally are awarded an initial grant in the form of a share option in connection with their commencement of employment with us. Additional grants may occur periodically in order to specifically incentivize executives with respect to achieving certain corporate goals or to reward executives for exceptional performance.

Prior to this offering, we have granted all share options pursuant to our Repare Therapeutics Inc. Amended and Restated Option Plan, or the Existing Plan. Following this offering, we will grant equity incentive awards under the terms of the 2020 Equity Incentive Plan, or the 2020 Plan. The terms of our equity plans are described below under "— Equity Incentive Plans."

All options are granted with an exercise price per share that is no less than the fair market value of our common shares on the date of grant of such award. Our share option awards generally vest over a four-year period and may be subject to acceleration of vesting and exercisability under certain termination and change in control events. See "— Outstanding Equity Awards at Fiscal Year-End."

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Outstanding Equity Awards at Fiscal Year-End

The following table provides certain information regarding the outstanding equity awards granted to our named executive officers that remain outstanding as of December 31, 2019. All awards were granted pursuant to the Existing Plan. See “—Equity Incentive Plans— Existing Plan” below for additional information.

NAME AND PRINCIPAL POSITION	GRANT DATE	VESTING COMMENCEMENT DATE	OPTION AWARDS (1)			
			NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS (#) (EXERCISABLE)	NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS (#) (UNEXERCISABLE)	OPTION EXERCISE PRICE (\$)(2)	OPTION EXPIRATION DATE
Lloyd M. Segal	12/1/2017	6/22/2017	1,093,750	656,250(3)	0.27	6/22/2027
<i>President and Chief Executive Officer</i>	3/29/2019	3/29/2019	–	1,650,000(3)	0.34	3/29/2029
	12/16/2019	12/16/2019	–	2,950,000(4)	0.40	12/16/2029
Michael Zinda, Ph.D.	12/1/2017	6/14/2017	125,000	75,000(3)	0.27	6/14/2027
<i>Executive Vice President, Chief Scientific Officer</i>	12/1/2017	6/22/2017	359,375	215,625(3)	0.27	6/22/2027
	3/29/2019	3/29/2019	–	570,000(3)	0.34	3/29/2029
	12/16/2019	12/16/2019	–	1,200,000(4)	0.40	12/16/2029
Maria Koehler, M.D., Ph.D.	3/29/2019	5/1/2019	–	1,175,000(3)	0.34	5/1/2029
<i>Executive Vice President, Chief Medical Officer</i>	12/16/2019	12/16/2019	–	675,000(5)	0.40	12/16/2029
Katina Dorton	3/29/2019	4/15/2019	393,750	–	0.34	4/10/2020
<i>Former Executive Vice President, Chief Financial Officer</i>						

- (1) All of the awards in this table were granted under the Existing Plan, the terms of which are described below under “—Equity Incentive Plans – Existing Plan.”
- (2) All of the option awards listed in the table were granted with an exercise price per share that is no less than the fair market value of our common shares on the date of grant of such award, as determined in good faith by our board of directors.
- (3) Twenty-five percent of the common shares subject to this award vested on the first anniversary of the vesting commencement date, and the remaining shares vested in 36 equal monthly installments thereafter, subject to the officer’s continued service through each vesting date.
- (4) Twenty-five percent of the common shares subject to this award vested on the first anniversary of the vesting commencement date, and the remaining shares vested in 39 equal monthly installments thereafter, subject to the officer’s continued service through each vesting date.
- (5) The vesting of Ms. Dorton’s option award accelerated upon her termination of employment effective October 10, 2019, pursuant to the terms of her separation agreement with us.

On and after this offering, we may, on an annual basis or otherwise, grant additional equity awards to our executive officers pursuant to our 2020 Equity Incentive Plan, or the 2020 Plan, the terms of which are described below under “—Equity Incentive Plans—2020 Plan.

Employment Arrangements with our Named Executive Officers

We have entered into employment agreements with each of our named executive officers. The agreements set forth the initial terms and conditions of the executive’s employment with us, including initial base salary, bonus opportunity, eligibility for employee benefits and severance benefits upon a qualifying termination of employment, subject to certain non-solicitation and non-competition provisions. Any potential payments and benefits due upon a qualifying termination of employment or a change in control are further described below under “— Potential Payments and Benefits upon Termination or Change in Control.”

The employment of each of our named executive officers is “at will” and may be terminated at any time. In addition, each of our named executive officers has executed a form of our standard proprietary information and inventions agreement. The material terms of each agreement are described below.

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In connection with this offering, we intend to enter new employment agreements with each of our named executive officers that will replace and supersede the agreements described below.

Lloyd M. Segal. We entered into an employment agreement with Mr. Segal in January 2018, effective July 1, 2017, in connection with his appointment as our President and Chief Executive Officer. The employment agreement provides for a base salary and target bonus opportunity, which shall be reviewed and may be adjusted by the Compensation Committee of our board of directors on an annual basis. Mr. Segal's compensation has been subsequently increased to the amounts described above. To qualify for the annual target bonus set at a percentage of his adjusted base salary, in respect of any calendar year, Mr. Segal must remain continuously employed with us through the date that such bonus is paid, which will be before the end of February of the following year. Under the employment agreement, we agreed to grant Mr. Segal an option to acquire 1,750,000 shares of our common shares pursuant to the terms of the Existing Plan, at an exercise price of \$0.27 per share; 25% of the shares vested on the one-year anniversary of the grant date, with the remainder vesting monthly in equal installments over the following 36 months such that the share options vested in full on the four-year anniversary of the grant date, subject to Mr. Segal's continuous employment through such vesting dates. Mr. Segal is also eligible for additional equity awards under our equity compensation plans, as may be granted from time to time.

Michael Zinda, Ph.D. We entered into an employment agreement with Dr. Zinda in August 2017, effective June 14, 2017, in connection with his appointment as our Executive Vice President, Head of Research and Development from June 2017 to May 2019. He subsequently was promoted to the role of our Executive Vice President, Chief Scientific Officer in May 2019. The employment agreement provides for a base salary and target bonus opportunity, which shall be reviewed and may be adjusted by the Compensation Committee of our board of directors on an annual basis. Dr. Zinda's compensation has been subsequently increased to the amounts described above, including in connection with his promotion. To qualify for the annual target bonus set at a percentage of his adjusted base salary in respect of any calendar year, Dr. Zinda must remain continuously employed with us through the end of the applicable calendar year. Under the employment agreement, we granted Dr. Zinda an initial option to acquire 200,000 shares of our common shares. In addition, under the employment agreement, we granted Dr. Zinda an option to acquire 575,000 shares of our common shares upon the initial closing of our Series A preferred share financing. Each grant is pursuant to the terms of the Existing Plan, has an exercise price of \$0.27 per share; 25% of the shares vested on the one-year anniversary of the grant date, with the remainder vesting monthly in equal installments over the following 36 months such that share options will be vested in full on the four-year anniversary of the grant date, subject to Dr. Zinda's continuous employment through such vesting dates. Dr. Zinda is also eligible for additional equity awards under our equity compensation plans, as may be granted from time to time. Under the agreement, we agreed to annually contribute 7.5% of Dr. Zinda's base salary as in effect to an individual retirement account maintained for the benefit of Dr. Zinda or a similar pension program, to be selected at his direction. The employment agreement provided that until we provided standardized, group medical, dental, and vision insurance, Dr. Zinda could submit reimbursements for personal and dental insurance coverage, up to \$2,500 per month. Such obligation to provide reimbursement ended June 30, 2019 when we began to provide these health and welfare benefits for U.S. employees, as discussed further under "Health and Welfare and Retirement Benefits; Perquisites."

Maria Koehler, M.D., Ph.D. We entered into an employment agreement with Dr. Koehler in April 2019, effective May 1, 2019, in connection with her appointment as our Executive Vice President, Chief Medical Officer. The employment agreement provides for a base salary and target bonus opportunity, which shall be reviewed and may be adjusted by the Compensation Committee of our board of directors on an annual basis. Dr. Koehler's compensation has been subsequently increased to the amounts described above. To qualify for the annual target bonus set at a percentage of his adjusted base salary in respect of any calendar year, Dr. Koehler must remain continuously employed with us through the date that the annual target bonus is approved by the Compensation Committee, which will be prior to March 15 of the following year. Under the employment agreement, we granted Dr. Koehler an option to acquire 1,175,000 shares of our common shares pursuant to the Existing Plan, at an exercise price of \$0.34 per share; 25% of the shares vested on the one-year anniversary of the grant date, with the remainder vesting monthly in equal installments over the following 36 months such that it

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will be vested in full on the four-year anniversary of the grant date, subject to Dr. Koehler's continuous employment through such vesting dates. The employment agreement provided that until we provided standardized, group medical, dental, and vision insurance, Dr. Koehler could submit reimbursements for personal and dental insurance coverage, up to \$2,500 per month. Such obligation to provide reimbursement ended June 30, 2019 when we began to provide these health and welfare benefits for U.S. employees, as discussed further under "- Health and Welfare and Retirement Benefits; Perquisites." As of July 1, 2019, we now pay the employee portion of her medical and dental insurance premiums.

Separation Agreement with Katina Dorton

We terminated Ms. Dorton's employment as our Executive Vice President, Chief Financial Officer effective October 10, 2019. In connection with her termination, we entered into a separation agreement with Ms. Dorton and an independent contractor agreement with Ms. Dorton, pursuant to which Ms. Dorton agreed to provide us with certain consulting services following her termination and through December 31, 2019. In connection with the separation agreement, she entered into a full and final release of any claims relating to her employment with us or termination therefrom. Pursuant to her separation agreement, Ms. Dorton received the following severance benefits: (i) her fully earned but unpaid base salary through the date of termination at the rate then in effect, plus accrued vacation and any other reimbursements or expenses to which she was entitled; (ii) a cash payment, payable in nine equal monthly installments, in the amount of \$354,375, reduced dollar-for-dollar by the \$9,000 in consulting fees paid to Ms. Dorton pursuant to her independent contractor agreement; (iii) continuation of health benefits for a period of nine months following her termination date; and (iv) the automatic acceleration of the vesting and exercisability of 393,750 outstanding but unvested stock options. The remaining 956,250 stock options then held by Ms. Dorton were immediately forfeited on her termination date. Ms. Dorton may exercise her vested options within six months following her termination. She subsequently exercised all of her vested options on January 8, 2020.

Potential Payments and Benefits upon Termination or Change in Control

Prior to the completion of this offering, we intend to enter into change in control and severance agreements with each of Mr. Segal, Dr. Zinda and Dr. Koehler, respectively, which will supersede all previous severance and change in control arrangements we had entered into with these executive officers.

Health and Welfare and Retirement Benefits; Perquisites

These payments and benefits discussed above are in addition to eligibility to participate in benefits available generally to salaried employees, including accrued benefits under our health and welfare plans and arrangements and vacation pay or other accrued benefits under our medical and dental insurance plans, that are not generally described. Since 2017, we have offered medical, dental, vision, life and accidental death and dismemberment insurance to our Canadian employees. Prior to July 1, 2019, we did not provide any health or welfare benefits to our U.S. employees. We also did provide reimbursements to employees to cover COBRA monthly payments. Now, we offer medical, dental, vision, life and accidental death and dismemberment insurance to our U.S. employees. We only provide limited perquisites or personal benefits to our named executive officers. Our board of directors may elect to adopt qualified or nonqualified benefit plans in the future, if it determines that doing so is in our best interests.

Equity Incentive Plans

2020 Plan

Our board of directors intends to adopt the 2020 Plan in connection with this offering, which will be subsequently approved by our shareholders. Our 2020 Plan will be a successor to and continuation of our Existing Plan. The 2020 Plan will become effective upon, and no share awards may be granted under the 2020 Plan until, the date of the underwriting agreement related to this offering. Once the 2020 Plan is effective, no further grants will be made under the Existing Plan.

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Awards. Our 2020 Plan provides for the grant of incentive share options, or ISOs, within the meaning of Section 422 of the Code, to employees, including employees of any parent or subsidiary, and for the grant of nonstatutory share options, or NSOs, share appreciation rights, restricted share awards, restricted share unit awards, performance share awards, performance cash awards and other forms of share awards to employees, directors and consultants, including employees and consultants of our affiliates.

Authorized Shares. Initially, the maximum number of our common shares that may be issued under our 2020 Plan after it becomes effective will be _____ shares, which is the sum of (1) _____ new shares, plus (2) the number of shares (not to exceed _____ shares) (i) that remain available for the issuance of awards under our Existing Plan at the time our 2020 Plan becomes effective, and (ii) any shares subject to outstanding options or other share awards that were granted under our Existing Plan that terminate or expire prior to exercise or settlement; are forfeited because of the failure to vest; or are reacquired or withheld (or not issued) to satisfy a tax withholding obligation or the purchase or exercise price. In addition, the number of our common shares reserved for issuance under our 2020 Plan will automatically increase on January 1 of each calendar year, starting on January 1, 2021 (assuming the 2020 Plan becomes effective in 2020) through January 1, 2030, in an amount equal to _____ % of the total number of our capital shares outstanding on the last day of the calendar month before the date of each automatic increase, or a lesser number of shares determined by our board of directors. The maximum number of our common shares that may be issued on the exercise of ISOs under our 2020 Plan is _____ shares.

Shares subject to share awards granted under our 2020 Plan that expire or terminate without being exercised in full or that are paid out in cash rather than in shares do not reduce the number of shares available for issuance under our 2020 Plan. If any common shares issued pursuant to a share award are forfeited back to or repurchased or reacquired by us for any reason, the shares that are forfeited or repurchased or reacquired will revert to and again become available for issuance under the 2020 Plan. Any shares reacquired in satisfaction of tax withholding obligations or as consideration for the exercise or purchase price of a share award will again become available for issuance under the 2020 Plan.

The maximum number of common shares subject to share awards granted under the 2020 Plan or otherwise during any one calendar year to any non-employee director, taken together with any cash fees paid by us to such non-employee director during such calendar year for service on the board of directors, will not exceed \$ _____ in total value (calculating the value of any such share awards based on the grant date fair value of such share awards for financial reporting purposes), or, with respect to the calendar year in which a non-employee director is first appointed or elected to our board of directors, \$ _____.

Plan Administration. Our board of directors, or a duly authorized committee of our board of directors, will administer our 2020 Plan and is referred to as the “plan administrator” herein. Our board of directors may also delegate to one or more of our officers the authority to (1) designate employees (other than officers) to receive specified share awards and (2) determine the number of shares subject to such share awards. Under our 2020 Plan, our board of directors has the authority to determine award recipients, grant dates, the numbers and types of share awards to be granted, the applicable fair market value, and the provisions of each share award, including the period of exercisability and the vesting schedule applicable to a share award.

Under the 2020 Plan, the board of directors also generally has the authority to effect, with the consent of any adversely affected participant, (A) the reduction of the exercise, purchase, or strike price of any outstanding award; (B) the cancellation of any outstanding award and the grant in substitution therefore of other awards, cash, or other consideration; or (C) any other action that is treated as a repricing under generally accepted accounting principles.

Options. ISOs and NSOs are granted under option agreements adopted by the plan administrator. The plan administrator determines the exercise price for options, within the terms and conditions of the 2020 Plan, provided that the exercise price of an option generally cannot be less than 100% of the fair market value of our common shares on the date of grant. Options granted under the 2020 Plan vest at the rate specified in the option agreement as determined by the plan administrator.

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The plan administrator determines the term of options granted under the 2020 Plan, up to a maximum of 10 years. Unless the terms of an optionholder's option agreement provide otherwise, if an optionholder's service relationship with us or any of our affiliates ceases for any reason other than disability, death, or cause, the optionholder may generally exercise any vested options for a period of three months following the cessation of service. This period may be extended in the event that exercise of the option is prohibited by applicable securities laws or our insider trading policy. If an optionholder's service relationship with us or any of our affiliates ceases due to death, or an optionholder dies within a certain period following cessation of service, the optionholder or a beneficiary may generally exercise any vested options for a period of 18 months following the date of death. If an optionholder's service relationship with us or any of our affiliates ceases due to disability, the optionholder may generally exercise any vested options for a period of 12 months following the cessation of service. In the event of a termination for cause, options generally terminate upon the termination date. In no event may an option be exercised beyond the expiration of its term.

Acceptable consideration for the purchase of common shares issued upon the exercise of an option will be determined by the plan administrator and may include (1) cash, check, bank draft or money order, (2) a broker-assisted cashless exercise, (3) the tender of our common shares previously owned by the optionholder, (4) a net exercise of the option if it is an NSO, or (5) other legal consideration approved by the plan administrator.

Unless the plan administrator provides otherwise, options generally are not transferable except by will or the laws of descent and distribution. Subject to approval of the plan administrator or a duly authorized officer in each case, (i) an option may be transferred pursuant to a domestic relations order, official marital settlement agreement, or other divorce or separation instrument and (ii) an optionholder may designate a beneficiary who may exercise the option following the optionholder's death.

Tax Limitations on ISOs. The aggregate fair market value, determined at the time of grant, of our common shares with respect to ISOs that are exercisable for the first time by an award holder during any calendar year under all of our equity benefit plans may not exceed \$100,000. Options or portions thereof that exceed such limit will generally be treated as NSOs. No ISO may be granted to any person who, at the time of the grant, owns or is deemed to own shares possessing more than 10% of our total combined voting power or that of any of our affiliates unless (1) the option exercise price is at least 110% of the fair market value of the shares subject to the option on the date of grant, and (2) the term of the ISO does not exceed five years from the date of grant.

Restricted Share Unit Awards. Restricted share unit awards are granted under restricted share unit award agreements adopted by the plan administrator. Restricted share unit awards may be granted in consideration for any form of legal consideration that may be acceptable to our board of directors and permissible under applicable law. A restricted share unit award may be settled by cash, delivery of shares, a combination of cash and shares as deemed appropriate by the plan administrator, or in any other form of consideration set forth in the restricted share unit award agreement. Additionally, dividend equivalents may be credited in respect of shares covered by a restricted share unit award. Except as otherwise provided in the applicable award agreement, restricted share unit awards that have not vested will be forfeited once the participant's continuous service ends for any reason.

Restricted Share Awards. Restricted share awards are granted under restricted share award agreements adopted by the plan administrator. A restricted share award may be awarded in consideration for cash, check, bank draft or money order, past or future services to us, or any other form of legal consideration that may be acceptable to our board of directors and permissible under applicable law. The plan administrator determines the terms and conditions of restricted share awards, including vesting and forfeiture terms. If a participant's service relationship with us ends for any reason, we may receive any or all of the common shares held by the participant that have not vested as of the date the participant terminates service with us through a forfeiture condition or a repurchase right.

Share Appreciation Rights. Share appreciation rights are granted under share appreciation right agreements adopted by the plan administrator. The plan administrator determines the purchase price or strike price for a share appreciation right, which generally cannot be less than 100% of the fair market value of our common shares on

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the date of grant. A share appreciation right granted under the 2020 Plan vests at the rate specified in the share appreciation right agreement as determined by the plan administrator.

The plan administrator determines the term of share appreciation rights granted under the 2020 Plan, up to a maximum of 10 years. If a participant's service relationship with us or any of our affiliates ceases for any reason other than cause, disability, or death, the participant may generally exercise any vested share appreciation right for a period of three months following the cessation of service. This period may be further extended in the event that exercise of the share appreciation right following such a termination of service is prohibited by applicable securities laws or our insider trading policy. If a participant's service relationship with us, or any of our affiliates, ceases due to disability or death, or a participant dies within a certain period following cessation of service, the participant or a beneficiary may generally exercise any vested share appreciation right for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, share appreciation rights generally terminate immediately upon the occurrence of the event giving rise to the termination of the individual for cause. In no event may a share appreciation right be exercised beyond the expiration of its term.

Performance Awards. The 2020 Plan permits the grant of performance-based share and cash awards. Our compensation committee may structure awards so that the share or cash will be issued or paid only following the achievement of certain pre-established performance goals during a designated performance period.

The performance goals that may be selected include one or more of the following: (i) sales; (ii) revenues; (iii) assets; (iv) expenses; (v) market penetration or expansion; (vi) earnings from operations; (vii) earnings before or after deduction for all or any portion of interest, taxes, depreciation, amortization, incentives, service fees or extraordinary or special items, whether or not on a continuing operations or an aggregate or per share basis; (viii) net income or net income per common share (basic or diluted); (ix) return on equity, investment, capital or assets; (x) one or more operating ratios; (xi) borrowing levels, leverage ratios or credit rating; (xii) market share; (xiii) capital expenditures; (xiv) cash flow, free cash flow, cash flow return on investment, or net cash provided by operations; (xv) share price, dividends or total shareholder return; (xvi) development of new technologies or products; (xvii) sales of particular products or services; (xviii) economic value created or added; (xix) operating margin or profit margin; (xx) customer acquisition or retention; (xxi) raising or refinancing of capital; (xxii) successful hiring of key individuals; (xxiii) resolution of significant litigation; (xxiv) acquisitions and divestitures (in whole or in part); (xxv) joint ventures and strategic alliances; (xxvi) spin-offs, split-ups and the like; (xxvii) reorganizations; (xxviii) recapitalizations, restructurings, financings (issuance of debt or equity) or refinancings; (xxix) or strategic business criteria, consisting of one or more objectives based on the following goals: achievement of timely development, design management or enrollment, meeting specified market penetration or value added, payor acceptance, patient adherence, peer reviewed publications, issuance of new patents, establishment of or securing of licenses to intellectual property, product development or introduction (including, without limitation, any clinical trial accomplishments, regulatory or other filings, approvals or milestones, discovery of novel products, maintenance of multiple products in pipeline, product launch or other product development milestones), geographic business expansion, cost targets, cost reductions or savings, customer satisfaction, operating efficiency, acquisition or retention, employee satisfaction, information technology, corporate development (including, without limitation, licenses, innovation, research or establishment of third-party collaborations), manufacturing or process development, legal compliance or risk reduction, patent application or issuance goals, or goals relating to acquisitions, divestitures or other business combinations (in whole or in part), joint ventures or strategic alliances; and (xxx) other measures of performance selected by the board of directors.

The performance goals may be based on company-wide performance or performance of one or more business units, divisions, affiliates, or business segments, and may be either absolute or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Our board of directors is authorized at any time in its sole discretion, to adjust or modify the calculation of a performance goal for such performance period in order to prevent the dilution or enlargement of the rights of

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participants, (a) in the event of, or in anticipation of, any unusual or extraordinary corporate item, transaction, event or development; (b) in recognition of, or in anticipation of, any other unusual or nonrecurring events affecting us, or our financial statements in response to, or in anticipation of, changes in applicable laws, regulations, accounting principles, or business conditions; or (c) in view of the board of director's assessment of our business strategy, performance of comparable organizations, economic and business conditions, and any other circumstances deemed relevant. Specifically, the board of directors is authorized to make adjustment in the method of calculating attainment of performance goals and objectives for a performance period as follows: (i) to exclude the dilutive effects of acquisitions or joint ventures; (ii) to assume that any business divested by us achieved performance objectives at targeted levels during the balance of a performance period following such divestiture; and (iii) to exclude the effect of any change in our outstanding common share by reason of any share dividend or split, share repurchase, reorganization, recapitalization, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to common shareholders other than regular cash dividends. In addition, the board of directors is authorized to make adjustment in the method of calculating attainment of performance goals and objectives for a performance period as follows: (i) to exclude restructuring and/or other nonrecurring charges; (ii) to exclude exchange rate effects, as applicable, for non-U.S. dollar denominated net sales and operating earnings; to exclude the effects of changes to generally accepted accounting standards required by the Financial Accounting Standards Board; (iv) to exclude the effects of any items that are "unusual" in nature or occur "infrequently" as determined under generally accepted accounting principles; (v) to exclude the effects to any statutory adjustments to corporate tax rates; and (vi) to make other appropriate adjustments selected by the board of directors.

Other Share Awards. The plan administrator may grant other awards based in whole or in part by reference to our common shares. The plan administrator will set the number of shares under the share award and all other terms and conditions of such awards.

Changes to Capital Structure. In the event there is a specified type of change in our capital structure, such as a share split, reverse share split, or recapitalization, appropriate adjustments will be made to (1) the class and maximum number of shares reserved for issuance under the 2020 Plan, (2) the class and maximum number of shares by which the share reserve may increase automatically each year, (3) the class and maximum number of shares that may be issued on the exercise of ISOs and (4) the class and number of shares and exercise price, strike price, or purchase price, if applicable, of all outstanding share awards.

Corporate Transactions. Our 2020 Plan provides that in the event of certain specified significant corporate transactions (or a change in control, as defined below), unless otherwise provided in an award agreement or other written agreement between us and the award holder, the plan administrator may take one or more of the following actions with respect to such share awards:

- arrange for the assumption, continuation, or substitution of a share award by a successor corporation;
- arrange for the assignment of any reacquisition or repurchase rights held by us to a successor corporation;
- accelerate the vesting, in whole or in part, of the share award and provide for its termination if not exercised (if applicable) at or before the effective time of the transaction;
- arrange for the lapse, in whole or in part, of any reacquisition or repurchase rights held by us;
- cancel or arrange for the cancellation of the share award, to the extent not vested or not exercised before the effective time of the transaction, in exchange for a cash payment, if any; or
- make a payment equal to the excess, if any, of (A) the value of the property the participant would have received on exercise of the award immediately before the effective time of the transaction, over (B) any exercise price payable by the participant in connection with the exercise.

The plan administrator is not obligated to treat all share awards or portions of share awards in the same manner and is not obligated to take the same actions with respect to all participants.

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Under the 2020 Plan, a corporate transaction is generally the consummation of: (1) a sale of all or substantially all of our assets, (2) the sale or disposition of more than 50% of our outstanding securities, (3) a merger or consolidation where we do not survive the transaction, or (4) a merger or consolidation where we do survive the transaction but our common shares outstanding immediately before such transaction are converted or exchanged into other property by virtue of the transaction.

Change in Control. In the event of a change in control, the plan administrator may take any of the above-mentioned actions. Awards granted under the 2020 Plan may be subject to additional acceleration of vesting and exercisability upon or after a change in control as may be provided in the applicable share award agreement or in any other written agreement between us or any affiliate and the participant, but in the absence of such provision, no such acceleration will automatically occur. Under the 2020 Plan, a change in control is generally (1) the acquisition by any person or company of more than 50% of the combined voting power of our then outstanding shares, (2) a merger, consolidation or similar transaction in which our shareholders immediately before the transaction do not own, directly or indirectly, more than 50% of the combined voting power of the surviving entity (or the parent of the surviving entity) in substantially the same proportions as their ownership immediately prior to such transaction, (3) a sale, lease, exclusive license or other disposition of all or substantially all of our assets other than to an entity more than 50% of the combined voting power of which is owned by our shareholders in substantially the same proportions as their ownership of our outstanding voting securities immediately prior to such transaction, (4) a complete dissolution or liquidation of the company or (5) when a majority of our board of directors becomes comprised of individuals who were not serving on our board of directors on the date of the underwriting agreement related to this offering, or the incumbent board, or whose nomination, appointment, or election was not approved by a majority of the incumbent board still in office.

Plan Amendment or Termination. Our board of directors has the authority to amend, suspend, or terminate our 2020 Plan, provided that such action does not materially impair the existing rights of any participant without such participant's written consent. Certain material amendments also require the approval of our shareholders. No ISOs may be granted after the tenth anniversary of the date our board of directors adopts our 2020 Plan. No share awards may be granted under our 2020 Plan while it is suspended or after it is terminated.

Existing Plan

General. Our board of directors originally adopted and our shareholders initially approved our Existing Plan in December 2016. We have subsequently amended and restated our Existing Plan, most recently in September 2019, the purpose of which was to increase the number of shares available for issuance under our Existing Plan. Our shareholders approved this recent amendment and restatement in August 2019. Our Existing Plan will terminate upon the adoption of our 2020 Plan; however, awards outstanding under our Existing Plan will continue in full effect in accordance with their existing terms. Our Existing Plan provides for the grant of incentive share options and nonstatutory share options to purchase common shares of our share capital to employees, members of our board of directors and consultants. Incentive share options may be granted only to employees.

Share Reserve. No common shares will be available for future issuance under the Existing Plan following the effectiveness of the registration statement of which this prospectus forms a part. The maximum number of common shares reserved for issuance under our Existing Plan is 24,697,408. As of December 31, 2019, options to purchase 21,248,158 common shares, at exercise prices ranging from \$0.27 to \$0.40 per share, or a weighted-average exercise price of \$0.34 per share, were outstanding under our Existing Plan.

Administration. Our board of directors administers our Existing Plan. Our board of directors has full authority and discretion to take any actions it deems necessary or advisable for the administration of our Existing Plan. Our board of directors may generally cancel, amend, adjust or otherwise change any outstanding options under such circumstances as it may consider appropriate in accordance with the provisions of the Existing Plan, unless the optionholder would be adversely affected.

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Options. The exercise price of options granted under our Existing Plan will be equal to or exceed the fair market value of a common share of our share capital on the grant date. Options expire at the time determined by the administrator, but in no event more than ten years after they are granted, and generally expire earlier if the optionholder's service terminates.

Capital Reorganization. If we effect a subdivision, consolidation, or similar reorganization, or any other change in capitalization that, in the option of the administrator, warrants the replacement or amendment of any existing options, the administrator may adjust: (i) the number of common shares that may be acquired on the exercise of any options; and/or (ii) the exercise price of any outstanding options, as necessary.

Liquidity Event. Upon a liquidity event, our board of directors shall have the power to accelerate the vesting of any unvested options in connection with such liquidity event in its sole discretion and/or to make such changes to the terms of the options as it considers fair and appropriate in the circumstances, acting reasonably.

In general, a "liquidity event" means the acquisition of the company by another entity by means of any transaction or series of related transactions, which results in one person, together with any related entities of such person, acquiring beneficial ownership, or exercising direction or control, over more than 50% of the combined voting power attached to all of our outstanding securities; a sale, lease, transfer, exclusive license or disposition of all or substantially all of our assets; our adoption of a plan of liquidation providing for the distribution of all or substantially all of our assets; or any other event so specified by our board of directors, subject to certain exceptions.

Transferability. A participant may not transfer options under our Existing Plan other than by will, the laws of descent and distribution, or as otherwise provided under our Existing Plan.

Plan Amendment or Termination. Subject to any shareholders agreement, our board of directors may terminate the Existing Plan at any time without shareholder approval. Our board of directors has the authority to amend our Existing Plan, provided that such action is approved by our shareholders to the extent shareholder approval is necessary. As described above, our Existing Plan will terminate upon the effective date of our 2020 Plan.

2020 Employee Share Purchase Plan

Our board of directors intends to adopt the 2020 Employee Share Purchase Plan, or the ESPP, in connection with this offering. The ESPP will become effective immediately prior to and contingent upon the date of the underwriting agreement related to this offering. The purpose of the ESPP is to secure the services of new employees, to retain the services of existing employees, and to provide incentives for such individuals to exert maximum efforts toward our success and that of our affiliates. The ESPP is intended to qualify as an "employee stock purchase plan" within the meaning of Section 423 of the Code for U.S. employees. In addition, the ESPP authorizes grants of purchase rights that do not comply with Section 423 of the Code under a separate non-423 component. In particular, where such purchase rights are granted to employees who are employed or located outside the United States, our board of directors may adopt rules that are beyond the scope of Section 423 of the Code.

Share Reserve. Following this offering, the ESPP authorizes the issuance of _____ common shares of our share capital under purchase rights granted to our employees or to employees of any of our designated affiliates. The number of shares of our share capital reserved for issuance will automatically increase on January 1 of each calendar year, beginning on January 1, 2021 (assuming the ESPP becomes effective in 2020) through January 1, 2030, by the lesser of (1) _____ % of the total number of shares of our share capital outstanding on the last day of the calendar month before the date of the automatic increase and (2) _____ shares; provided that before the date of any such increase, our board of directors may determine that such increase will be less than the amount set forth in clauses (1) and (2). As of the date hereof, no shares of our share capital have been purchased under the ESPP.

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Administration. Our board of directors administers the ESPP and may delegate its authority to administer the ESPP to our compensation committee. The ESPP is implemented through a series of offerings under which eligible employees are granted purchase rights to purchase shares of our share capital on specified dates during such offerings. Under the ESPP, we may specify offerings with durations of not more than 27 months, and may specify shorter purchase periods within each offering. Each offering will have one or more purchase dates on which shares of our share capital will be purchased for employees participating in the offering. An offering under the ESPP may be terminated under certain circumstances.

Payroll Deductions. Generally, all regular employees, including executive officers, employed by us or by any of our designated affiliates, may participate in the ESPP and may contribute, normally through payroll deductions, up to 15% of their earnings (as defined in the ESPP) for the purchase of our share capital under the ESPP. Unless otherwise determined by our board of directors, common shares will be purchased for the accounts of employees participating in the ESPP at a price per share that is at least the lesser of (1) 85% of the fair market value of a share of our share capital on the first date of an offering or (2) 85% of the fair market value of a share of our share capital on the date of purchase.

Limitations. Employees may have to satisfy one or more of the following service requirements before participating in the ESPP, as determined by our board of directors, including: (1) being customarily employed for more than 20 hours per week, (2) being customarily employed for more than five months per calendar year or (3) continuous employment with us or one of our affiliates for a period of time (not to exceed two years). No employee may purchase shares under the ESPP at a rate in excess of \$25,000 worth of our common shares based on the fair market value per share of our common shares at the beginning of an offering for each calendar year such a purchase right is outstanding. Finally, no employee will be eligible for the grant of any purchase rights under the ESPP if immediately after such rights are granted, such employee has voting power over 5% or more of our outstanding capital shares measured by vote or value under Section 424(d) of the Code.

Changes to Capital Structure. In the event that there occurs a change in our capital structure through such actions as a share split, merger, consolidation, reorganization, recapitalization, reincorporation, share dividend, dividend in property other than cash, large nonrecurring cash dividend, liquidating dividend, combination of shares, exchange of shares, change in corporate structure, or similar transaction, the board of directors will make appropriate adjustments to: (1) the class(es) and maximum number of shares reserved under the ESPP, (2) the class(es) and maximum number of shares by which the share reserve may increase automatically each year, (3) the class(es) and number of shares subject to and purchase price applicable to outstanding offerings and purchase rights and (4) the class(es) and number of shares that are subject to purchase limits under ongoing offerings.

Corporate Transactions. In the event of certain significant corporate transactions, any then-outstanding rights to purchase our shares under the ESPP may be assumed, continued, or substituted for by any surviving or acquiring entity (or its parent company). If the surviving or acquiring entity (or its parent company) elects not to assume, continue, or substitute for such purchase rights, then the participants' accumulated payroll contributions will be used to purchase shares of our share capital within 10 business days before such corporate transaction, and such purchase rights will terminate immediately.

Under the ESPP, a corporate transaction is generally the consummation of: (1) a sale of all or substantially all of our assets, (2) the sale or disposition of more than 50% of our outstanding securities, (3) a merger or consolidation where we do not survive the transaction and (4) a merger or consolidation where we do survive the transaction but the shares of our share capital outstanding immediately before such transaction are converted or exchanged into other property by virtue of the transaction.

Amendment or Termination. Our board of directors has the authority to amend or terminate our ESPP, provided that except in certain circumstances such amendment or termination may not materially impair any outstanding purchase rights without the holder's consent. We will obtain shareholder approval of any amendment to our ESPP as required by applicable law or listing requirements

Limitation on Liability and Indemnification Matters

Under the CBCA and our amended and restated articles of incorporation to be in effect upon the completion of this offering, we must indemnify our current or former directors or officers or another individual who acts or acted at our request as a director or officer, or an individual acting in a similar capacity, of another entity, against all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by the individual in respect of any civil, criminal, administrative, investigative or other proceeding in which the individual is involved because of his or her association with us or another entity. The CBCA also provides that we may advance moneys to a director, officer or other individual for costs, charges and expenses reasonably incurred in connection with such a proceeding; provided that such individual shall repay the moneys if the individual does not fulfill the conditions described below.

However, indemnification is prohibited under the CBCA unless the individual:

- acted honestly and in good faith with a view to our best interests, or the best interests of the other entity for which the individual acted as director or officer or in a similar capacity at our request; and
- in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, the individual had reasonable grounds for believing that his or her conduct was lawful.

The CBCA and our bylaws authorize us to purchase and maintain insurance for the benefit of each of our current or former directors or officers and each person who acts or acted at our request as a director, officer or an individual acting in a similar capacity, of another entity.

In addition, we have entered, and intend to continue to enter, into separate indemnity agreements with each of our directors and officers. These indemnity agreements, among other things, require us to indemnify our directors and officers for certain expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or officer in any action or proceeding arising out of their services as a director or officer, or any other company or enterprise to which the person provides services at our request.

We maintain a directors' and officers' insurance policy pursuant to which our directors and officers are insured against liability for actions taken in their capacities as directors and officers. We believe that these provisions in our amended and restated articles of incorporation and amended and restated bylaws and these indemnity agreements are necessary to attract and retain qualified persons as directors and officers.

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, or the Securities Act, may be permitted to directors, officers or control persons, in the opinion of the SEC, such indemnification is against public policy, as expressed in the Securities Act and is therefore unenforceable.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following includes a summary of transactions since January 1, 2017 and any currently proposed transactions, to which we were or are to be a participant, in which:

- the amount involved exceeds the lesser of \$120,000 or one percent of the average of our total assets at year end for the last two completed fiscal years, and
- any of our directors, executive officers or holders of more than 5% of our share capital, or any affiliate or member of the immediate family of the foregoing persons, had or will have a direct or indirect material interest.

Preferred Share Financings***Series A Preferred Share Financing***

In June 2017 and January 2019, we sold an aggregate of 61,728,395 of our Series A preferred shares in multiple closings at a purchase price of \$0.81 per share for an aggregate amount of \$50.0 million. The following table summarizes purchases of our Series A preferred shares by related parties. Each Series A preferred share in the table below will automatically convert into one common share upon the completion of this offering.

Name	Series A Preferred Shares (#)	Aggregate Cash Purchase Price (#)
Entities affiliated with Versant(1)	23,504,274	19,038,662
Entities affiliated with MPM(2)	10,921,178	8,846,154
UBS Oncology Impact Fund, L.P.(3)	10,921,178	8,846,154
Fonds de solidarité des travailleurs et travailleuses du Québec	8,309,591	6,730,769

- (1) Represents (i) 7,625,795 Series A preferred shares purchased by Versant Venture Capital V, L.P., or Versant V, (ii) 580,361 Series A preferred shares purchased by Versant Venture Capital V (Canada) LP, or Versant V Canada, (iii) 253,915 Series A preferred shares purchased by Versant Ophthalmic Affiliates Fund I, L.P., or Versant Ophthalmic, (iv) 229,388 Series A preferred shares purchased by Versant Affiliates Fund V, L.P., or Versant Affiliates V, and (v) 14,814,815 Series A preferred shares purchased by Versant Venture Capital VI, L.P., or Versant VI. Versant V, Versant V Canada, Versant Ophthalmic, Versant Affiliates V, Versant VI and Versant Vantage (as defined below) are collectively referred to as the Versant Entities. Versant Ventures V LLC is the general partner of each of Versant V, Versant Ophthalmic and Versant Affiliates V and has voting and dispositive control over the shares held by such Entities. Jerel Davis, Ph.D., a member of our board of directors, is a managing director of Versant Ventures V, and, as a result, may be deemed to share voting and investment power with respect to the shares held by each of Versant V, Versant Ophthalmic and Versant Affiliates V. Versant Ventures V (Canada), L.P. is the general partner of Versant V Canada and Versant Ventures V GP-GP (Canada), Inc. is the sole general partner of Versant Ventures V (Canada), L.P. and has voting and dispositive control over the shares held by Versant V Canada. Dr. Davis is a director of Versant Ventures V GP-GP (Canada), Inc. and, as a result, may be deemed to share voting and investment power with respect to the shares held by Versant Ventures Canada. Versant Ventures VI GP, L.P. is the sole general partner of Versant VI and Versant Ventures VI GP-GP, LLC is the sole general partner of Versant Ventures VI GP, L.P. and has voting and dispositive control over the shares held by Versant VI. Dr. Davis is a managing director of Versant Ventures VI GP-GP, LLC, and, as a result, may be deemed to share voting and investment power with respect to the shares held by Versant VI. The Versant Entities collectively hold more than 5% of our share capital.
- (2) Represents (i) 9,918,254 Series A preferred shares purchased by MPM Bioventures 2014, L.P., or MPM 2014, (ii) 661,531 Series A preferred shares purchased by MPM Bioventures 2014 (B), L.P., or MPM B 2014 and (iii) 341,393 Series A preferred shares purchased by MPM Asset Management Investors BV2014 LLC, or MPM LLC. MPM 2014, MPM B 2014 and MPM LLC are collectively referred to as the MPM

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Entities. Todd Foley, a member of our board of directors, is a Managing Director of MPM BioVentures 2014 LLC, or BV2014 LLC. BV2014 LLC is the Managing Member of MPM BioVentures 2014 GP LLC, which is the General Partner of MPM 2014 and MPM B 2014. MPM LLC invests alongside MPM 2014 and MPM B 2014. As a result, Todd Foley may be deemed to share voting and investment power with respect to the shares held by each of the MPM Entities. The MPM Entities collectively hold more than 5% of our share capital.

(3) UBS Oncology Impact Fund L.P. is a holder of more than 5% of our share capital.

In connection with and as partial consideration for the Series A preferred share financing described above, an aggregate principal amount of \$2.75 million of convertible promissory notes held by certain of the Versant Entities were redeemed and converted into 5,500,000 Series A preferred shares at a price of \$0.50 per share. Following the issuance of the 5,500,000 Series A preferred shares and the payment of accrued interest of \$45,589, the convertible promissory notes were cancelled and are of no further force or effect.

Series B Preferred Share Financing

In September 2019, we sold an aggregate of 63,458,580 of our Series B preferred shares at a purchase price of \$1.30 per share for an aggregate amount of \$82.5 million. The following table summarizes purchases of our Series B preferred shares by related parties. Each Series B preferred share in the table below will automatically convert into one common share upon the completion of this offering.

Name	Series B Preferred Shares (#)	Aggregate Cash Purchase Price (#)
OrbiMed Private Investments VII, L.P.(1)	15,769,231	20,500,000
Entities affiliated with Cowen Healthcare Investments(2)	11,538,462	15,000,000
Redmile Biopharma Investments II, L.P.	9,615,385	12,500,000
Entities affiliated with Versant(3)	8,855,029	11,511,538
Entities affiliated with MPM(4)	5,772,189	7,503,846
Fonds de solidarité des travailleurs et travailleuses du Québec	2,322,486	3,019,232
UBS Oncology Impact Fund, L.P.(5)	2,041,420	2,653,846

- (1) Represents shares purchase by OrbiMed Private Investments VII, L.P., or OrbiMed. OrbiMed Advisors LLC, or OrbiMed Advisors, is the managing member of OrbiMed Capital GP VII LLC, or OrbiMed GP VII. OrbiMed GP VII is the general partner of OrbiMed. David Bonita, M.D., a member of our board of directors, is a member of OrbiMed Advisors, and, as a result, may be deemed to share voting and investment power with respect to the shares held by OrbiMed. OrbiMed is a holder of more than 5% of our share capital.
- (2) Represents (i) 10,749,200 Series B preferred shares purchased by CHI II and (ii) 789,262 Series B preferred shares purchased by CHI EF. CHI II and CHI EF are collectively referred to as the Cowen Entities. Cowen Healthcare Investments II GP LLC is the sole general partner of CHI II and CHI EF. As managing partner of Cowen Healthcare Investments II GP LLC, Kevin J. Raidy, a member of our board of directors, exercises sole voting and investment power over the securities held by Cowen Entities. The Cowen Entities collectively hold more than 5% of our share capital.
- (3) Represents (i) 675,071 Series B preferred shares purchased by Versant V, (ii) 51,376 Series B preferred shares purchased by Versant V Canada, (iii) 22,478 Series B preferred shares purchased by Versant Ophthalmic, (iv) 20,306 Series B preferred shares purchased by Versant Affiliates V, (v) 5,307,692 Series B preferred shares purchased by Versant VI and (vi) 2,778,106 Series B preferred shares purchased by Versant Vantage I, L.P., or Versant Vantage. As described above, Dr. Davis may be deemed to share voting and investment power with respect to the shares held by each of Versant V, Versant V Canada, Versant Ophthalmic, Versant Affiliates V and Versant VI. Versant Vantage I GP, L.P. is the sole general partner of Versant Vantage and Versant Vantage I GP-GP, LLC is the sole general partner of Versant Vantage I GP,

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L.P. and has voting and dispositive control over the shares held by Versant Vantage. Dr. Davis is a managing director of Versant Vantage I GP-GP, LLC, and, as a result, may be deemed to share voting and investment power with respect to the shares held by Versant Vantage. The Versant Entities collectively hold more than 5% of our share capital.

- (4) Represents (i) 5,242,111 Series B preferred shares purchased by MPM 2014, (ii) 349,641 Series B preferred shares purchased by MPM B 2014 and (iii) 180,437 Series B preferred shares purchased by MPM LLC. Mr. Foley, a member of our board of directors, is a Managing Director of MPM BioVentures 2014 LLC, or BV2014 LLC. BV2014 LLC is the Managing Member of MPM BioVentures 2014 GP LLC, which is the General Partner of MPM 2014 and MPM B 2014. MPM LLC invests alongside MPM 2014 and MPM B 2014. As a result, Todd Foley may be deemed to share voting and investment power with respect to the shares held by each of the MPM Funds. The MPM Entities collectively hold more than 5% of our share capital.
- (5) UBS Oncology Impact Fund L.P. is a holder of more than 5% of our share capital.

Research Services

From September 2018 to December 2019, we engaged Inception Sciences Canada, Inc., an affiliate of Versant, a holder of more than 5% of our share capital, for certain research services. For the years ended December 31, 2018 and 2019, we recorded expenses to Inception Sciences Canada of \$321,989 and \$1,180,284 for such research services, respectively.

Registration Rights Agreement

We are party to an amended and restated registration rights agreement, or the registration rights agreement, dated September 3, 2019, with all holders of our preferred shares. The registration rights agreement provides that these holders are entitled to certain registration rights, including the right to demand that we file a registration statement or request that their shares be covered by a registration statement that we otherwise file. The registration rights will terminate upon the earliest of (i) the occurrence of certain mergers, amalgamations, consolidations, reorganizations, arrangements, business combinations or similar transactions that result in a change of control of our company, or a sale of all or substantially all of our assets, or a dissolution, liquidation or winding up of our company, (ii) three years after the completion of this offering or (iii) with respect to any particular holder, at such time that such holder can sell its preferred shares under Rule 144 of the Securities Act during any three-month period. For a description of the registration rights granted under the registration rights agreement, see the section titled “Description of Share Capital—Registration Rights.”

Shareholders’ Agreement

We are party to a second amended and restated unanimous shareholders’ agreement, or the shareholders’ agreement, dated September 3, 2019, with all of our shareholders. The shareholders’ agreement provides, among other things, that these holders will vote in accordance with the terms of the agreement, including in matters related to the composition of our board of directors, as well as for certain transfer restrictions, information rights and preemptive rights in favor of certain holders of our preferred shares with regard to certain issuances of our share capital. The shareholders’ agreement will terminate upon the completion of this offering.

Employment Arrangements

We have entered into employment agreements with certain of our executive officers. For more information regarding these agreements with our named executive officers, see the sections titled “Executive Compensation—Agreements with our Named Executive Officers” and “Management.”

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Severance Arrangements

The employment agreements and offer letter agreements we have entered into with certain of our executive officers provide for certain severance arrangements. For more information regarding these arrangements with our named executive officers, see “Executive Compensation—Potential Payments upon Termination or Change of Control.”

Executive and Director Compensation

We have granted options to certain of our executive officers and directors. See the sections titled “Non-Employee Director Compensation” and “Executive Compensation” for a description of these options

Indemnity Agreements

We have entered, and intend to continue to enter, into separate indemnity agreements with each of our directors and officers, in addition to the indemnification provided for in our bylaws. These indemnity agreements provide our directors and executive officers with contractual rights to indemnification and, in some cases, expense advancement in any action or proceeding arising out of their services as one of our directors or executive officers or as a director or executive officer of any other company or enterprise to which the person provides services at our request. For more information regarding these indemnity agreements, see “—Limitation on Liability and Indemnification Matters.”

Related Party Transaction Policy

In connection with this offering, we intend to adopt a written related party transaction policy that sets forth our procedures for the identification, review, consideration and approval or ratification of related party transactions. This policy will become effective upon the effectiveness of the registration statement of which this prospectus is a part. For purposes of this policy only, a “related person transaction” is a transaction, arrangement or relationship (or any series of similar transactions, arrangements or relationships) in which we and any related person are participants involving an amount that exceeds \$120,000. Transactions involving compensation for services provided to us as an employee, consultant or director are not considered related-person transactions under this policy. A “related person” is any executive officer, director, nominee to become a director or a holder of more than 5% of our share capital, or any affiliate or member of the immediate family of the foregoing.

Under the policy, where a transaction has been identified as a related-person transaction, management will be required to present information regarding the proposed related-person transaction to our audit committee or, where review by our audit committee would be inappropriate due to a conflict of interest, to another independent body of our board of directors, for review. The presentation will need to include a description of, among other things, all of the parties, the direct and indirect interests of the related persons, the purpose of the transaction, the material facts, the benefits of the transaction to us and whether any alternative transactions are available, an assessment of whether the terms are comparable to the terms available from unrelated third parties and management’s recommendation. To identify related-person transactions in advance, we will rely on information supplied by our executive officers, directors and certain significant shareholders. In considering related-person transactions, our audit committee or another independent body of our board of directors will take into account the relevant available facts and circumstances including, but not limited to:

- the risks, costs and benefits to us;
- the impact on a director’s independence in the event the related person is a director, immediate family member of a director or an entity with which a director is affiliated;
- the terms of the transaction;

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- the availability of other sources for comparable services or products; and
- the terms available to or from, as the case may be, unrelated third parties under the same or similar circumstances.

All of the transactions described in this section were entered into prior to the adoption of this policy. Although we have not had a written policy for the review and approval of transactions with related persons, our board of directors has historically reviewed and approved any transaction where a director or officer had a financial interest, including the transactions described above. Prior to approving such a transaction, the material facts as to a director's or officer's relationship or interest in the agreement or transaction were disclosed to our board of directors. Our board of directors took this information into account when evaluating the transaction and in determining whether such transaction was fair to us and in the best interest of all our shareholders.

PRINCIPAL SHAREHOLDERS

The following table sets forth information regarding beneficial ownership of our share capital as of March 31, 2020 by:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of our common shares;
- each of our directors;
- each of our named executive officers; and
- all of our current executive officers and directors as a group.

The percentage ownership information under the column titled “Before Offering” is based on _____ common shares outstanding as of March 31, 2020, assuming the automatic conversion of all outstanding preferred shares into an aggregate of _____ common shares immediately prior to the completion of this offering. The percentage ownership information under the column titled “After Offering” is based on the sale of common shares in this offering (assuming an initial public offering price of \$ _____ per share, the midpoint of the price range set forth on the cover page of this prospectus). The percentage ownership information assumes no exercise of the underwriters’ option to purchase additional shares and no purchases of any common shares in this offering by the beneficial owners identified in the table below.

Information with respect to beneficial ownership has been furnished by each director, officer or beneficial owner of more than 5% of our common shares. We have determined beneficial ownership in accordance with the rules of the SEC. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities. In addition, the rules include common shares issuable pursuant to the exercise of options that are either immediately exercisable or exercisable within 60 days of March 31, 2020. These shares are deemed to be outstanding and beneficially owned by the person holding those options for the purpose of computing the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated, the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them, subject to applicable community property laws.

Except as otherwise noted below, the address for each person or entity listed in the table is c/o Repare Therapeutics Inc., 7210 Frederick-Banting, Suite 100, St-Laurent, Québec, Canada H4S 2A1.

	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned	
		Before Offering	After Offering
Greater than 5% Shareholders:			
Entities affiliated with Versant			
Entities affiliated with MPM			
OrbiMed Private Investments VII, L.P.			
UBS Oncology Impact Fund, L.P.			
Entities affiliated with Cowen Healthcare Investments			
Fonds de solidarité des travailleurs et travailleuses du Québec			
Redmile Biopharma Investments II, L.P.			

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	<u>Number of Shares Beneficially Owned</u>	<u>Percentage of Shares Beneficially Owned</u>	
		<u>Before Offering</u>	<u>After Offering</u>
Directors and Named Executive Officers:			
Lloyd M. Segal			
Michael Zinda, Ph.D.			
Maria Koehler, M.D., Ph.D.			
Katina Dorton			
Jerel Davis, Ph.D.			
David Bonita, M.D.			
Todd Foley			
Samarth Kulkarni			
Briggs Morrison, M.D.			
Kevin J. Raidy			
Carol A. Schafer			
All current executive officers and directors as a group (11 persons)			

DESCRIPTION OF SHARE CAPITAL

The following is a description of the material terms of our common shares and preferred shares will be forth in our amended and restated articles of incorporation, as will be in effect upon the closing of this offering. The following description of our share capital is intended as a summary only. For more detailed information, please see our amended and restated articles of incorporation, which is filed as an exhibit to the registration statement of which this prospectus is a part.

General

Following the completion of this offering, based upon shares outstanding as of December 31, 2019 and assuming the automatic conversion of all outstanding preferred shares immediately prior to the completion of this offering, our share capital will consist of an unlimited number of common shares, no par value per share, of which shares will be issued and outstanding, and an unlimited number of preferred shares, no par value per share, none of which will be issued and outstanding.

Common Shares

Outstanding Shares

As of December 31, 2019, we had 139,951,975 common shares outstanding, which were held by approximately 30 shareholders of record, assuming the automatic conversion of all outstanding preferred shares into 130,686,975 common shares immediately prior to the completion of this offering.

Voting Rights

Under our amended and restated articles of incorporation to be in effect following the completion of this offering, the holders of common shares will be entitled to one vote for each share held at any meeting of the shareholders.

Dividends

Subject to the prior rights of the holders of our preferred shares, the holders of common shares will be entitled to receive dividends as and when declared by our board of directors. See "Dividend Policy."

Liquidation

Subject to the prior payment to the holders of our preferred shares, in the event of our liquidation, dissolution or winding-up or other distribution of our assets among our shareholders, the holders of common shares will be entitled to share *pro rata* in the distribution of the balance of our assets.

Rights and Preferences

The holders of common shares will have no preemptive, conversion rights or other subscription rights. There will be no redemption or sinking fund provisions applicable to our common shares. There will be no provision in our amended and restated articles of incorporation to be in effect following the closing of this offering requiring the holders of common shares to contribute additional capital or permitting or restricting the issuance of additional securities or any other material restrictions. The rights, preferences and privileges of the holders of common shares will be subject to and may be adversely affected by, the rights of the holders of any series of preferred shares that we may designate in the future.

Preferred shares

Upon the completion of this offering, all outstanding preferred shares will convert into common shares on a one-to-one basis. As of December 31, 2019, we had 130,686,975 preferred shares outstanding, held of record by 22 shareholders. Under our amended and restated articles of incorporation to be in effect following the completion of this offering, we will be authorized to issue, without shareholder approval, an unlimited number of preferred shares, issuable in one or more series, and, subject to the provisions of the Canada Business Corporations Act, or CBCA, having such designations, rights, privileges, restrictions and conditions, including dividend and voting rights, as our board of directors may determine, and such rights and privileges, including dividend and voting rights, may be superior to those of the common shares. The issuance of preferred shares, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control of our company and might adversely affect the market price of our common shares and the voting and other rights of the holders of common shares. We have no current plans to issue any preferred shares following the completion of this offering.

Options

As of December 31, 2019, 21,248,158 common shares were issuable upon the exercise of outstanding share options, at a weighted-average exercise price of \$0.34 per common share. For additional information regarding terms of our equity incentive plans, see the section titled “Executive and Director Compensation—Equity Incentive Plans.”

Registration Rights

Upon the completion of this offering, holders of the common shares issued upon the conversion of our preferred shares, including any accrued dividends thereon, will be entitled to certain rights with respect to registration of such shares under the Securities Act, pursuant to the terms of the registration rights agreement by and among us and certain of our holders. We refer to these shares as registrable securities. The registration of common shares pursuant to the exercise of the registration rights described below would enable the holders to trade these shares without restriction under the Securities Act when the applicable registration statement is declared effective.

We will pay the registration expenses, other than underwriting fees, selling commissions and share transfer taxes for the shares registered pursuant to the demand, piggyback and short-form registrations described below. Expenses relating to underwriting fees, selling commissions and share transfer taxes for the shares registered will be borne by us and the participating holders in proportion to the number of common shares sold by each, or, as between the participating holders, as such participating holders may otherwise agree.

As of December 31, 2019, holders of an aggregate of 135,186,975 registrable securities were entitled to these demand, piggyback and short-form registration rights. Under the terms of the registration rights agreement, holders of registrable securities will have equivalent registration rights with respect to any of our common shares acquired by these holders.

Demand Registration Rights

At any time beginning 180 days following the effective date of the registration statement of which this prospectus forms a part, the holders of at least a majority of the registrable securities then outstanding have the right to make up to two demands that we file a registration statement under the Securities Act, subject to specified conditions and exceptions.

Piggyback Registration Rights

If we register any securities for public sale, the holders of our registrable securities then outstanding will each be entitled to notice of the registration and will have the right to include their shares in the registration statement, subject to specified exceptions. The underwriters of any underwritten offering will have the right to limit the number of shares having registration rights to be included in such registration statement, but not below 30% of the total amount of securities included in such registration.

Short-Form Registration Rights

At any time beginning 180 days following the effective date of the registration statement of which this prospectus forms a part, if we are eligible to file a registration statement on Form S-3 under the Securities Act or Form 44-101F1 under National Instrument 44-101 of the Canadian Securities Administrators, as applicable, the holders of our registrable securities then outstanding will have the right to demand that we file a registration statement on Form S-3 or Form 44-101F1, as applicable, provided that the aggregate amount of securities to be sold under such short-form registration statement is at least \$5.0 million. We are not obligated to effect a demand for registration on Form S-3 or Form 44-101 by holders of our registrable securities more than two times during any 12-month period. The right to have such shares registered on Form S-3 or Form 44-101 is further subject to other specified conditions and limitations.

Termination of Registration Rights

The demand, piggyback and short-form registration rights described below will expire upon the earliest of (i) the occurrence of certain mergers, amalgamations, consolidations, reorganizations, arrangements, business combinations or similar transactions that result in a change of control, or a sale of all or substantially all of our assets, or a dissolution, liquidation or winding up of our company, (ii) three years after the completion this offering or (iii) with respect to any particular holder, at such time that such holder can sell its preferred shares under Rule 144 of the Securities Act during any three-month period.

Indemnification

The registration rights agreement contains customary cross-indemnification provisions, pursuant to which we are obligated to indemnify the selling shareholders in the event of material misstatements or omissions in the registration statement attributable to us, and they are obligated to indemnify us for material misstatements or omissions in the registration statement attributable to them.

Transfer Agent and Registrar

The transfer agent and registrar for our common shares will be . The transfer agent's address is .

Nasdaq Global Market Listing

We intend to apply to list our common shares on the Nasdaq Global Market under the trading symbol "RPTX."

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for our common shares, and a liquid trading market for our common shares may not develop or be sustained after this offering. Future sales of our common shares, including shares issued upon the exercise of outstanding options, in the public market after the completion of this offering, or the perception that those sales may occur, could adversely affect the prevailing market price for our common shares from time to time or impair our ability to raise equity capital in the future. As described below, only a limited number of our common shares will be available for sale in the public market for a period of several months after the completion of this offering due to contractual and legal restrictions on resale described below. Future sales of our common shares in the public market either before or after restrictions lapse, or the perception that those sales may occur, could adversely affect the prevailing market price of our common shares at such time and our ability to raise equity capital at a time and price we deem appropriate.

Sale of Restricted Shares

Based on the number of common shares outstanding as of December 31, 2019, upon the closing of this offering and assuming (i) the automatic conversion of our outstanding preferred shares into an aggregate of 130,686,975 common shares immediately prior to the completion of this offering, (ii) no exercise of the underwriters' option to purchase additional common shares, and (iii) no exercise of outstanding options, we will have outstanding common shares as of such date. Of these shares, all of the common shares to be sold in this offering will be freely tradable in the public market without restriction or further registration under the Securities Act, unless the shares are held by any of our "affiliates" as such term is defined in Rule 144 of the Securities Act, or Rule 144 or subject to lock-up agreements. All remaining common shares held by existing shareholders immediately prior to the consummation of this offering will be "restricted securities," as such term is defined in Rule 144. These restricted securities were issued and sold by us in private transactions and are eligible for public sale only if registered under the Securities Act or if they qualify for an exemption from registration under the Securities Act, including the exemptions provided by Rule 144 or Rule 701 of the Securities Act, or Rule 701, which rules are summarized below.

As a result of the lock-up agreements referred to below and the provisions of Rule 144 and Rule 701 under the Securities Act, based on the number of our common shares outstanding as of December 31, 2019, the common shares (excluding the shares sold in this offering) that will be available for sale in the public market are as follows:

<u>Approximate Number of Shares</u> shares	<u>First Date Available for Sale into Public Market</u>
	181 days after the date of this prospectus, upon expiration of the lock-up agreements referred to below, subject in some cases to applicable volume, manner of sale and other limitations under Rule 144 and Rule 701.

We may issue common shares from time to time as consideration for future acquisitions, investments or other corporate purposes. In the event that any such acquisition, investment or other transaction is significant, the number of common shares that we may issue may in turn be significant. We may also grant registration rights covering those common shares issued in connection with any such acquisition and investment.

In addition, the common shares reserved for future issuance under our 2020 Plan will become eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules, the lock-up agreements, a registration statement under the Securities Act or an exemption from registration, including Rule 144 and Rule 701.

Rule 144

In general, persons who have beneficially owned restricted common shares for at least six months, and any affiliate of the company who owns common shares, are entitled to sell their securities without registration with the SEC under an exemption from registration provided by Rule 144.

Under Rule 144, as currently in effect, once we have been subject to the public company reporting requirements of the Exchange Act for at least 90 days, and we are current in our Exchange Act reporting at the time of sale, a person (or persons whose shares are required to be aggregated) who is not deemed to have been one of our “affiliates” for purposes of Rule 144 at any time during the 90 days preceding a sale and who has beneficially owned restricted securities within the meaning of Rule 144 for at least six months, including the holding period of any prior owner other than one of our “affiliates,” is entitled to sell those shares in the public market (subject to the lock-up agreement referred to below, if applicable) without complying with the manner of sale, volume limitations or notice provisions of Rule 144, but subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of any prior owner other than “affiliates,” then such person is entitled to sell such shares in the public market without complying with any of the requirements of Rule 144 (subject to the lock-up agreement referred to above, if applicable).

In general, under Rule 144, as currently in effect, once we have been subject to the public company reporting requirements of the Exchange Act for at least 90 days, our “affiliates,” as defined in Rule 144, who have beneficially owned the shares proposed to be sold for at least six months, are entitled to sell in the public market, upon expiration of any applicable lock-up agreements and within any three-month period, a number of those common shares that does not exceed the greater of:

- 1% of the number of common shares then outstanding, which will equal approximately _____ common shares immediately upon the completion of this offering (calculated as of December 31, 2019 on the basis of the assumptions described above and assuming no exercise of the underwriter’s option to purchase additional shares and no exercise of outstanding options); or
- the average weekly trading volume of our common shares on Nasdaq during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Such sales under Rule 144 by our “affiliates” or persons selling shares on behalf of our “affiliates” are also subject to certain manner of sale provisions, notice requirements and to the availability of current public information about us. Notwithstanding the availability of Rule 144, the holders of substantially all of our restricted securities have entered into lock-up agreements as referenced above and their restricted securities will become eligible for sale (subject to the above limitations under Rule 144) upon the expiration of the restrictions set forth in those agreements.

Rule 701

In general, under Rule 701 as currently in effect, any of our employees, directors, officers, consultants or advisors who acquired common shares from us in connection with a written compensatory share or option plan or other written agreement in compliance with Rule 701 before the effective date of the registration statement of which this prospectus is a part (to the extent such common shares are not subject to a lock-up agreement) and who are not our “affiliates” as defined in Rule 144 during the immediately preceding 90 days, is entitled to rely on Rule 701 to resell such shares beginning 90 days after the date of this prospectus in reliance on Rule 144, but without complying with the notice, manner of sale, public information requirements or volume limitation provisions of Rule 144. Persons who are our “affiliates” may resell those shares beginning 90 days after the date of this prospectus without compliance with Rule 144’s minimum holding period requirements (subject to the terms of the lock-up agreement referred to below, if applicable).

Lock-Up Agreements

In connection with this offering, we, our directors, our executive officers and holders of substantially all of our outstanding common shares or securities convertible into or exchangeable for common shares, have agreed, subject to certain exceptions, with the underwriters not to directly or indirectly offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise dispose of or hedge any common shares or any options to purchase common shares, or any securities convertible into or exchangeable for common shares during the period from the date of the lock-up agreement continuing through the date 180 days after the date of this prospectus, except with the prior written consent of _____ and _____ may waive the restrictions contained in such lock-up agreements at any time in their sole discretion. See the section entitled “Underwriting” appearing elsewhere in this prospectus for more information. These agreements are described in the section titled “Underwriting.”

In addition to the restrictions contained in the lock-up agreements described above, we have entered into agreements with certain security holders, including our second amended and restated unanimous shareholders’ agreement and our standard form of option agreement, that contain market stand-off provisions imposing restrictions on the ability of such security holders to offer, sell or transfer our equity securities for a period of 180 days following the date of this prospectus.

Prior to the completion of the offering, certain of our employees, including our executive officers, and/or directors, may enter into written trading plans that are intended to comply with Rule 10b5-1 under the Exchange Act. Sales under these trading plans would not be permitted until the expiration of the lock-up agreements relating to the offering described above.

Following the lock-up periods set forth in the agreements described above, and assuming that the representatives of the underwriters do not release any parties from these agreements and that there is no extension of the lock-up period, all of the common shares that are restricted securities or are held by our affiliates as of the date of this prospectus will be eligible for sale in the public market in compliance with Rule 144.

Registration Rights

Upon the completion of this offering, the holders of 135,186,975 common shares will be entitled to rights with respect to the registration of their shares under the Securities Act, subject to the lock-up agreements described under “—Lock-Up Agreements” above. Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act, except for shares purchased by affiliates, immediately upon the effectiveness of the registration statement of which this prospectus is a part. Any sales of securities by these shareholders could have a material adverse effect on the trading price of our common shares. See the section titled “Description of Share Capital—Registration Rights.”

Equity Incentive Plans

We intend to file with the SEC a registration statement on Form S-8 under the Securities Act covering the common shares reserved for issuance under our equity incentive plans. The registration statement on Form S-8 is expected to be filed and become effective as soon as practicable after the completion of this offering. Accordingly, shares registered under the registration statement will be available for sale in the open market following its effective date, subject to Rule 144 volume limitations and the lock-up agreements described above, if applicable.

MATERIAL DIFFERENCES BETWEEN THE CANADA BUSINESS CORPORATIONS ACT AND THE DELAWARE GENERAL CORPORATION LAW

We are governed by the Canada Business Corporations Act, or the CBCA, which is generally similar to laws applicable to U.S. corporations. Significant differences between the CBCA and the Delaware General Corporation Law, or DGCL, which governs companies incorporated in the State of Delaware, include the differences summarized below. This summary is not an exhaustive review of the two statutes, and reference should be made to the full text of both statutes for particulars of the differences.

	<u>Delaware</u>	<u>CBCA</u>
<i>Number and Election of Directors</i>	<p>Under the DGCL, the board of directors must consist of at least one director. The number of directors shall be fixed by the bylaws of the corporation, unless the certificate of incorporation fixes the number of directors, in which case a change in the number of directors shall only be made by an amendment of the certificate of incorporation. Under the DGCL, directors are elected at annual stockholder meetings by plurality vote of the stockholders, unless a shareholder-adopted bylaw prescribes a different required vote.</p>	<p>Under the CBCA, a corporation whose securities are publicly traded must have not fewer than three directors, at least two of whom are not officers or employees of the corporation or its affiliates.</p> <p>Under the CBCA, shareholders of a corporation shall, by ordinary resolution at the first meeting of shareholders and at each succeeding annual meeting at which an election of directors is required, elect directors to hold office for a term expiring not later than the close of the third annual meeting of shareholders following the election.</p> <p>The length of the directors' mandates can be set out in the bylaws. If no term is stated, as is the case for us, directors hold office until the next meeting of shareholders.</p>
<i>Constitution and Residency of Directors</i>	<p>The DGCL does not have residency requirements, but a corporation may prescribe qualifications for directors under its certificate of incorporation or bylaws.</p>	<p>Under the CBCA, subject to certain limited exceptions, at least 25% of the directors (or if a corporation has less than four directors, at least one director) of a corporation must be resident Canadians.</p>
<i>Removal of Directors</i>	<p>Under the DGCL, any director or the entire board of directors may be removed, with or without cause, by the holders of a majority of the shares then entitled to vote at an election of directors, except (i) unless the certificate of incorporation provides otherwise, in the case of a corporation whose board of directors is classified, stockholders may effect such removal</p>	<p>Under the CBCA, unless the articles of a corporation provide for cumulative voting which is not the case for us, shareholders of the corporation may, by ordinary resolution passed at a special meeting of shareholders, remove any director or directors from office and may elect any qualified person to fill the resulting vacancy.</p>

	<u>Delaware</u>	<u>CBCA</u>
	only for cause, or (ii) in the case of a corporation having cumulative voting, if less than the entire board of directors is to be removed, no director may be removed without cause if the votes cast against his removal would be sufficient to elect him if then cumulatively voted at an election of the entire board of directors, or, if there are classes of directors, at an election of the class of directors of which he is a part.	Ordinary resolution means a resolution passed by a majority of the votes cast by the shareholders who voted in respect of that resolution. If holders of a class or series of shares have the exclusive right to elect one or more directors, a director elected by them may only be removed by an ordinary resolution at a meeting of the shareholders of that class or series.
<i>Vacancies on the Board of Directors</i>	Under the DGCL, vacancies and newly created directorships may be filled by a majority of the directors then in office (even though less than a quorum) or by a sole remaining director unless (i) otherwise provided in the certificate of incorporation or bylaws of the corporation or (ii) the certificate of incorporation directs that a particular class of stock is to elect such director, in which case a majority of the other directors elected by such class, or a sole remaining director elected by such class, will fill such vacancy.	Under the CBCA, a vacancy among the directors created by the removal of a director may be filled by the shareholders at the meeting at which the director is removed or, if not so filled, a quorum of directors may fill a vacancy among the directors unless the vacancy results from an increase in the number of the minimum or maximum number of directors or a failure to elect the number or minimum number of directors provided for in the articles.
<i>Board of Director Quorum and Vote Requirements</i>	<p>Under the DGCL, a majority of the total number of directors shall constitute a quorum for the transaction of business unless the certificate of incorporation or bylaws require a greater number. The bylaws may lower the number required for a quorum to one-third the number of directors, but no less.</p> <p>Under the DGCL, the board of directors may take action by the majority vote of the directors present at a meeting at which a quorum is present unless the certificate of incorporation or bylaws require a greater vote.</p>	Under the CBCA, subject to the articles or bylaws, a majority of the number of directors or minimum number of directors required by the articles constitutes a quorum at any meeting of directors, and, notwithstanding any vacancy among the directors, a quorum of directors may exercise all the powers of the directors.

Transactions with Directors and Officers

Delaware

The DGCL generally provides that no transaction between a corporation and one or more of its directors or officers, or between a corporation and any other corporation or other organization in which one or more of its directors or officers, are directors or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the board or committee which authorizes the transaction, or solely because any such director's or officer's votes are counted for such purpose, if (i) the material facts as to the director's or officer's interest and as to the transaction are known to the board of directors or the committee, and the board or committee in good faith authorizes the transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum (ii) the material facts as to the director's or officer's interest and as to the transaction are disclosed or are known to the stockholders entitled to vote thereon, and the transaction is specifically approved in good faith by vote of the stockholders; or (iii) the transaction is fair as to the corporation as of the time it is authorized, approved or ratified, by the board of directors, a committee or the stockholders.

CBCA

Under the CBCA, a director or an officer of a corporation must disclose to the corporation, in writing or by requesting to have it entered in the minutes of meetings of directors or of meetings of committees of directors, the nature and extent of any interest that he or she has in a material contract or material transaction, whether made or proposed, with the corporation, if the director or officer (a) is a party to the contract or transaction; (b) is a director or an officer, or an individual acting in a similar capacity, of a party to the contract or transaction; or (c) has a material interest in a party to the contract or transaction.

If a material contract or material transaction, whether entered into or proposed, is one that, in the ordinary course of the corporation's business, would not require approval by the directors or shareholders, a director or officer shall disclose, in writing to the corporation or request to have it entered in the minutes of meetings of directors or of meetings of committees of directors, the nature and extent of his or her interest immediately after he or she becomes aware of the contract or transaction.

A director required to make a disclosure shall not vote on any resolution to approve the contract or transaction unless the contract or transaction (a) relates primarily to his or her remuneration as a director, officer, employee, agent or mandatary of the corporation or an affiliate; (b) is for indemnity or insurance under the CBCA; or (c) is with an affiliate.

A contract or transaction for which disclosure is required is not invalid, and the director or officer is not accountable to the corporation or its shareholders for any profit realized from the contract or transaction, because of the director's or officer's

Delaware

CBCA

interest in the contract or transaction or because the director was present or was counted to determine whether a quorum existed at the meeting of directors or committee of directors that considered the contract or transaction, if (a) disclosure of the interest was made; (b) the directors approved the contract or transaction; and (c) the contract or transaction was reasonable and fair to the corporation when it was approved.

Even if the above conditions are not met, a director or officer, acting honestly and in good faith, is not accountable to the corporation or to its shareholders for any profit realized from a contract or transaction for which disclosure is required and the contract or transaction is not invalid by reason only of the interest of the director or officer in the contract or transaction, if (a) the contract or transaction is approved or confirmed by special resolution at a meeting of the shareholders; (b) disclosure of the interest was made to the shareholders in a manner sufficient to indicate its nature before the contract or transaction was approved or confirmed; and (c) the contract or transaction was reasonable and fair to the corporation when it was approved or confirmed.

If a director or an officer of a corporation fails to comply with this section, a court may, on application of the corporation or any of its shareholders, set aside the contract or transaction on any terms that it thinks fit, or require the director or officer to account to the corporation for any profit or gain realized on it, or do both those things.

Limitation on Liability of Directors

Delaware

Under the DGCL, a corporation's certificate of incorporation may include a provision eliminating or limiting the personal liability of a director to the corporation and its stockholders for damages arising from a breach of fiduciary duty as a director. However, no provision can limit the liability of a director for:

- breach of the director's duty of loyalty to the corporation or its stockholders;
- acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of the law;
- intentional or negligent payment of unlawful dividends or stock purchases or redemptions; or
- for any transaction from which the director derived an improper personal benefit.

CBCA

Under the CBCA, a director or officer of a corporation must (i) act honestly and in good faith with a view to the best interests of the corporation; (ii) exercise the care, diligence and skill that a reasonably prudent individual would exercise in comparable circumstances; and (iii) comply with the CBCA, the regulations thereunder and the corporation's articles, bylaws and any unanimous shareholder agreement.

These statutory duties are in addition to duties under common law and equity.

No provision in a contract or the articles, bylaws, or resolution of a corporation may relieve a director or officer of a corporation from the duty to act in accordance with the CBCA and the regulations thereunder, or from any liability for failing to do so.

The CBCA does not permit any limitation of a director's liability other than in connection with the adoption of a unanimous shareholder agreement that restricts certain powers of the directors. If such a unanimous shareholder agreement were adopted, the parties who are given the power to manage or supervise the management of the business and affairs of the corporation under such agreement assume all of the liabilities of a director under the CBCA.

Under the CBCA, a director is not liable for certain acts if the director has otherwise complied with his or her duties and otherwise exercised the degree of care, diligence and skill that a reasonably prudent person would have exercised in comparable circumstances, including relying in good faith, on (i) financial statements of the corporation represented to the director by an officer of the corporation or in a written report of the auditor of the corporation to fairly reflect the financial condition of the corporation; or (ii) a report of a person whose profession lends credibility to a statement made by the professional person.

Indemnification of Directors and Officers

Delaware

The DGCL permits indemnification for derivative suits only for expenses (including legal fees) and only if the person is not found liable, unless a court determines the person is fairly and reasonably entitled to the indemnification.

CBCA

Under the CBCA, a corporation may indemnify its current or former directors or officers or another individual who acts or acted at the corporation's request as a director or officer, or an individual acting in a similar capacity, of another entity, against all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by the individual in respect of any civil, criminal, administrative, investigative or other proceeding in which the individual is involved because of his or her association with the corporation or another entity.

The CBCA also provides that a corporation may advance moneys to a director, officer or other individual for costs, charges and expenses incurred in connection with such a proceeding.

However, indemnification is prohibited under the CBCA unless the individual (i) acted honestly and in good faith with a view to the corporation's best interests, or the best interests of the other entity for which the individual acted as director or officer or in a similar capacity at the corporation's request; and (ii) in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, the individual had reasonable grounds for believing that his or her conduct was lawful.

Call and Notice of Stockholder Meetings

Under the DGCL, an annual or special stockholder meeting is held on such date, at such time and at such place as may be designated by the board of directors or any other person authorized to call such meeting under the corporation's certificate of incorporation or bylaws. If an annual meeting for election of directors is not held on the date designated or an action by written consent to elect

Under the CBCA, an annual meeting of shareholders must be held not later than fifteen months after holding the last preceding annual meeting but no later than six months after the end of the corporation's preceding financial year.

The directors of a corporation may at any time call a special meeting of shareholders.

	<u>Delaware</u>	<u>CBCA</u>
	directors in lieu of an annual meeting has not been taken within 30 days after the date designated for the annual meeting, or if no date has been designated, for a period of 13 months after the later of the last annual meeting or the last action by written consent to elect directors in lieu of an annual meeting, the Delaware Court of Chancery may summarily order a meeting to be held upon the application of any stockholder or director.	Additionally, under the CBCA, the holders of not less than 5% of the issued shares of a corporation that carry the right to vote at a meeting of shareholders may requisition that the directors call a meeting of shareholders for the purpose of transacting any business that may be transacted at a shareholders meeting. Upon receiving a requisition that complies with the technical requirements set out in the CBCA, the directors must, subject to certain limited exceptions, call a meeting of shareholders. If the directors do not call such a meeting within 21 days after receiving the requisition, the requisitioning shareholders or any of them may call the meeting.
<i>Stockholder Action by Written Consent</i>	Under the DGCL, a majority of the stockholders of a corporation may act by written consent without a meeting unless such action is prohibited by the corporation's certificate of incorporation.	Under the CBCA, a written resolution signed by all the shareholders of a corporation who would have been entitled to vote on the resolution at a meeting is effective to approve the resolution.
<i>Stockholder Nominations and Proposals</i>	Not applicable.	Under the CBCA, proposals with respect to the nomination of candidates for election to the board of directors may be made by certain registered or beneficial holders of shares entitled to be voted at an annual meeting of shareholders. To be eligible to submit a proposal, a shareholder must be the registered or beneficial holder of, or have support of the registered or beneficial holders of, (i) at least 1% of the total number of outstanding voting shares of the corporation, or (ii) voting shares whose fair market value is at least \$2,000 and such registered or beneficial holder(s) must have held such shares for at least six months immediately prior to the day upon which the shareholder submits the proposal.

Delaware

CBCA

In order for a proposal to include nominations of directors, it must be signed by one or more holders of shares representing not less than 5% of the shares (or shares of a class) entitled to vote at the special meeting.

If the proposal is submitted at least 90 days before the anniversary date of the notice of meeting sent to shareholders in connection with the previous annual meeting and the proposal meets other specified requirements, then the corporation shall either set out the proposal in the proxy circular of the corporation or attach the proposal thereto. In addition, if so requested by the person submitting the proposal, the corporation shall include in or attach to the proxy circular a statement in support of the proposal by the person and the name and address of the person.

If a corporation refuses to include a proposal in a management proxy circular, the corporation shall notify the person in writing within 21 days after its receipt of the proposal (or proof of the person's ownership of securities) of its intention to omit the proposal and the reasons therefor. In any such event, the person submitting the proposal may make application to a court for an order permitting the corporation to omit the proposal from the management proxy circular and the court may make such order as it determines appropriate.

Any registered shareholder entitled to vote, or any beneficial shareholder whose shares are entitled to be voted, at a meeting of shareholders may also discuss at the meeting any matter in respect of which such shareholder would have been entitled to submit a proposal.

	<u>Delaware</u>	<u>CBCA</u>
<i>Stockholder Quorum and Vote Requirements</i>	<p>Under the DGCL, quorum for a stock corporation is a majority of the shares entitled to vote at the meeting unless the certificate of incorporation or bylaws specify a different quorum, but in no event may a quorum be less than one-third of the shares entitled to vote. Unless the DGCL, certificate of incorporation or bylaws provide for a greater vote, generally the required vote under the DGCL is a majority of the shares present in person or represented by proxy, except for the election of directors which requires a plurality of the votes cast.</p>	<p>Under the CBCA, unless the bylaws otherwise provide, a quorum of shareholders is present at a meeting of shareholders, irrespective of the number of persons actually present at the meeting, if the holders of a majority of the shares entitled to vote at the meeting are present in person or represented by proxy.</p>
<i>Amendment of Certificate of Incorporation</i>	<p>Generally, under the DGCL, the affirmative vote of the holders of a majority of the outstanding stock entitled to vote is required to approve a proposed amendment to the certificate of incorporation, following the adoption of the amendment by the board of directors of the corporation, provided that the certificate of incorporation may provide for a greater vote. Under the DGCL, holders of outstanding shares of a class or series are entitled to vote separately on an amendment to the certificate of incorporation if the amendment would have certain consequences, including changes that adversely affect the rights and preferences of such class or series.</p>	<p>Under the CBCA, any amendment to the articles of a corporation generally requires shareholder approval by special resolution.</p> <p>If a proposed amendment requires approval by special resolution (which requires the approval of not less than two-thirds of the votes cast by the shareholders), the holders of shares of a class (or of a series of a class, if the proposed amendment would affect such series differently from the other series of shares of such class) are entitled to vote separately as a class or series if the proposed amendment affects the class or series as specified in the CBCA, whether or not the class or series otherwise carries the right to vote.</p>
<i>Amendment of Bylaws</i>	<p>Under the DGCL, after a corporation has received any payment for any of its stock, the power to adopt, amend or repeal bylaws shall be vested in the stockholders entitled to vote; provided, however, that any corporation may, in its certificate of incorporation, provide that bylaws may be adopted, amended or repealed by the board of directors. The fact that such power has been conferred upon the board of directors shall not divest the stockholders of the power nor limit their power to adopt, amend or repeal the bylaws.</p>	<p>Under the CBCA, unless the articles or bylaws otherwise provide, the board of directors of a corporation may, by resolution, make, amend or repeal bylaws that regulate the business or affairs of a corporation provided that any such bylaw, amendment or repeal of a bylaw must be confirmed at the next meeting of shareholders by the affirmative vote of a majority of the shareholders entitled to vote thereat.</p> <p>Any bylaw or amendment is effective when made by the board of directors</p>

	Delaware	CBCA
<i>Votes on Mergers, Consolidations and Sales of Assets</i>	<p>The DGCL provides that, unless otherwise provided in the certificate of incorporation or bylaws, the adoption of a merger agreement requires the approval of a majority of the outstanding stock of the corporation entitled to vote thereon.</p>	<p>but ceases to be effective if not confirmed by the shareholders. If a bylaw, amendment or repeal is rejected by shareholders, or the directors of a corporation do not submit a bylaw, an amendment or a repeal to the shareholders at the next meeting of shareholders, then such bylaw, amendment or repeal will cease to be effective and no subsequent resolution of the directors to make, amend or repeal a bylaw having substantially the same purpose or effect is effective until it is confirmed or confirmed as amended by the shareholders.</p> <p>Under the CBCA, certain fundamental changes, such as amendments to the articles, certain bylaw amendments, continuances to another jurisdiction, certain amalgamations, a lease, sale or transfer of all or substantially all of the property of a corporation other than in the ordinary course of business, liquidations, dissolutions, and certain arrangements are required to be approved by special resolution.</p> <p>A special resolution is a resolution (i) passed by not less than two-thirds of the votes cast by the shareholders who voted in respect of the resolution at a meeting duly called and held for that purpose; or (ii) signed by all shareholders entitled to vote on the resolution.</p> <p>In specified cases, a special resolution to approve an extraordinary corporate action is also required to be approved separately by the holders of a class or series of shares, including in certain cases a class or series of shares not otherwise carrying voting rights. In specified extraordinary corporate actions, all shares have a vote, whether or not they generally vote and, in certain cases, have separate class votes.</p>

Delaware

CBCA

In addition, the CBCA provides that, where it is not practicable for a corporation (that is not an insolvent corporation) to effect such a fundamental change under any other provision contemplated under the CBCA, the corporation may apply to a court for an order approving an arrangement.

Under the CBCA, arrangements are permitted, and a corporation may make any proposal it considers appropriate. In general, a plan of arrangement is approved by a corporation's board of directors and then is submitted to a court for approval. It is customary for a corporation in such circumstances to apply to a court initially for an interim order governing various procedural matters prior to calling any security holder meeting to consider the proposed arrangement. Plans of arrangement involving shareholders must be approved by a special resolution of shareholders, (or such higher approval that a court may require) and may provide that holders of shares not normally entitled to vote may vote on the arrangement. The court determines, among other things, to whom notice shall be given and whether, and in what manner, approval of any person is to be obtained and also determines whether any shareholders may dissent from the proposed arrangement and receive payment of the fair value of their shares. Following compliance with the procedural steps contemplated in any such interim order (including as to obtaining security holder approval), the court would conduct a final hearing and approve or reject the proposed arrangement.

Dissenter's Rights of Appraisal

<u>Delaware</u>	<u>CBCA</u>
<p>Under the DGCL, a stockholder of a Delaware corporation generally has the right to dissent from, merger or consolidation in which the Delaware corporation is participating, subject to specified procedural requirements, including that such dissenting stockholder does not vote in favor of the merger or consolidation. However, the DGCL does not confer appraisal rights, in certain circumstances, including if the dissenting stockholder owns shares traded on a national securities exchange and will receive publicly traded shares in the merger or consolidation. Under the DGCL, a stockholder asserting appraisal rights does not receive any payment for his or her shares until the court determines the fair value or the parties otherwise agree to a value. The costs of the proceeding may be determined by the court and assessed against the parties as the court deems equitable under the circumstances.</p>	<p>The CBCA provides that shareholders of a corporation are entitled to exercise dissent rights and to be paid the fair value of their shares in respect of which such shareholders dissent in connection with specified matters, including:</p> <ul style="list-style-type: none">(i) any amalgamation with another corporation (other than with certain affiliated corporations);(ii) an amendment to the corporation's articles to add, change or remove any provisions restricting or constraining the issue, transfer or ownership of shares of the class in respect of which a shareholder is dissenting;(iii) an amendment to the corporation's articles to add, change or remove any restriction upon the business or businesses that the corporation may carry on;(iv) a continuance under the laws of another jurisdiction;(v) a sale, lease or exchange of all, or substantially all, the property of the corporation other than in the ordinary course of business;(vi) pursuant to a court order permitting a shareholder to dissent in connection with an application to the court for an order approving an arrangement proposed by the corporation;(vii) the carrying out of a going-private transaction or a squeeze-out transaction; and(viii) certain amendments to the articles of a corporation which require a separate class or series vote by a holder of shares of any class or series, including in certain cases a class or series of shares not otherwise carrying voting rights; provided that, a shareholder is not entitled to dissent if any amendment to the articles is effected by a court order (a) approving a reorganization; or (b) made in connection with an action for an oppression remedy, described below.

Oppression Remedy

Delaware

The DGCL does not provide for a similar remedy.

CBCA

The CBCA's oppression remedy enables a court to make an order (interim or final) to rectify the matters complained of if the court is satisfied upon application by a complainant (as defined below) that (i) any act or omission of the corporation or any of its affiliates effects or threatens to effect a result, (ii) the business and affairs of the corporation or its affiliates are, have been or are threatened to be carried on or conducted in a manner, or (iii) the powers of the directors of the corporation or any of its affiliates are or have been exercised in a manner, that is, oppressive or unfairly prejudicial to, or that unfairly disregards, the interests of any security holder, creditor, director or officer of the corporation.

Under the CBCA, a "complainant" includes a current or former shareholder (including a current or former beneficial shareholder) of a corporation or any of its affiliates, a current or former director or officer of a corporation or any of its affiliates, the "Director" appointed under the CBCA or any other person who, in the discretion of the court, is a proper person to bring the application.

The oppression remedy provides the court with extremely broad and flexible jurisdiction to intervene in corporate affairs to protect shareholders and other complainants.

Shareholder Derivative Actions

Delaware

Under the DGCL, stockholders may bring derivative actions on behalf of, and for the benefit of the corporation. The plaintiff in a derivative action on behalf of the corporation either must be or have been a stockholder of the corporation at the time of the transaction or must be a stockholder who became a stockholder by operation of law in the transaction regarding which the stockholder complains. A stockholder may not sue derivatively on behalf of the corporation unless the stockholder first makes demand on the corporation that it bring suit and the demand is refused, unless it is shown that making the demand would have been a futile act.

CBCA

Under the CBCA, a current or former shareholder (including a current or former beneficial shareholder) of a corporation or any of its affiliates, a current or former director or officer of a corporation or any of its affiliates the "Director" appointed under the CBCA, or any other person who, in the discretion of the court, is a proper person may make an application to the court (each a "complainant") for leave to bring an action in the name and on behalf of the corporation or any of its subsidiaries, or intervene in an action to which the corporation or any of its subsidiaries is a party, to prosecute or defend an action on behalf of a corporation (a derivative action).

No derivative action may be brought unless the court is satisfied that (i) notice of the application for leave has been given to the directors of the corporation or its subsidiary of the complainant's intention not less than fourteen days before bringing the application, or as otherwise ordered by the court, if the directors of the corporation or its subsidiary do not bring, diligently prosecute or defend or discontinue the action; (ii) the complainant is acting in good faith; and (iii) it appears to be in the interests of the corporation for the action to be prosecuted or defended.

Under the CBCA, upon the final disposition of a derivative action, the court may make any order it determines to be appropriate. In addition, under the CBCA, a court may order a corporation to pay the complainant's reasonable legal fees and other costs reasonably incurred by the complainant in connection with the action.

Anti-Takeover and Ownership Provisions

<u>Delaware</u>	<u>CBCA</u>
<p>Unless an issuer opts out of the provisions of Section 203 of the DGCL, Section 203 generally prohibits a public Delaware corporation from engaging in a “business combination” with a holder of 15% or more of the corporation’s voting stock (as defined in Section 203), referred to as an interested stockholder, for a period of three years after the date of the transaction in which the interested stockholder became an interested stockholder, except as otherwise provided in Section 203. For these purposes, the term “business combination” includes mergers, assets sales and other similar transactions with an interested stockholder.</p>	<p>While the CBCA does not contain specific anti-takeover provisions with respect to “business combinations,” rules and policies of certain Canadian securities regulatory authorities, including Multilateral Instrument 61-101—Protection of Minority Security Holders in Special Transactions, or Multilateral Instrument 61-101, contain requirements in connection with, among other things, “related party transactions” and “business combinations”, including, among other things, any transaction by which an issuer directly or indirectly engages in the following with a related party: acquires, sells, leases or transfers an asset, acquires the related party, acquires or issues treasury securities, amends the terms of a security if the security is owned by the related party or assumes or becomes subject to a liability or takes certain other actions with respect to debt.</p> <p>The term “related party” includes directors, senior officers and holders of more than 10% of the voting rights attached to all outstanding voting securities of the issuer or holders of a sufficient number of any securities of the issuer to materially affect control of the issuer.</p> <p>Multilateral Instrument 61-101 requires, subject to certain exceptions, the preparation of a formal valuation relating to certain aspects of the transaction and more detailed disclosure in the proxy material sent to security holders in connection with a related party transaction including related to the valuation. Multilateral Instrument 61-101 also requires, subject to certain exceptions, that an issuer not engage in a related party transaction unless the shareholders of the issuer, other than the related parties, approve the transaction by a simple majority of the votes cast.</p>

MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS FOR U.S. HOLDERS

The following is a description of the material U.S. federal income tax consequences to the U.S. Holders described below of owning and disposing of our common shares. It is not a comprehensive description of all tax considerations that may be relevant to a particular U.S. Holder. This discussion applies only to a U.S. Holder that holds our common shares as a capital asset for tax purposes (generally, property held for investment). In addition, it does not describe all of the tax consequences that may be relevant in light of a U.S. Holder's particular circumstances, including state and local tax consequences, estate or gift tax consequences, alternative minimum tax consequences, the potential application of the Medicare contribution tax, and tax consequences applicable to U.S. Holders subject to special rules, such as:

- banks, insurance companies, and certain other financial institutions;
- U.S. expatriates and certain former citizens or long-term residents of the United States;
- dealers or traders in securities who use a mark-to-market method of tax accounting;
- persons holding common shares as part of a hedging transaction, "straddle," wash sale, conversion transaction or integrated transaction or persons entering into a constructive sale with respect to common shares;
- persons whose "functional currency" for U.S. federal income tax purposes is not the U.S. dollar;
- brokers, dealers or traders in securities, commodities or currencies;
- tax-exempt entities or government organizations;
- S corporations, partnerships or other entities or arrangements classified as partnerships for U.S. federal income tax purposes (and investors therein);
- regulated investment companies or real estate investment trusts;
- persons who acquired our common shares pursuant to the exercise of any employee share option or otherwise as compensation;
- persons that own or are deemed to own 10 percent or more of the voting power or value of our shares; and
- persons holding our common shares in connection with a trade or business, permanent establishment or fixed base outside the United States.

If an entity that is classified as a partnership for U.S. federal income tax purposes holds common shares, the U.S. federal income tax treatment of a partner will generally depend on the status of the partner and the activities of the partnership. Partnerships holding common shares and partners in such partnerships are encouraged to consult their tax advisors as to the particular U.S. federal income tax consequences of holding and disposing of common shares.

The discussion is based on the Internal Revenue Code of 1986, as amended, or the Code, existing, proposed and temporary U.S. Treasury Regulations promulgated thereunder and administrative and judicial interpretations thereof and the Convention Between Canada and the United States of America with Respect to Taxes on Income and Capital, signed September 26, 1980, as amended, or the Canada-U.S. Tax Treaty, all as of the date hereof, changes to any of which may affect the tax consequences described herein—possibly with retroactive effect. No ruling has been sought from the U.S. Internal Revenue Service, or the IRS, with respect to any of the U.S. federal income tax consequences described below, and there can be no assurances that the IRS will not take a contrary position concerning the tax consequences of the acquisition, ownership and disposition of our common shares or that such a position would not be sustained by a court.

A "U.S. Holder" is a holder who, for U.S. federal income tax purposes, is a beneficial owner of common shares who is eligible for the benefits of the Canada-U.S. Tax Treaty and is:

- (i) an individual who is a citizen or resident of the United States;

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- (ii) a corporation, or another entity taxable as a corporation, created or organized in or under the laws of the United States, any state therein or the District of Columbia;
- (iii) an estate the income of which is subject to U.S. federal income taxation regardless of its source; or
- (iv) a trust if (1) a U.S. court is able to exercise primary supervision over the administration of the trust and one or more U.S. persons have authority to control all substantial decisions of the trust or (2) the trust has a valid election to be treated as a U.S. person under applicable U.S. Treasury Regulations.

U.S. Holders are encouraged to consult their tax advisors concerning the U.S. federal, state, local and foreign tax consequences of owning and disposing of our common shares in their particular circumstances.

THESE PARAGRAPHS ARE A SUMMARY OF CERTAIN U.S. TAX CONSIDERATIONS AND ARE INTENDED AS A GENERAL GUIDE ONLY. IT IS RECOMMENDED THAT ALL HOLDERS OF COMMON SHARES OBTAIN ADVICE AS TO THE CONSEQUENCES OF THE ACQUISITION, OWNERSHIP AND DISPOSITION OF THE COMMON SHARES IN THEIR OWN SPECIFIC CIRCUMSTANCES FROM THEIR OWN TAX ADVISORS.

Passive Foreign Investment Company Rules

If we are classified as a PFIC in any taxable year, a U.S. Holder will be subject to special rules generally intended to reduce or eliminate any benefits from the deferral of U.S. federal income tax that a U.S. Holder could derive from investing in a non-U.S. company that does not distribute all of its earnings on a current basis.

A non-U.S. corporation will be classified as a PFIC for any taxable year in which, after applying certain look-through rules, either:

- at least 75% of its gross income is passive income (such as interest income); or
- at least 50% of its gross assets (determined on the basis of a quarterly average) is attributable to assets that produce passive income or are held for the production of passive income.

For purposes of these tests, passive income includes dividends, interest, gains from the sale or exchange of investment property and certain rents and royalties. We will be treated as owning our proportionate share of the assets and earning our proportionate share of the income of any other corporation, the equity of which we own, directly or indirectly, 25% or more (by value).

Based on our operating history and the projected composition of our income and valuation of our assets, including goodwill, we believe that we classified as a passive foreign investment company, or PFIC, for the taxable year ending December 31, 2020. However, the application of the PFIC rules is subject to uncertainty in several respects, and therefore, no assurances can be provided with respect to our PFIC status for any past, current or future taxable years.

A separate determination must be made after the close of each taxable year as to whether we are a PFIC for that year. As a result, our PFIC status may change from year to year. The total value of our assets for purposes of the asset test generally may be determined in part by reference to the market price of the common shares, which may fluctuate considerably. Fluctuations in the market price of the common shares may result in our being a PFIC for any taxable year. Even if we determine that we are not a PFIC for a taxable year, there can be no assurance that the IRS will agree with our conclusion and that the IRS would not successfully challenge our position. Because of the uncertainties involved in establishing our PFIC status, our United States tax counsel expresses no opinion regarding our PFIC status.

If we are classified as a PFIC in any year with respect to which a U.S. Holder owns common shares, we will continue to be treated as a PFIC with respect to such U.S. Holder in all succeeding years during which the U.S.

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Holder owns the common shares, regardless of whether we continue to meet the tests described above unless (i) we cease to be a PFIC and the U.S. Holder has made a valid “deemed sale” election under the PFIC rules, (ii) we cease to be a PFIC and the U.S. Holder has a valid mark-to-market election in effect (as described below) or (iii) the U.S. Holder makes a valid Qualified Electing Fund Election, or QEF Election, with respect to all taxable years during such U.S. Holders holding period in which we are a PFIC. However, a U.S. Holder may make a QEF Election with respect to our common shares only if we annually provide such U.S. Holder with certain tax information, and we currently do not intend to prepare or provide such information. As a result, the QEF Election is not expected to be available to a U.S. Holder and the remainder of this discussion assumes that such election will not be available. If the “deemed sale” election is made, a U.S. Holder will be deemed to have sold the common shares the U.S. Holder holds at their fair market value and any gain from such deemed sale would be subject to the rules described below. After the deemed sale election, so long as we do not become a PFIC in a subsequent taxable year, the U.S. Holder’s common shares with respect to which such election was made will not be treated as shares in a PFIC and the U.S. Holder will not be subject to the rules described below with respect to any “excess distribution” the U.S. Holder receives from us or any gain from an actual sale or other disposition of the common shares. U.S. Holders should consult their tax advisors as to the possibility and consequences of making a deemed sale election if we cease to be a PFIC and such election becomes available.

For each taxable year we are treated as a PFIC, U.S. Holders will be subject to special tax rules with respect to any “excess distribution” such U.S. Holder receives and any gain such U.S. Holder recognizes from a sale or other disposition (including a pledge) of our common shares, unless (i) such U.S. Holder makes a QEF Election with respect to all taxable years of a U.S. Holder’s holding period during which we are a PFIC or makes a purging election to cause a deemed sale of the common shares at their fair market value in conjunction with a QEF Election (however, as discussed above, such elections are expected and assumed not to be available) or (ii) our common shares constitute “marketable” securities, and such U.S. Holder makes a mark-to-market election as discussed below. Distributions a U.S. Holder receives in a taxable year that are greater than 125% of the average annual distributions a U.S. Holder received during the shorter of the three preceding taxable years or the U.S. Holder’s holding period for the common shares will be treated as an excess distribution. Under these special tax rules:

- the excess distribution or gain will be allocated ratably over a U.S. Holder’s holding period for the common shares;
- the amount allocated to the current taxable year, and any taxable year prior to the first taxable year in which we became a PFIC, will be taxable as ordinary income; and
- the amount allocated to each other year will be subject to the highest tax rate in effect for that year and the interest charge generally applicable to underpayments of tax will be imposed on the resulting tax attributable to each such year.

A U.S. Holder’s tax liability for amounts allocated to years prior to the year of disposition or the year of an “excess distribution” cannot be offset by any net operating losses for such years, and gains (but not losses) realized on the sale of the common shares cannot be treated as capital, even if the U.S. Holder holds the common shares as capital assets.

If we are a PFIC, a U.S. Holder will generally be subject to similar rules with respect to distributions we receive from, and our dispositions of the shares of, any of our direct or indirect subsidiaries that also are PFICs, as if such distributions were indirectly received by, and/or dispositions were indirectly carried out by, such U.S. Holder. U.S. Holders should consult their tax advisors regarding the potential application of the PFIC rules if we were to form or acquire any non-U.S. subsidiaries in the future.

If we are a PFIC, U.S. Holders can avoid the interest charge on excess distributions or gain relating to the common shares by making a mark-to-market election with respect to the common shares, provided that the common shares are “marketable.” Common shares will be marketable if they are “regularly traded” on certain

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U.S. stock exchanges or on a foreign stock exchange that meets certain conditions. For these purposes, the common shares will be considered regularly traded during any calendar year during which they are traded, other than in de minimis quantities, on at least 15 days during each calendar quarter. Any trades that have as their principal purpose meeting this requirement will be disregarded. Our common shares will be listed on Nasdaq, which is a qualified exchange for these purposes. Consequently, if our common shares remain listed on Nasdaq and are regularly traded, and you are a U.S. Holder that holds our common shares, we expect the mark-to-market election would be available to you if we are a PFIC. Each U.S. Holder should consult its tax advisor as to the whether a mark-to-market election is available or advisable with respect to the common shares.

A U.S. Holder that makes a mark-to-market election must include as ordinary income for each year an amount equal to the excess, if any, of the fair market value of the common shares at the close of the taxable year over the U.S. Holder's adjusted tax basis in the common shares. Accordingly, such mark-to-market election may accelerate the recognition of income without a corresponding receipt of cash. An electing holder may also claim an ordinary loss deduction for the excess, if any, of the U.S. Holder's adjusted basis in the common shares over the fair market value of the common shares at the close of the taxable year, but this deduction is allowable only to the extent of any net mark-to-market gains for prior years. The U.S. Holder's tax basis in our common shares would be adjusted to reflect any income or loss recognized as a result of the mark-to-market election. Gains from an actual sale or other disposition of the common shares will be treated as ordinary income, and any losses incurred on a sale or other disposition of the common shares will be treated first as an ordinary loss (to the extent of any net mark-to-market gains for prior years) and thereafter as a capital loss. Once made, the election cannot be revoked without the consent of the IRS, unless the common shares cease to be marketable.

In any year in which we are classified as a PFIC, a U.S. Holder will be required to file an annual information return on IRS Form 8621 containing such information as the Treasury Regulations and/or other IRS guidance may require. A U.S. Holder's failure to file IRS Form 8621 could result in the imposition of penalties and the extension of the statute of limitations with respect to U.S. federal income tax. U.S. Holders should consult their tax advisors regarding the requirements of filing such information returns under these rules.

Taxation of Distributions

As described in the section above entitled "Dividend Policy," we do not anticipate declaring or paying dividends to holders of our common shares in the foreseeable future. However, if we make a distribution contrary to this expectation, subject to the discussion above under "Passive Foreign Investment Company Rules," distributions paid to a U.S. Holder in respect to our common shares (including any amounts withheld in respect of foreign taxes), other than certain pro rata distributions of common shares, will generally be treated as dividends to the extent paid out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles). To the extent a distribution received by a U.S. Holder is not a dividend because it exceeds the U.S. Holder's pro rata share of our current and accumulated earnings and profits, it will be treated first as a tax-free return of capital and reduce (but not below zero) the adjusted tax basis of the U.S. Holder's common shares. To the extent the distribution exceeds the adjusted tax basis of the U.S. Holder's common shares, the remainder will be taxed as capital gain. Because we may not calculate our earnings and profits under U.S. federal income tax principles, we expect that distributions generally will be reported to U.S. Holders as dividends.

Subject to applicable limitations, dividends paid by a "qualified foreign corporation" to certain non-corporate U.S. Holders may be taxable at preferential rates provided that certain requirements are met. A non-U.S. corporation (other than a corporation that is classified as a PFIC for the taxable year in which the dividend is paid or the preceding taxable year) generally will be considered to be a qualified foreign corporation (a) if it is eligible for the benefits of a comprehensive tax treaty with the United States which the Secretary of Treasury of the United States determines is satisfactory for purposes of this provision and which includes an exchange of information provision, or (b) with respect to any dividend it pays on shares that are readily tradable on an established securities market in the United States. Our common shares will generally be considered to be

readily tradable on an established securities market in the United States for so long as they are listed on the Nasdaq Global Market. The amount of the dividend will be treated as foreign-source dividend income to U.S. Holders and will not be eligible for the dividends-received deduction generally available to U.S. corporations under the Code. Dividends will generally be included in a U.S. Holder's income on the date of the U.S. Holder's receipt of the dividend. The amount of any dividend income paid in foreign currency will be the U.S. dollar amount calculated by reference to the exchange rate in effect on the date of actual or constructive receipt, regardless of whether the payment is in fact converted into U.S. dollars. If the dividend is converted into U.S. dollars on the date of receipt, a U.S. Holder should not be required to recognize foreign currency gain or loss in respect of the dividend income. A U.S. Holder may have foreign currency gain or loss if the dividend is converted into U.S. dollars after the date of receipt. Such gain or loss would generally be treated as U.S.-source ordinary income or loss. The amount of any distribution of property other than cash (and other than certain pro rata distributions of common shares or rights to acquire common shares) will be the fair market value of such property on the date of distribution.

For foreign tax credit limitation purposes, our dividends will generally be treated as passive category income. A U.S. Holder generally may claim the amount of any Canadian withholding tax as either a deduction from gross income or a credit against its U.S. federal income tax liability. However, the foreign tax credit is subject to numerous complex limitations that must be determined and applied on an individual basis. Each U.S. Holder should consult its own tax advisors regarding the foreign tax credit rules.

Sale or Other Taxable Disposition of Common Shares

Subject to the discussion above under "Passive Foreign Investment Company Rules," gain or loss realized on the sale or other taxable disposition of common shares will be capital gain or loss, and will be a long-term capital gain or loss if the U.S. Holder held the common shares for more than one year. The amount of the gain or loss will equal the difference between the U.S. Holder's adjusted tax basis in the common shares disposed of and the amount realized on the disposition, in each case as determined in U.S. dollars. This gain or loss will generally be U.S.-source gain or loss for foreign tax credit purposes, which will generally limit the availability of foreign tax credits. The deductibility of capital losses is subject to limitations.

If the consideration received by a U.S. Holder is not paid in U.S. dollars, the amount realized will be the U.S. dollar value of the payment received determined by reference to the spot rate of exchange on the date of the sale or other disposition. However, if the common shares are treated as traded on an "established securities market" and a U.S. Holder is either a cash basis taxpayer or an accrual basis taxpayer that has made a special election (which must be applied consistently from year to year and cannot be changed without the consent of the IRS), such U.S. Holder will determine the U.S. dollar value of the amount realized in a non-U.S. dollar currency by translating the amount received at the spot rate of exchange on the settlement date of the sale. If a U.S. Holder is an accrual basis taxpayer that is not eligible to or does not elect to determine the amount realized using the spot rate on the settlement date, such U.S. Holder will recognize foreign currency gain or loss to the extent of any difference between the U.S. dollar amount realized on the date of sale or disposition and the U.S. dollar value of the currency received at the spot rate on the settlement date.

WE STRONGLY URGE YOU TO CONSULT YOUR TAX ADVISOR REGARDING THE IMPACT OF OUR PFIC STATUS ON YOUR INVESTMENT IN THE COMMON SHARES AS WELL AS THE APPLICATION OF THE PFIC RULES TO YOUR INVESTMENT IN THE COMMON SHARES.

Information Reporting and Backup Withholding

Payments of dividends and sales proceeds that are made within the United States or through certain U.S.-related financial intermediaries generally are subject to information reporting, and may be subject to backup withholding, unless (i) the U.S. Holder is a corporation or other exempt recipient or (ii) in the case of backup withholding, the U.S. Holder provides a correct taxpayer identification number and certifies that it is not subject to backup withholding (generally, by providing an IRS Form W-9).

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Backup withholding is not an additional tax. The amount of any backup withholding from a payment to a U.S. Holder will be allowed as a credit against the holder's U.S. federal income tax liability and may entitle it to a refund, provided that the required information is timely furnished to the IRS.

The discussion of reporting requirements set forth above is not intended to constitute a complete description of all reporting requirements that may apply to a U.S. Holder. Each U.S. Holder should consult its own tax advisors regarding the information reporting and backup withholding rules.

Information with Respect to Foreign Financial Assets

Certain U.S. Holders who are individuals (and, under regulations, certain entities) may be required to report information relating to the common shares, subject to certain exceptions (including an exception for common shares held in accounts maintained by certain U.S. financial institutions). Such U.S. Holders who fail to timely furnish the required information may be subject to a penalty. Additionally, if a U.S. Holder does not file the required information, the statute of limitations with respect to tax returns of the U.S. Holder to which the information relates may not close until three years after such information is filed. Each U.S. Holder should consult its own tax advisors regarding its reporting obligations with respect to its ownership and disposition of the common shares.

MATERIAL CANADIAN FEDERAL INCOME TAX CONSIDERATIONS

The following is, as of the date hereof, a summary of the principal Canadian federal income tax considerations generally applicable under the Income Tax Act (Canada) and the regulations promulgated thereunder, collectively the Tax Act, to a purchaser who acquires, as beneficial owner, the common shares under this offering, and who, for purposes of the Tax Act and at all relevant times, (i) is not, and is not deemed to be, resident in Canada, (ii) holds the common shares as capital property, (iii) deals at arm's length with, and is not affiliated with, the Company or the underwriters, and (iv) does not use or hold and will not be deemed to use or hold, the common shares in a business carried on in Canada, hereinafter, a Non-Resident Holder. Special rules, which are not discussed in this summary, may apply to an insurer that carries on an insurance business in Canada and elsewhere.

This summary is based upon the provisions of the Tax Act in force as of the date hereof, all specific proposals to amend the Tax Act that have been publicly announced by or on behalf of the Minister of Finance (Canada) prior to the date hereof, or the Proposed Amendments, the Canada-U.S. Tax Treaty, and an understanding of the current administrative policies and assessing practices of the Canada Revenue Agency, or the CRA, published in writing by it prior to the date hereof. This summary assumes the Proposed Amendments will be enacted in the form proposed. However, no assurance can be given that the Proposed Amendments will be enacted in their current form, or at all. This summary is not exhaustive of all possible Canadian federal income tax considerations and, except for the Proposed Amendments, does not take into account or anticipate any changes in the law or any changes in the CRA's administrative policies or assessing practices, whether by legislative, governmental or judicial action or decision, nor does it take into account or anticipate any other federal or any provincial, territorial or foreign tax considerations, which may differ significantly from those discussed herein.

This summary is not applicable to a Non-Resident Holder who makes or has made a "functional currency" reporting election; or that has entered or enters into a "derivative forward agreement" with respect to the common shares (each as defined in the Tax Act). **Any such Non-Resident Holder should consult its own tax advisor with respect to an investment in the common shares. This summary is of a general nature only and is not intended to be, nor should it be construed to be, legal or tax advice to any prospective purchaser or holder of the common shares, and no representations with respect to the income tax consequences to any prospective purchaser or holder are made. Consequently, prospective purchasers or holders of the common shares should consult their own tax advisors with respect to their particular circumstances.**

Currency Conversion

Generally, for purposes of the Tax Act, all amounts relating to the acquisition, holding or disposition of the common shares must be converted into Canadian dollars based on the exchange rates as determined in accordance with the Tax Act. The amounts subject to withholding tax and any capital gains or capital losses realized by a Non-Resident Holder may be affected by fluctuations in the Canadian-U.S. dollar exchange rate.

Dispositions

A Non-Resident Holder will not be subject to tax under the Tax Act on a disposition of a common share, unless the common share constitutes "taxable Canadian property" (as defined in the Tax Act) of the Non-Resident Holder at the time of disposition and the Non-Resident Holder is not entitled to relief under an applicable income tax treaty or convention.

Provided the common shares are listed on a "designated stock exchange," as defined in the Tax Act (which currently includes the Nasdaq Stock Market) at the time of disposition, the common shares will generally not constitute taxable Canadian property of a Non-Resident Holder at that time, unless at any time during the 60-month period immediately preceding the disposition the following two conditions are satisfied

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concurrently: (i) (a) the Non-Resident Holder; (b) persons with whom the Non-Resident Holder did not deal at arm's length; (c) partnerships in which the Non-Resident Holder or a person described in (b) holds a membership interest directly or indirectly through one or more partnerships; or (d) any combination of the persons and partnerships described in (a) through (c), owned 25% or more of the issued shares of any class or series of the shares of the Company; and (ii) more than 50% of the fair market value of the shares of the Company was derived directly or indirectly from one or any combination of: real or immovable property situated in Canada, "Canadian resource properties", "timber resource properties" (each as defined in the Tax Act), and options in respect of, or interests in or for civil law rights in, any such property whether or not the property exists. Notwithstanding the foregoing, in certain circumstances set out in the Tax Act, the common shares could be deemed to be taxable Canadian property. Even if the common shares are taxable Canadian property to a Non-Resident Holder, such Non-Resident Holder may be exempt from tax under the Tax Act on the disposition of such common shares by virtue of an applicable income tax treaty or convention, such as the Canada-U.S. Tax Treaty. **A Non-Resident Holder contemplating a disposition of common shares that may constitute taxable Canadian property should consult a tax advisor prior to such disposition.**

Dividends

Dividends paid or credited on the common shares or deemed to be paid or credited on the common shares to a Non-Resident Holder will be subject to Canadian withholding tax under the Tax Act at the rate of 25%, although such rate may be reduced under the provisions of an applicable income tax convention between Canada and the Non-Resident Holder's country of residence. For example, under the Canada-U.S. Tax Treaty, the rate of Canadian withholding tax applicable to a dividend paid on a common share to a Non-Resident Holder that is a resident of the United States for purposes of the Canada-U.S. Tax Treaty, beneficially owns the dividend and is fully entitled to the benefits of the Canada-U.S. Tax Treaty is generally reduced to 15%.

UNDERWRITING

Under the terms and subject to the conditions in an underwriting agreement dated the date of this prospectus, the underwriters named below, for whom Morgan Stanley & Co. LLC, Goldman Sachs & Co. LLC, Cowen and Company, LLC and Piper Sandler & Co. are acting as representatives, have severally agreed to purchase, and we have agreed to sell to them, severally, the number of shares indicated below:

<u>Name</u>	<u>Number of Shares</u>
Morgan Stanley & Co. LLC	
Goldman Sachs & Co. LLC	
Cowen and Company, LLC	
Piper Sandler & Co.	
Total:	

The underwriters and the representatives are collectively referred to as the “underwriters” and the “representatives,” respectively. The underwriters are offering the common shares subject to their receipt and acceptance of the shares from us and subject to prior sale. The offering of the shares by the underwriters is also subject to the underwriters’ right to reject any order in whole or in part. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the common shares offered by this prospectus are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the common shares offered by this prospectus if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters’ option to purchase additional shares described below.

The underwriters initially propose to offer part of the common shares directly to the public at the offering price listed on the cover page of this prospectus and part to certain dealers at a price that represents a concession not in excess of \$ _____ per share under the public offering price. After the initial offering of the common shares, the offering price and other selling terms may from time to time be varied by the representatives.

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to _____ additional common shares at the public offering price listed on the cover page of this prospectus, less underwriting discounts and commissions. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase about the same percentage of the additional common shares as the number listed next to the underwriter’s name in the preceding table bears to the total number of common shares listed next to the names of all underwriters in the preceding table.

The following table shows the per share and total public offering price, underwriting discounts and commissions, and proceeds before expenses to us. These amounts are shown assuming both no exercise and full exercise of the underwriters’ option to purchase up to an additional _____ common shares.

	<u>Per Share</u>	<u>Total</u>	
		<u>No Exercise</u>	<u>Full Exercise</u>
Public offering price	\$	\$	\$
Underwriting discounts and commissions:	\$	\$	\$
Proceeds, before expenses, to us	\$	\$	\$

The estimated offering expenses payable by us, exclusive of the underwriting discounts and commissions, are approximately \$ _____. We have agreed to reimburse the underwriters for expense relating to clearance of this offering with the Financial Industry Regulatory Authority up to \$ _____.

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The underwriters have informed us that they do not intend sales to discretionary accounts to exceed 5% of the total number of common shares offered by them.

We intend to apply to list our common shares on the Nasdaq Global Market under the trading symbol "RPTX."

We, all of our directors and officers, and the holders of substantially all of our common shares and securities convertible into or exchangeable for our common shares have entered into lock-up agreements with the underwriters and/or are subject to market standoff agreements or other agreements with us under which they agreed, subject to specific exceptions, that without the prior written consent of _____ and _____ on behalf of the underwriters, we and they will not, during the period ending at least 180 days, or the restricted period, after the date of this prospectus:

- offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any common shares or any other securities convertible into or exercisable or exchangeable for common shares;
- file any registration statement with the SEC relating to the offering of any common shares or any securities convertible into or exercisable or exchangeable for common shares; or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common shares,

whether any such transaction described above is to be settled by delivery of common shares or such other securities, in cash or otherwise. In addition, we and each such person agrees that, without the prior written consent of _____ and _____ on behalf of the underwriters, we or such other person will not, during the restricted period, make any demand for, or exercise any right with respect to, the registration of any common shares or any security convertible into or exercisable or exchangeable for common shares.

_____ and _____, in their joint discretion, may release the common shares and other securities subject to the lock-up agreements described above in whole or in part at any time.

In order to facilitate the offering of the common shares, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the common shares. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under their option to purchase additional shares. The underwriters can close out a covered short sale by exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open market price of shares compared to the price available under their option to purchase additional shares. The underwriters may also sell shares in excess of their option to purchase additional shares, creating a naked short position. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common shares in the open market after pricing that could adversely affect investors who purchase in this offering. As an additional means of facilitating this offering, the underwriters may bid for, and purchase, common shares in the open market to stabilize the price of the common shares. These activities may raise or maintain the market price of the common shares above independent market levels or prevent or retard a decline in the market price of the common shares. The underwriters are not required to engage in these activities and may end any of these activities at any time.

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The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

We and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

A prospectus in electronic format may be made available on websites maintained by one or more underwriters, or selling group members, if any, participating in this offering. The representatives may agree to allocate a number of common shares to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters that may make Internet distributions on the same basis as other allocations.

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Certain of the underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for us, for which they received or will receive customary fees and expenses.

In addition, in the ordinary course of their various business activities, the underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve our securities and instruments. The underwriters and their respective affiliates may also make investment recommendations or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long or short positions in such securities and instruments.

Certain affiliates of Cowen and Company, LLC purchased 11,538,462 of our Series B convertible preferred shares in our September 2019 Series B preferred share financing. Those Series B preferred shares will automatically convert into 11,538,462 common shares immediately prior to and in connection with the completion of this offering.

Pricing of the offering

Prior to this offering, there has been no public market for our common shares. The initial public offering price was determined by negotiations between us and the representatives. Among the factors considered in determining the initial public offering price were our future prospects and those of our industry in general, our sales, earnings and certain other financial and operating information in recent periods, and the price-earnings ratios, price-sales ratios, market prices of securities, and certain financial and operating information of companies engaged in activities similar to ours.

Selling restrictions

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Regulation, or each, a Relevant Member State, an offer to the public of any of our common shares may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of any of our common shares may be made at any time under the following exemptions under the Prospectus Regulation, if they have been implemented in that Relevant Member State:

- (i) to any legal entity which is a qualified investor as defined in the Prospectus Regulation;

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- (ii) to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Regulation), subject to obtaining the prior consent of the representatives for any such offer; or
- (iii) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of our common shares shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Regulation.

For the purposes of this provision, the expression an “offer to the public” in relation to any of our common shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any of our common shares to be offered so as to enable an investor to decide to purchase any of our common shares, and the expression “Prospectus Regulation” means Regulation (EU) 2017/1129.

United Kingdom

Each underwriter has represented and agreed that:

- (a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000, or the FSMA, received by it in connection with the issue or sale of our common shares in circumstances in which Section 21(1) of the FSMA does not apply to us; and
- (b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the of our common shares in, from or otherwise involving the United Kingdom.

Canada

The shares may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act* (Ontario), and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any sale or resale of the shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser’s province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser’s province or territory for particulars of these rights or consult with a legal advisor.

Hong Kong

The shares have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (b) in other circumstances which do not result in the document being a “prospectus” as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to the shares has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws

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of Hong Kong) other than with respect to the shares which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Japan

No registration pursuant to Article 4, paragraph 1 of the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended), or the FIEL, has been made or will be made with respect to the solicitation of the application for the acquisition of our shares.

Accordingly, our shares have not been, directly or indirectly, offered or sold and will not be, directly or indirectly, offered or sold in Japan or to, or for the benefit of, any “resident” of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan) or to others for re-offering or re-sale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan except pursuant to an exemption from the registration requirements, and otherwise in compliance with, the FIEL and the other applicable laws and regulations of Japan.

For Qualified Institutional Investors, or QII

Please note that the solicitation for newly-issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to our shares constitutes either a “QII only private placement” or a “QII only secondary distribution” (each as described in Paragraph 1, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to our shares. Our shares may only be transferred to QIIs.

For Non-QII Investors

Please note that the solicitation for newly-issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to our shares constitutes either a “small number private placement” or a “small number private secondary distribution” (each as is described in Paragraph 4, Article 23-13 of the FIEL).

Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to our shares. Our shares may only be transferred en bloc without subdivision to a single investor.

Singapore

This prospectus supplement has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus supplement and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor (as defined under Section 4A of the Securities and Futures Act, Chapter 289 of Singapore (the “SFA”)) under Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to conditions set forth in the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor, the securities (as defined in Section 239(1) of the SFA) of that corporation shall

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not be transferable for six months after that corporation has acquired the shares under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer in that corporation's securities pursuant to Section 275(1A) of the SFA, (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore, or Regulation 32.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a trust (where the trustee is not an accredited investor (as defined in Section 4A of the SFA)) whose sole purpose is to hold investments and each beneficiary of the trust is an accredited investor, the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferable for six months after that trust has acquired the shares under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer that is made on terms that such rights or interest are acquired at a consideration of not less than S\$200,000 (or its equivalent in a foreign currency) for each transaction (whether such amount is to be paid for in cash or by exchange of securities or other assets), (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32.

Israel

This prospectus does not constitute a prospectus under the Israeli Securities Law, 5728-1968, and has not been filed with or approved by the Israel Securities Authority. In Israel, this prospectus is being distributed only to, and is directed only at, investors listed in the first addendum, or the Addendum, to the Israeli Securities Law, consisting primarily of joint investment in trust funds, provident funds, insurance companies, banks, portfolio managers, investment advisors, members of the Tel Aviv Stock Exchange, underwriters purchasing for their own account, venture capital funds, and entities with shareholders' equity in excess of NIS 50 million, each as defined in the Addendum (as it may be amended from time to time, collectively referred to as institutional investors). Institutional investors may be required to submit written confirmation that they fall within the scope of the Addendum. In addition, we may distribute and direct this prospectus in Israel, at our sole discretion, to certain other exempt investors or to investors who do not qualify as institutional or exempt investors, provided that the number of such non-qualified investors in Israel shall be no greater than 35 in any 12-month period.

LEGAL MATTERS

Certain legal matters in connection with this offering relating to U.S. law will be passed upon for us by Cooley LLP, Boston, Massachusetts. The validity of the issuance of our common shares offered in this prospectus and certain other matters of Canadian law will be passed upon for us by Stikeman Elliott LLP, Montréal, Québec, Canada. Certain legal matters in connection with this offering will be passed upon for the underwriters by Goodwin Procter LLP, Boston, Massachusetts, with respect to U.S. law.

EXPERTS

The consolidated financial statements of Repare Therapeutics Inc. at December 31, 2018 and 2019 and for each of the three years in the period ended December 31, 2019, appearing in this prospectus have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon appearing elsewhere herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

SERVICE OF PROCESS AND ENFORCEMENT OF LIABILITIES

We are incorporated under the laws of Canada. Substantially all of our assets are located outside the United States. In addition, several of our directors and officers are nationals and/or residents of countries other than the United States, and all or a substantial portion of such persons' assets may be located outside the United States. As a result, it may be difficult for investors to effect service of process within the United States upon us or such persons or to enforce against them or against us, judgments obtained in United States courts, including judgments predicated upon the civil liability provisions of the securities laws of the United States or any state thereof. In addition, investors should not assume that the courts of Canada (i) would enforce judgments of U.S. courts obtained in actions against us, our officers or directors, or other said persons, predicated upon the civil liability provisions of the U.S. federal securities laws or other laws of the United States or (ii) would enforce, in original actions, liabilities against us or such directors, officers or experts predicated upon the United States federal securities laws or any securities or other laws of any state or jurisdiction of the United States.

In addition, there is doubt as to the applicability of the civil liability provisions of U.S. federal securities law to original actions instituted in Canada. It may be difficult for an investor, or any other person or entity, to assert U.S. securities laws claims in original actions instituted in Canada.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1, including exhibits and schedules, under the Securities Act, with respect to the common shares being offered by this prospectus. This prospectus, which constitutes part of the registration statement, does not contain all of the information in the registration statement and its exhibits. For further information with respect to us and the common shares offered by this prospectus, we refer you to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

You may read our SEC filings, including this registration statement, over the Internet at the SEC's website at www.sec.gov. Upon the completion of this offering, we will be subject to the information reporting requirements of the Exchange Act and we will file reports, proxy statements and other information with the SEC. These reports, proxy statements and other information will be available on the website of the SEC referred to

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above. We also maintain a website at www.reparerx.com, at which, following the completion of this offering, you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on or accessible through our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only.

REPARE THERAPEUTICS INC.

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Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Repare Therapeutics Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Repare Therapeutics Inc. (the “Company”) as of December 31, 2018 and 2019, the related consolidated statements of operations and comprehensive loss, convertible preferred shares and shareholders’ deficit, and cash flows for each of the three years in the period ended December 31, 2019, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2018 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019 in conformity with U.S. generally accepted accounting principles.

Adoption of New Accounting Standard

As discussed in Note 2 to the consolidated financial statements, the Company changed its method of accounting for leases in 2019.

Basis for Opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP¹

We have served as the Company’s auditor since 2017.
Montréal, Canada
April 3, 2020

¹ CPA auditor, CA, public accountancy permit no. A113209

Repare Therapeutics Inc.
Consolidated Balance Sheets
(In thousands of U.S. dollars, except share data)

	As of December 31,	
	2018	2019
ASSETS		
Current assets:		
Cash	\$ 10,731	\$ 94,797
Research and development tax credits receivable	477	1,080
Other receivables	587	1,976
Prepaid expenses and other current assets	253	719
Total current assets	12,048	98,572
Property and equipment, net	1,652	2,390
Restricted cash	198	208
Operating lease right-of-use assets	—	1,034
Other assets	27	359
Deferred tax assets	—	132
TOTAL ASSETS	\$ 13,925	\$ 102,695
LIABILITIES, CONVERTIBLE PREFERRED SHARES AND SHAREHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	\$ 1,245	\$ 2,127
Accrued expenses and other current liabilities	660	1,276
Operating lease liability, current portion	—	625
Income tax payable	—	218
Total current liabilities	1,905	4,246
Tranche obligation	2,490	—
Operating lease liability, net of current portion	—	439
Deferred revenue	—	8,142
Other liabilities	41	—
TOTAL LIABILITIES	4,436	12,827
Commitments and Contingencies (note 15)		
Series A convertible Preferred Shares, no par value per share; unlimited shares authorized as of December 31, 2018 and 2019; 41,302,469 shares and 67,228,395 shares issued and outstanding as of December 31, 2018 and 2019, respectively; liquidation and redemption value of \$31,750 and \$52,750 as of December 31, 2018 and 2019, respectively.	31,873	53,749
Series B convertible Preferred Shares, no par value per share; 0 shares and unlimited shares authorized as of December 31, 2018, and 2019, respectively; 0 shares and 63,458,580 shares issued and outstanding as of December 31, 2018 and 2019, respectively; liquidation and redemption value of \$0 and \$82,496 as of December 31, 2018 and 2019, respectively	—	82,248
TOTAL CONVERTIBLE PREFERRED SHARES	31,873	135,997
SHAREHOLDERS' DEFICIT:		
Common shares, no par value per share; unlimited shares authorized as of December 31, 2018 and 2019; 9,265,000 shares issued and outstanding as of December 31, 2018, and 2019.	1	1
Additional paid-in capital	340	3,811
Accumulated deficit	(22,725)	(49,941)
TOTAL SHAREHOLDERS' DEFICIT	(22,384)	(46,129)
TOTAL LIABILITIES, CONVERTIBLE PREFERRED SHARES AND SHAREHOLDERS' DEFICIT	\$ 13,925	\$ 102,695

The accompanying notes are an integral part of these consolidated financial statements

Repare Therapeutics Inc.
Consolidated Statements of Operations and Comprehensive Loss
(In thousands of U.S. dollars, except share and per share data)

	Year Ended December 31,		
	2017	2018	2019
Operating expenses:			
Research and development, net of tax credits	\$ 4,401	\$ 9,906	\$ 20,995
General and administrative	1,774	2,914	5,382
Total operating expenses	<u>6,175</u>	<u>12,820</u>	<u>26,377</u>
Loss from operations	<u>(6,175)</u>	<u>(12,820)</u>	<u>(26,377)</u>
Other (expense) income, net			
Realized and unrealized (loss) gain on foreign exchange	(147)	(292)	712
Change in fair value of convertible notes	(1,615)	—	—
Change in fair value of Series A Preferred Share tranche obligation	180	(1,130)	(1,350)
Other expense	(39)	(6)	(6)
Total other expense, net	<u>(1,621)</u>	<u>(1,428)</u>	<u>(644)</u>
Loss before income taxes	<u>(7,796)</u>	<u>(14,248)</u>	<u>(27,021)</u>
Income tax expense	—	(35)	(195)
Net loss and comprehensive loss	<u>\$ (7,796)</u>	<u>\$ (14,283)</u>	<u>\$ (27,216)</u>
Net loss attributable to common shareholders—basic and diluted	<u>\$ (7,796)</u>	<u>\$ (14,283)</u>	<u>\$ (27,216)</u>
Net loss per share attributable to common shareholders—basic and diluted	<u>\$ (0.84)</u>	<u>\$ (1.54)</u>	<u>\$ (2.94)</u>
Weighted-average common shares outstanding—basic and diluted	<u>9,229,658</u>	<u>9,265,000</u>	<u>9,265,000</u>
Pro forma net loss per share attributable to common shareholders—basic and diluted (unaudited)			<u>\$ (0.27)</u>
Pro forma weighted-average common shares outstanding—basic and diluted (unaudited)			<u>95,722,801</u>

The accompanying notes are an integral part of these consolidated financial statements

Repare Therapeutics Inc.
Consolidated Statements of Convertible Preferred Shares and Shareholders' Deficit
(In thousands of U.S. dollars, except share data)

	Convertible Preferred Shares				Common Shares		Additional Paid-in Capital	Accumulated Deficit	Total Shareholders' Deficit
	Series A		Series B		Shares	Amount			
	Shares	Amount	Shares	Amount					
Balance, January 1, 2017	—	\$ —	—	\$ —	8,665,000	\$ 1	\$ —	\$ (646)	\$ (645)
Issuance of Series A convertible Preferred Shares, net of issuance costs of \$42	41,302,469	31,873	—	—	—	—	—	—	—
Issuance of common shares	—	—	—	—	600,000	—	—	—	—
Share-based compensation expense	—	—	—	—	—	—	34	—	34
Net loss and comprehensive loss	—	—	—	—	—	—	—	(7,796)	(7,796)
Balance, December 31, 2017	<u>41,302,469</u>	<u>\$31,873</u>	<u>—</u>	<u>\$ —</u>	<u>9,265,000</u>	<u>\$ 1</u>	<u>\$ 34</u>	<u>\$ (8,442)</u>	<u>\$ (8,407)</u>
Share-based compensation expense	—	—	—	—	—	—	306	—	306
Net loss and comprehensive loss	—	—	—	—	—	—	—	(14,283)	(14,283)
Balance, December 31, 2018	<u>41,302,469</u>	<u>\$31,873</u>	<u>—</u>	<u>\$ —</u>	<u>9,265,000</u>	<u>\$ 1</u>	<u>\$ 340</u>	<u>\$ (22,725)</u>	<u>\$ (22,384)</u>
Issuance of Series A convertible Preferred Shares, net of issuance costs of \$5	25,925,926	21,876	—	—	—	—	—	—	—
Series A Tranche 3 termination	—	—	—	—	—	—	2,960	—	2,960
Issuance of Series B convertible Preferred Shares, net of issuance costs of \$248	—	—	63,458,580	82,248	—	—	—	—	—
Share-based compensation expense	—	—	—	—	—	—	511	—	511
Net loss and comprehensive loss	—	—	—	—	—	—	—	(27,216)	(27,216)
Balance, December 31, 2019	<u>67,228,395</u>	<u>\$53,749</u>	<u>63,458,580</u>	<u>\$82,248</u>	<u>9,265,000</u>	<u>\$ 1</u>	<u>\$ 3,811</u>	<u>\$ (49,941)</u>	<u>\$ (46,129)</u>

The accompanying notes are an integral part of these consolidated financial statements

Repare Therapeutics Inc.
Consolidated Statements of Cash Flows
(In thousands of U.S. dollars)

	Year Ended December 31,		
	2017	2018	2019
Cash Flows From Operating Activities:			
Net loss and comprehensive loss for the year	\$ (7,796)	\$ (14,283)	\$ (27,216)
Adjustments to reconcile net loss to net cash used in operating activities:			
Share-based compensation expense	34	306	511
Depreciation expense	102	407	605
Change in fair value of Series A Preferred Shares tranche obligation	(180)	1,130	1,350
Change in fair value of convertible notes	1,605	—	—
Non-cash lease expense	—	—	362
Foreign exchange (gain) loss	(11)	306	(629)
Changes in operating assets and liabilities:			
Prepaid expenses and other current assets	(186)	(60)	(466)
Research and development tax credits receivable	(162)	(330)	(566)
Other receivables	(447)	(155)	(1,347)
Other non-current assets	(29)	2	(464)
Accounts payable	730	10	833
Accrued expenses and other current liabilities	272	69	611
Income tax payable	—	—	218
Operating lease liability, current portion	—	—	21
Operating lease liability, net of current portion	—	—	(394)
Deferred revenue	—	—	8,142
Other liabilities	61	(20)	—
Net cash used in operating activities	(6,007)	(12,618)	(18,429)
Cash Flows From Investing Activities:			
Purchase of property and equipment	(1,156)	(583)	(1,304)
Net cash used in investing activities	(1,156)	(583)	(1,304)
Cash Flows From Financing Activities:			
Proceeds from issuance of Series A Preferred Shares, net	28,958	—	20,995
Proceeds from issuance of Series B Preferred Shares, net	—	—	82,248
Proceeds from issuance of convertible notes	1,500	—	—
Net cash provided by financing activities	30,458	—	103,243
Effect of exchange rate fluctuations on cash held	7	(259)	566
Net Decrease In Cash And Restricted Cash	23,302	(13,460)	84,076
Cash and restricted cash at beginning of year	1,087	24,389	10,929
Cash and restricted cash at end of year	<u>\$24,389</u>	<u>\$ 10,929</u>	<u>\$ 95,005</u>
Reconciliation Of Cash And Restricted Cash			
Cash	24,281	\$ 10,731	\$ 94,797
Restricted cash	108	198	208
Total cash and restricted cash	<u>\$24,389</u>	<u>\$ 10,929</u>	<u>\$ 95,005</u>
Supplemental Disclosure Of Cash Flow Information:			
Property and equipment purchases in accounts payable	\$ 262	\$ 159	\$ 40
Conversion of convertible notes to Series A Preferred Shares	<u>\$ 4,455</u>	<u>\$ —</u>	<u>\$ —</u>
Right-of-use assets obtained in exchange for operating lease obligation	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 1,074</u>

The accompanying notes are an integral part of these consolidated financial statements

REPARE THERAPEUTICS INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Amounts in thousands, except share and per share amounts)

1. Organization and Nature of Business

Repare Therapeutics Inc. (“Repare” or the “Company”) is a precision medicine oncology company focused on the development of synthetic lethality-based therapies to patients with cancer. The Company was incorporated under the *Canada Business Corporations Act* on September 6, 2016.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements have been prepared in conformity with generally accepted accounting principles in the United States of America (“U.S. GAAP”). Any reference in these notes to applicable guidance is meant to refer to the authoritative U.S. GAAP as found in the Accounting Standards Codification (“ASC”) and as amended by Accounting Standards Updates (“ASU”) of the Financial Accounting Standards Board (“FASB”).

Principles of Consolidation

The accompanying consolidated financial statements of the Company include the accounts of the Company and its wholly-owned subsidiary, Repare Therapeutics USA Inc. (“Repare USA”), which was incorporated under the laws of Delaware on June 1, 2017. The financial statements of Repare USA are prepared for the same reporting period as the parent company, using consistent accounting policies. All intra-group transactions, balances, incomes and expenses are eliminated in full upon consolidation.

Foreign Currencies

The functional currency for the Company and Repare USA is the U.S. dollar (“USD”). Accordingly, transactions denominated in currencies other than the functional currency are measured and recorded in the functional currency at the exchange rate in effect on the date of the transactions. At each consolidated balance sheet date, monetary assets and liabilities denominated in currencies other than the functional currency are remeasured using the exchange rate in effect at that date. Non-monetary assets and liabilities and revenue and expense items denominated in foreign currencies are translated into the functional currency using the exchange rate prevailing at the dates of the respective transactions. Any gains or losses arising on remeasurement are included in the consolidated statement of operations.

Segment Information

The Company manages its operations as a single operating segment for the purposes of assessing performance and making operating decisions. The Company’s singular focus is the research, development and commercialization of precision oncology drugs targeting specific vulnerabilities of tumors in genetically defined patient populations.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in consolidated financial statements and accompanying notes. Significant estimates and assumptions reflected in these consolidated financial statements include, but are not limited to, accrued research and development expenses, share-based compensation and the measurement of the fair value of the Company’s Series A Preferred Share Tranche Obligation (as defined in

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Note 3). Estimates are periodically reviewed in light of changes in circumstances, facts and experience. Changes in estimates are recorded in the period in which they become known. Actual results could differ from those estimates.

Restricted Cash

As of December 31, 2018 and 2019, restricted cash consisted of \$198 and \$208, respectively, used to secure a letter of credit denominated in a foreign currency for the benefit of the landlord in connection with one of the Company's lease agreements (Note 7).

Concentrations of Credit Risk and Off-Balance Sheet Risk

Financial instruments that potentially expose the Company to concentrations of credit risk consist primarily of cash. The Company maintains deposits in accredited financial institutions which may periodically exceed insured limits. The Company deposits its cash in financial institutions that it believes have high credit quality and has not experienced any losses on such accounts and does not believe it is exposed to any unusual credit risk beyond the normal credit risk associated with commercial banking relationships.

The Company's exposure to foreign exchange risk is primarily related to fluctuations between the Canadian dollar and the USD. There are balances in Canadian dollars which are subject to foreign currency fluctuations relating to the impact of translating to USD for financial statement presentation.

As of December 31, 2018 and 2019, the Company had no significant off-balance sheet risk, such as foreign exchange contracts, option contracts or other foreign hedging arrangements.

Comprehensive Loss

Comprehensive loss includes net loss as well as other changes in shareholders' deficit that result from transactions and economic events other than those with shareholders. For each of the years ended December 31, 2017, 2018 and 2019, comprehensive loss was equal to net loss.

Fair Value Measurements

Certain assets and liabilities of the Company are carried at fair value under U.S. GAAP. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. Financial assets and liabilities carried at fair value are to be classified and disclosed in one of the following three levels of the fair value hierarchy, of which the first two are considered observable and the last is considered unobservable:

- Level 1 – Quoted prices in active markets for identical assets or liabilities.
- Level 2 – Observable inputs (other than Level 1 quoted prices), such as quoted prices in active markets for similar assets or liabilities, quoted prices in markets that are not active for identical or similar assets or liabilities, or other inputs that are observable or can be corroborated by observable market data.
- Level 3 – Unobservable inputs that are supported by little or no market activity that are significant to determining the fair value of the assets or liabilities, including pricing models, discounted cash flow methodologies and similar techniques.

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To the extent that the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. Financial assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement.

An entity may choose to measure financial instruments and certain other items at fair value at specified election dates. Subsequent unrealized gains and losses on items for which the fair value option has been elected will be reported in earnings.

The estimated fair values of the Company's cash, restricted cash, other assets, accounts payable and accrued expenses and other current liabilities approximate their carrying values.

The Company's Series A Preferred Share Tranche Obligation liabilities are carried at fair value, determined according to Level 3 inputs in the fair value hierarchy described above. In January 2019, in connection with the closing of the second tranche of Series A Preferred Shares, the liability related to the Series A second tranche obligation was settled. In September 2019, in connection with the Company's issuance and sale of Series B Preferred Shares, the liability related to the Series A third tranche obligation was terminated (Notes 3 and 8).

Property and Equipment, Net

Property and equipment is stated at historical cost, net of accumulated depreciation. Depreciation is calculated using the straight-line method over the estimated useful lives of the assets, which are as follows:

<u>Asset Category</u>	<u>Estimated Useful Lives</u>
Computer equipment	3 years
Office equipment	5 years
Laboratory equipment	5 years
Leasehold improvements	the shorter of the lease term and the useful life

When assets are retired or disposed of, the assets and related accumulated depreciation are derecognized from the accounts, and any resulting gain or loss is included in the determination of net loss. Expenditures for maintenance and repairs are recorded to expense as incurred.

Impairment of Long-Lived Assets

The Company evaluates its finite-lived intangible assets for impairment whenever events or changes in circumstances indicate that the carrying value of assets may not be recoverable. Recoverability of these assets is measured by comparing their carrying value to the future net undiscounted cash flows the assets are expected to generate over their remaining economic life. If such assets are considered impaired, the impairment to be recognized is measured by the amount by which the carrying value of the assets exceeds their fair value. Indefinite-lived intangible assets are tested for impairment annually, or more frequently if indicators of impairment are present. To date, no such impairment losses have been recorded.

Fair Value Option for Convertible Notes

The Company elected the fair value option to account for its convertible notes issued during 2017 (the "Convertible Notes"). The Company recorded the Convertible Notes at fair value and subsequently remeasured

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them to fair value at each reporting date. Changes in fair value were recognized as a component of other income (expense), net in the consolidated statements of operations and comprehensive loss. As a result of applying the fair value option, direct costs and fees related to the Convertible Notes were recognized in earnings as incurred and not deferred.

Leases

Effective January 1, 2019, the Company elected to early adopt ASU No. 2016-02, Leases (Topic 842), (“ASU No. 2016-02” or “ASC 842”), using the modified retrospective approach and utilized the effective date as its date of initial application, with prior periods presented in accordance with the previous guidance under ASC 840, Leases (“ASC 840”).

At the inception of an arrangement, the Company determines whether the arrangement is or contains a lease based on the unique facts and circumstances present in the arrangement. Leases with a term greater than one year are recognized on the consolidated balance sheet as a right-of-use asset and current and non-current lease liabilities, as applicable.

Operating lease liabilities and their corresponding right-of-use assets are initially recorded based on the present value of lease payments over the expected remaining lease term. Certain adjustments to the right-of-use asset may be required for items such as incentives received. The interest rate implicit in lease contracts is typically not readily determinable. As a result, the Company utilizes its incremental borrowing rate to discount lease payments, which reflects the fixed rate at which the Company could borrow on a collateralized basis the amount of the lease payments in the same currency, for a similar term, in a similar economic environment. Prospectively, the Company will adjust the right-of-use assets for straight-line rent expense or any incentives received and remeasure the lease liability at the net present value using the same incremental borrowing rate that was in effect as of the lease commencement or transition date.

The Company has elected not to recognize leases with an original term of one year or less on the consolidated balance sheet. The Company typically only includes an initial lease term in its assessment of a lease arrangement. Options to renew a lease are not included in the Company’s assessment unless there is reasonable certainty that the Company will renew.

Assumptions made by the Company at the commencement date are re-evaluated upon occurrence of certain events, including a lease modification. A lease modification results in a separate contract when the modification grants the lessee an additional right of use not included in the original lease and when lease payments increase commensurate with the standalone price for the additional right of use. When a lease modification results in a separate contract, it is accounted for in the same manner as a new lease.

The Company elected the following practical expedients, which must be elected as a package and applied consistently to all of its leases at the transition date (including those for which the entity is a lessee or a lessor): i) the Company did not reassess whether any expired or existing contracts are or contain leases; ii) the Company did not reassess the lease classification for any expired or existing leases (that is, all existing leases that were classified as operating leases in accordance with ASC 840 are classified as operating leases, and all existing leases that were classified as capital leases in accordance with ASC 840 are classified as finance leases); and iii) the Company did not reassess initial direct costs for any existing leases.

For leases that existed prior to the date of initial application of ASC 842 (which were previously classified as operating leases), a lessee may elect to use either the total lease term measured at lease inception under ASC 840

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or the remaining lease term as of the date of initial application of ASC 842 in determining the period for which to measure its incremental borrowing rate. In transition to ASC 842, the Company utilized the remaining lease term of its leases in determining the appropriate incremental borrowing rates.

In accordance with ASC 842, components of a lease should be split into three categories: lease components, non-lease components and non-components. The fixed and in-substance fixed contract consideration (including any consideration related to non-components) must be allocated based on the respective relative fair values to the lease components and non-lease components.

Entities may elect not to separate lease and non-lease components. The Company has elected to account for lease and non-lease components together as a single lease component for all underlying assets and allocate all of the contract consideration to the lease component only.

Revenue Recognition

The Company recognizes revenue in accordance with ASC 606, Revenue from Contracts with Customers (“ASC 606”). This standard applies to all contracts with customers, except for contracts that are within the scope of other standards, such as leases, insurance, collaboration arrangements and financial instruments. Under ASC 606, an entity recognizes revenue when its customer obtains control of promised goods or services, in an amount that reflects the consideration which the entity expects to receive in exchange for those goods or services. To determine revenue recognition for arrangements that an entity determines are within the scope of ASC 606, the entity performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation. The Company only applies the five-step model to contracts when it is probable that the entity will collect the consideration it is entitled to in exchange for the goods or services it transfers to the customer. At contract inception, once the contract is determined to be within the scope of ASC 606, the Company assesses the goods or services promised within each contract and determines those that are performance obligations and assesses whether each promised good or service is distinct. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied.

The Company enters into collaboration and license agreements, which are within the scope of ASC 606, to discover, develop, manufacture and commercialize product candidates. The terms of these agreements typically contain multiple promises or obligations, which may include: (i) licenses to compounds directed to specific targets (referred to as “exclusive licenses”) and (ii) research and development activities to be performed on behalf of the collaboration partner related to the licensed targets. Payments to the Company under these agreements may include non-refundable license fees, customer option exercise fees, payments for research activities, reimbursement of certain costs, payments based upon the achievement of certain milestones and royalties on any resulting net product sales.

The Company first evaluates license and/or collaboration arrangements to determine whether the arrangement (or part of the arrangement) represents a collaborative arrangement pursuant to ASC 808, Collaborative Arrangements (“ASC 808”), based on the risks and rewards and activities of the parties pursuant to the contractual arrangement. The Company accounts for collaborative arrangements (or elements within the contract that are deemed part of a collaborative arrangement), which represent a collaborative relationship and not a customer relationship, outside the scope of ASC 606. The Company’s collaborations primarily represent revenue arrangements. For the arrangements or arrangement components that are subject to revenue accounting guidance,

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in determining the appropriate amount of revenue to be recognized as it fulfills its obligations under each of its agreements, the Company applies the five-step model. As part of the accounting for these arrangements, the Company must use significant judgment to determine: a) the number of performance obligations based on the determination under step (ii) above and whether those performance obligations are distinct from other performance obligations in the contract; b) the transaction price under step (iii) above; and c) the stand-alone selling price for each performance obligation identified in the contract for the allocation of transaction price in step (iv) above. The Company uses judgment to determine whether milestones or other variable consideration, except for sales-based royalties, should be included in the transaction price as described further below. The transaction price is allocated to each performance obligation on a relative stand-alone selling price basis, for which the Company recognizes revenue as or when the performance obligations under the contract are satisfied. In determining the stand-alone selling price of a license to the Company's proprietary technology or a material right provided by a customer option, the Company considers market conditions as well as entity-specific factors, including those factors contemplated in negotiating the agreements as well as internally developed estimates that include assumptions related to the market opportunity, estimated development costs, probability of success and the time needed to commercialize a product candidate pursuant to the license. In validating its estimated stand-alone selling price, the Company evaluates whether changes in the key assumptions used to determine its estimated stand-alone selling price will have a significant effect on the allocation of arrangement consideration between performance obligations.

Amounts received prior to revenue recognition are recorded as deferred revenue. Amounts expected to be recognized as revenue within one year following the balance sheet date are classified as current portion of deferred revenue in the accompanying consolidated balance sheets. Amounts not expected to be recognized as revenue within one year following the balance sheet date are classified as deferred revenue, net of current portion. Amounts recognized as revenue, but not yet received or invoiced are generally recognized as contract assets.

Exclusive Licenses – If the license to the Company's intellectual property is determined to be distinct from the other promises or performance obligations identified in the arrangement, which generally include research and development services, the Company recognizes revenue from non-refundable, upfront fees allocated to the license when the license is transferred to the customer and the customer is able to use and benefit from the license. In assessing whether a license is distinct from the other promises, the Company considers relevant facts and circumstances of each arrangement, including the research and development capabilities of the collaboration partner and the availability of the associated expertise in the general marketplace. In addition, the Company considers whether the collaboration partner can benefit from the license for its intended purpose without the receipt of the remaining promises, whether the value of the license is dependent on the unsatisfied promises, whether there are other vendors that could provide the remaining promises and whether it is separately identifiable from the remaining promises. For licenses that are combined with other promises, the Company utilizes judgment to assess the nature of the combined performance obligation and whether the license is the predominant promise within the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time and, if over time, the appropriate method of measuring progress for purposes of recognizing revenue. If the license is the predominant promise, and it is determined that the license represents functional intellectual property ("IP"), revenue is recognized at the point in time when control of the license is transferred. If it is determined that the license does not represent functional IP, revenue is recognized over time using an appropriate method of measuring progress.

Research and Development Services – The obligations under the Company's collaboration and license agreements generally include research and development services to be performed by the Company to benefit the collaboration partner. For performance obligations that include research and development services, the Company

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generally recognizes revenue allocated to such performance obligations based on an appropriate measure of progress. The Company utilizes judgment to determine the appropriate method of measuring progress for purposes of recognizing revenue, which is generally an input measure such as costs incurred. The Company evaluates the measure of progress each reporting period and, if necessary, adjusts the measure of performance and related revenue recognition. The measure of progress, and thereby periods of which revenue should be recognized, are subject to estimates by management and may change over the course of the contract. Reimbursements from the partner that are the result of a collaborative relationship with the partner, instead of a customer relationship, such as co-development activities, are recorded as a reduction to research and development expense.

Customer Options – The Company’s arrangements may provide a collaborator with the right to acquire additional goods or services in the future. Under these agreements, fees may be due to the Company (i) at the inception of the arrangement as an upfront fee or payment or (ii) upon the exercise of the customer option. If an arrangement is determined to contain customer options that allow the customer to acquire additional goods or services, the goods and services underlying the customer options are not considered to be performance obligations at the outset of the arrangement, as they are contingent upon option exercise. The Company evaluates the customer options for material rights, or options to acquire additional goods or services for free or at a discount. If the customer options are determined to represent a material right, the material right is recognized as a separate performance obligation at the inception of the arrangement. The Company allocates the transaction price to material rights based on the relative stand-alone selling price, which is determined based on the identified discount and the probability that the customer will exercise the option. Amounts allocated to a material right are not recognized as revenue until, at the earliest, the option is exercised or expires.

Milestone Payments – At the inception of each arrangement that includes development milestone payments, the Company evaluates whether the milestones are considered probable of being achieved and estimates the amount to be included in the transaction price using the most likely amount method. If it is probable that a significant revenue reversal would not occur, the associated milestone value is included in the transaction price. Milestone payments that are not within the control of the Company or the licensee, such as regulatory approvals, are not considered probable of being achieved until those approvals are received. The Company evaluates factors such as the scientific, clinical, regulatory, commercial and other risks that must be overcome to achieve the particular milestone in making this assessment. There is considerable judgment involved in determining whether it is probable that a significant revenue reversal would not occur. At the end of each subsequent reporting period, the Company reevaluates the probability of achievement of all milestones subject to constraint and, if necessary, adjusts its estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis, which would affect revenues and earnings in the period of adjustment. If a milestone or other variable consideration relates specifically to the Company’s efforts to satisfy a single performance obligation or to a specific outcome from satisfying the performance obligation, the Company generally allocates the milestone amount entirely to that performance obligation once it is probable that a significant revenue reversal would not occur.

Royalties – For arrangements that include sales-based royalties, including milestone payments based on a level of sales, and the license is deemed to be the predominant item to which the royalties relate, the Company recognizes revenue at the later of (i) when the related sales occur or (ii) when the performance obligation to which some or all of the royalty has been allocated has been satisfied (or partially satisfied). To date, the Company has not recognized any royalty revenue resulting from any of its licensing arrangements.

For a complete discussion of accounting for collaboration revenues, see Note 10.

REPARE THERAPEUTICS INC.
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Research and Development Expenses

Research and development costs are expensed as incurred. The Company's research and development expenses consist primarily of costs incurred in performing research and development activities, including salaries and other compensation, share-based compensation, fees paid to external service providers, laboratory supplies and costs for facilities and equipment, partially offset by fully-refundable research and development tax credits. Non-refundable prepayments for goods or services that will be used or rendered for future research and development activities are deferred and capitalized. Such amounts are expensed as the goods are delivered or the services are performed, or until it is no longer expected that the goods will be delivered or the services rendered.

Accrued Research and Development Expenses

The Company has entered into various research and development contracts. The payments to these agreements are recorded as research and development expenses as incurred. The Company records accrued liabilities for estimated ongoing research costs. When evaluating the adequacy of the accrued liabilities, the Company analyzes progress of the studies, including the phase or completion of events, invoices received and contracted costs. Significant judgements and estimates are made in determining the accrued balances at the end of any reporting period. Actual results could differ from the Company's estimates.

Share-Based compensation

The Company accounts for all share-based awards granted to employees and non-employees as share-based compensation expense at fair value.

The Company engages an independent valuation firm to determine the fair value of the underlying common shares. The independent valuation firm uses valuation techniques and methods that comply with guidance provided by the American Institute of Certified Public Accountants in its Accounting & Valuation Guide. Each valuation methodology includes estimates and assumptions that require the Company's judgment. These estimates and assumptions include a number of objective and subjective factors in determining the value of the Company's common shares at each grant date, including: (1) prices paid for the Company's convertible preferred shares, which the Company has sold to outside investors in arm's-length transactions, and the rights, preferences and privileges of the Company's convertible preferred shares and common shares; (2) valuations performed by an independent valuation specialist; (3) the Company's stage of development; (4) the fact that grants of share-based awards involved illiquid securities in a private company; and (5) the likelihood of achieving a liquidity event for the common shares underlying the share-based awards, such as an initial public offering or sale of the Company, given prevailing market conditions.

The measurement date for employee and non-employee awards is the date of grant, and share-based compensation costs are recognized over the employees' requisite service period, which is the vesting period, on a straight-line basis.

The fair value of each stock option grant is estimated on the date of grant using the Black-Scholes option-pricing model, which requires inputs based on certain subjective assumptions, including the expected share price volatility, the expected term of the option, the risk-free interest rate for a period that approximates the expected term of the option and the Company's expected dividend yield. As there is no public market for its common shares, the Company determines the volatility for awards granted based on an analysis of reported data for a group of guideline companies that issued options with substantially similar terms. The expected volatility has been determined using a weighted-average of the historical volatility measures of this group of guideline

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companies. The Company expects to continue to do so until such time as it has adequate historical data regarding the volatility of its own traded share price. The expected term of the Company's stock options granted to employees and non-employees has been determined utilizing the "simplified" method for awards that qualify as "plain-vanilla" options. In connection with the adoption of ASU No. 2018-07, Compensation—Stock Compensation ("ASU No. 2018-07"), the Company calculated the expected term of non-employee awards using the midpoint between the vesting date and the contractual term, which is consistent with the method used for employee awards. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve in effect at the time of grant of the award for time periods approximately equal to the expected term of the award. The Company has not paid, and does not anticipate paying, cash dividends on its common shares; therefore, the expected dividend yield is assumed to be zero.

Share-based compensation is classified in the accompanying consolidated statements of operations and comprehensive loss based on the function to which the related services are provided. Forfeitures are accounted for as they occur. Any consideration paid by employees on exercising stock options and the corresponding portion previously credited to additional paid-in capital are credited to share capital.

Classification of Convertible Preferred Shares

The Company's convertible preferred shares are classified outside of shareholders' deficit because the holders of such shares have liquidation rights in the event of a deemed liquidation that, in certain situations, are not solely within the control of the Company. The Company records convertible preferred shares at fair value upon issuance, net of any issuance costs or discounts.

Share Issuance Costs

Share issuance costs applicable to the issuance of equity instruments are recorded as a reduction of the financing equity proceeds.

Net Loss per Share and Unaudited Pro Forma Loss per Share

Basic net loss per share attributable to common shareholders is computed by dividing the net loss attributable to common shareholders by the weighted-average number of common shares outstanding during the reporting period, without consideration for potentially dilutive securities. Diluted net loss per share is computed by dividing the net loss attributable to common shareholders by the weighted-average number of common shares and potentially dilutive securities outstanding during the period determined using the treasury-stock and if-converted methods. For purposes of the diluted net loss per share calculation, convertible preferred shares and stock options considered to be potentially dilutive securities were excluded from the calculation of diluted net loss per share because their effect would be anti-dilutive and therefore, basic and diluted net loss per share were the same for all reporting periods presented.

Unaudited pro forma net loss per share attributable to common shareholders is computed using the weighted-average number of common shares outstanding after giving effect to the conversion of all outstanding convertible preferred shares into common shares as if such conversion had occurred on January 1, 2019, or the date of issuance, if later.

Income Taxes

The Company recognizes deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the Company's consolidated financial statements. Under this method, deferred tax

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assets and liabilities are determined based on differences between the consolidated financial statement carrying amounts and the tax bases of the assets and liabilities using the enacted tax rates in effect in the years in which the differences are expected to reverse. A valuation allowance against deferred tax assets is recorded if, based on the weight of the available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

The Company accounts for uncertainty in income taxes recognized in the financial statements by applying a two-step process to determine the amount of tax benefit to be recognized. First, the tax position must be evaluated to determine the likelihood that it will be sustained upon external examination by the taxing authorities. If the tax position is deemed more-likely-than-not to be sustained, the tax position is then assessed to determine the amount of benefit to recognize in the financial statements. The amount of benefit that may be recognized is the largest amount that has a greater than 50% likelihood of being realized upon ultimate settlement. The provision for income taxes includes the effects of any resulting tax reserves, or unrecognized tax benefits, that are considered appropriate as well as the related net interest and penalties.

Research and Development Tax Credits

The Company recognizes the benefit of refundable Canadian research and development tax credits as a reduction of research and development costs when there is reasonable assurance that the amount claimed will be recovered.

Emerging Growth Company Status

The Company is an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act, or JOBS Act, and may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies. Section 107 of the JOBS Act provides that an emerging growth company can take advantage of the extended transition period afforded by the JOBS Act for the implementation of new or revised accounting standards. The Company has elected to use the extended transition period for complying with new or revised accounting standards and as a result of this election, its consolidated financial statements may not be comparable to companies that comply with public company effective dates. The Company may take advantage of these exemptions up until the last day of the fiscal year following the fifth anniversary of an initial public offering or such earlier time that it is no longer an emerging growth company.

Recently Adopted Accounting Pronouncements

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers (Topic 606) (“ASU No. 2014-09”), which modifies how all entities recognize revenue, and consolidates into one ASC (ASC 606) the current guidance found in ASC Topic 605, and various other revenue accounting standards for specialized transactions and industries. ASU No. 2014-09 outlines a comprehensive five-step revenue recognition model based on the principle that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. ASU No. 2014-09 may be applied using either a full retrospective approach, under which all years included in the consolidated financial statements will be presented under the revised guidance, or a modified retrospective approach, under which consolidated financial statements will be prepared under the revised guidance for the year of adoption, but not for prior years. The Company elected to early adopt this pronouncement as of January 1, 2017. The adoption of ASU No. 2014-09 had no impact on its consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, which requires an entity to recognize assets and liabilities arising from a lease for both financing and operating leases on their balance sheet date. In July 2018, an

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amendment was made that allows companies the option of using the effective date of the new standard as the initial application date (at the beginning of the period in which the new standard is adopted, rather than at the beginning of the earliest comparative period). This update includes a short-term lease exception for leases with a term of 12 months or less, in which a lessee can make an accounting policy election not to recognize the associated lease assets and lease liabilities on its balance sheet. Additionally, in March 2019, the FASB issued ASU No. 2019-01, Leases (Topic 842): Codification Improvements (“ASU No. 2019-01”). ASU No. 2019-01 clarifies the transition guidance related to interim disclosures provided in the year of adoption. Lessees will continue to differentiate between finance leases (previously referred to as capital leases) and operating leases, using classification criteria that are substantially similar to the previous guidance. For lessees, the recognition, measurement and presentation of expenses and cash flows arising from a lease did not significantly change from previous U.S. GAAP. The modified retrospective method includes several optional practical expedients that entities may elect to apply, as well as transition guidance specific to nonstandard leasing transactions. The Company elected to early adopt Topic 842 on January 1, 2019 using a cumulative-effect adjustment on the effective date of the standard, for which comparative periods are presented in accordance with the previous guidance under ASC 840.

In adopting ASC 842, the Company elected to utilize the available package of practical expedients permitted under the transition guidance within the new standard, which does not require the reassessment of the following: i) whether existing or expired arrangements are or contain a lease, ii) the lease classification of existing or expired leases, and iii) whether previous initial direct costs would qualify for capitalization under the new lease standard. Additionally, the Company made an accounting policy election to keep leases with a term of 12 months or less off its consolidated balance sheet.

Adoption of this standard resulted in the recording of operating lease liabilities and right-of-use assets of \$306 and \$347, respectively, on the Company’s consolidated balance sheet on the effective date. The adoption of the standard did not have a material effect on the Company’s consolidated statements of operations and comprehensive loss, consolidated statements of cash flows or accumulated deficit. Refer to Note 7 for right-of-use asset and liabilities recorded during the year ended December 31, 2019.

In August 2016, the FASB issued ASU No. 2016-15, Statement of Cash Flows: Classification of Certain Cash Receipts and Cash Payments (“ASU No. 2016-15”), to address diversity in practice in how certain cash receipts and cash payments are presented and classified in the consolidated statement of cash flows. The Company elected to early adopt ASU No. 2016-15 as of January 1, 2019. The adoption of ASU No. 2016-15 did not have a material impact on its consolidated financial statements.

In November 2016, FASB issued ASU No. 2016-18, Statements of Cash Flows (Topic 230): Restricted Cash (“ASU No. 2016-18”). The Amendments in ASU No. 2016-18 require that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of period total amounts shown on the statement of cash flows. The Company elected to early adopt ASU No. 2016-18 as of January 1, 2017. The adoption of ASU No. 2016-18 did not have a material impact on its consolidated financial statements.

In May 2017, the FASB issued ASU No. 2017-09, Compensation—Stock Compensation (Topic 718): Scope of Modification Accounting (“ASU No. 2017-09”), which clarifies when to account for a change to the terms or conditions of a share-based payment award as a modification. Under the new guidance, modification accounting is required only if the fair value, the vesting conditions, or the classification of the award (as equity or liability)

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changes as a result of the change in terms or conditions. The standard is effective for annual periods beginning after December 15, 2017. Early adoption is permitted, including adoption in any interim period, for (1) public business entities for reporting periods for which financial statements have not yet been issued and (2) all other entities for reporting periods for which financial statements have not yet been made available for issuance. The Company elected to early adopt ASU No. 2017-09 as of January 1, 2017. The adoption of ASU No. 2017-09 had no impact on its consolidated financial statements.

In June 2018, the FASB issued ASU No. 2018-07, which aligns the measurement and classification guidance for share-based payments to non-employees with that for employees, with certain exceptions. It expands the scope of ASC 718 to include share-based payments granted to non-employees in exchange for goods or services used or consumed in the entity's own operations and supersedes the guidance in ASC 505-50. ASU No. 2018-07 retains the existing cost attribution guidance, which requires entities to recognize compensation cost for non-employee awards in the same period and in the same manner (i.e., capitalize or expense) they would if they paid cash for the goods or services, but it moves the guidance to ASC 718. The guidance also allows nonpublic entities to account for non-employee awards using certain practical expedients that are already available for employee awards, but the same accounting policies must be used for awards to both employees and non-employees. ASU No. 2018-07 is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption is permitted. The Company elected to early adopt ASU No. 2018-07 as of January 1, 2017. The adoption of ASU No. 2018-07 did not have an impact on the Company's consolidated financial statements as the Company had not yet granted any non-employee awards.

Recently Issued Accounting Pronouncements

In December 2019, the FASB issued ASU No. 2019-12, Income Taxes-Simplifying the Accounting for Income Taxes ("ASU No. 2019-12"). ASU No. 2019-12 eliminates certain exceptions related to the approach for intra-period tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. The new guidance also simplifies aspects of the accounting for franchise taxes and enacted changes in tax laws or rates and clarifies the accounting for transactions that result in a step-up in the tax basis of goodwill. For public entities, ASU No. 2019-12 is effective for annual periods beginning after December 15, 2020, including interim periods within. For all other entities, this pronouncement is effective for fiscal years beginning after December 15, 2021, including interim periods within fiscal years beginning after December 15, 2022. Early adoption is permitted for all entities. Adoption of the standard requires certain changes to be made prospectively, with some changes to be made retrospectively. The Company is currently assessing the impact of this standard on its financial condition and results of operations.

3. Fair Value Measurements

The following table presents information about the Company's financial assets and liabilities measured at fair value on a recurring basis and indicates the level of the fair value hierarchy utilized to determine such fair values as of December 31, 2018:

<u>Description</u>	<u>December 31, 2018</u>	<u>Quoted Prices in Active Markets for Identical Assets (Level 1)</u>	<u>Significant Other Observable Inputs (Level 2)</u>	<u>Significant Other Observable Inputs (Level 3)</u>
Liabilities				
Series A Preferred Share Tranche Obligation	\$ 2,490	\$ —	\$ —	\$ 2,490
Total financial liabilities	\$ 2,490	\$ —	\$ —	\$ 2,490

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During the year ended December 31, 2018, there were no transfers between fair value measure levels. The Company's Series A Preferred Share Tranche Obligation is carried at fair value measured using Level 3 inputs in the fair value hierarchy as described above. In connection with the Company's issuance and sale of Series B Preferred Shares in September 2019, the Series A Preferred Share Tranche Obligation was terminated.

The Company had no financial assets and liabilities carried at fair value as of December 31, 2019.

Series A Preferred Share Tranche Obligation

The Company determined that its obligation to issue, and the Company's investors' obligation to purchase, additional Series A Preferred Shares at a fixed price (i.e., the issuance price) in subsequent tranches following the initial closing of the Series A Preferred Share financing represented a freestanding financial instrument, the Series A Preferred Share Tranche Obligation. The freestanding financial instrument was classified as an asset or liability on the Company's consolidated balance sheets and initially recorded at fair value, with changes in fair value for each reporting period recognized in other income (expense), net in the consolidated statements of operations and comprehensive loss (Note 8).

In connection with the Company's issuance of the Series A Preferred Shares in June 2017 (Note 8), the Company recognized the Series A Preferred Share Tranche Obligation at the initial fair value which was determined based on significant inputs not observable in the market, which represents a Level 3 measurement within the fair value hierarchy. The fair value of the obligation was estimated based on results of a third-party valuation. This obligation is remeasured prior to the issuance of subsequent tranches and at each subsequent reporting period. As such, the proceeds from the Series A Preferred Share financing were allocated between the Series A Preferred Share Tranche Obligation and Series A Preferred Shares using the residual method, with the Series A Preferred Share Tranche Obligation being recorded at its fair value and the Series A Preferred Shares at the residual value.

Each tranche obligation is valued as a forward contract. The values were determined using a probability-weighted present value calculation. In determining the fair values of the tranche obligations, estimates and assumptions impacting fair value included the estimated future values of the Company's Series A Preferred Shares, discount rates, estimated time to liquidity and probability of each tranche closing. The Company determined the per share future value of the Series A Preferred Shares by back-solving to the initial proceeds of the Series A Preferred Share financing. The Company remeasured each tranche obligation at each reporting period and prior to settlement. The following reflects the significant quantitative inputs used in the valuation of the Series A Preferred Share Tranche Obligation:

	December 31,	
	2017	2018
Estimated future value of Series A Preferred Shares	\$ 0.80	\$ 0.90
Discount rate	30.00%	25.00%
Time to liquidity (years)	4.00	2.50
Probability of tranche closing	90% – 95%	90% – 99%

A change in the assumptions related to the valuation of the Series A Preferred Share Tranche Obligation could have a significant impact on the value of the obligation.

The Company recorded other income of \$180 and other expense of \$1,130 and \$1,350 for changes in the fair value of the Series A Preferred Share Tranche Obligation in the consolidated statements of operations and comprehensive loss for the years ended December 31, 2017, 2018 and 2019, respectively.

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Convertible Notes

The Company elected the fair value option to account for its Convertible Notes issued during 2016 and 2017. The fair value of the Convertible Notes was determined based on significant inputs not observable in the market, which represents a Level 3 measurement within the fair value hierarchy.

The Company determined the fair value of the Convertible Notes based on the proceeds received for the Convertible Notes, the terms of the Convertible Notes, including the rate at which the notes convert into qualified equity financing securities, the probability and timing of a qualified equity financing and the fair value of the underlying preferred shares. Estimates and assumptions impacting the fair value measurement include the probability of a qualified equity financing as defined in the convertible notes agreement, the expected timing of such event and the then fair value of the Company's Series A Preferred Shares. The Company estimated the probability and timing of the qualified equity financing based on management's assumptions and knowledge of specified events at issuance and as of each reporting date. The Company determined the fair value per share of the Series A Preferred Shares as described above.

In June 2017, in connection with the Company's issuance and sale of Series A Preferred Shares, the outstanding principal under the Convertible Notes was automatically converted into shares of Series A Preferred Shares and the Convertible Notes liability was extinguished. The Company recorded other expense of \$1,615 for changes in the fair value of the Convertible Notes in the consolidated statements of operations and comprehensive loss for the year ended December 31, 2017.

The following table provides a roll forward of the aggregate fair value of the Company's Series A Preferred Share Tranche Obligation and Convertible Notes, for which fair value was determined using Level 3 inputs:

	Series A Preferred Share Tranche Obligation	Convertible Notes
Balance as of January 1, 2017	\$ —	\$ 1,350
Issuance of obligation	1,540	1,500
Change in fair value plus accrued interest	(180)	1,650
Settlement of obligation	—	(4,455)
Accrued interest to accounts payable	—	(45)
Balance as of December 31, 2017	<u>\$ 1,360</u>	<u>\$ —</u>
Change in fair value	1,130	
Balance as of December 31, 2018	<u>\$ 2,490</u>	
Change in fair value	1,350	
Tranche 2 settlement of obligation	(880)	
Tranche 3 termination	(2,960)	
Balance as of December 31, 2019	<u>\$ —</u>	

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4. Property and Equipment, Net

Property and equipment, net as of December 31, 2018 and 2019 consisted of the following:

	December 31,	
	2018	2019
Computer equipment	\$ 125	\$ 256
Office equipment	59	177
Laboratory equipment	1,490	2,565
Leasehold improvements	468	488
Total	2,142	3,486
Less: Accumulated depreciation	(490)	(1,096)
Property and equipment, net	<u>\$1,652</u>	<u>\$ 2,390</u>

The Company recognized depreciation expense of \$102, of which \$95 was included in research and development expense and \$7 was included in general and administrative expense, \$407, of which \$380 was included in research and development expense and \$27 was included in general and administrative expense, and \$606, of which \$539 was included in research and development expense and \$67 was included in general and administrative expense, for the years ended December 31, 2017, 2018 and 2019, respectively.

5. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities as of December 31, 2018 and 2019 consisted of the following:

	December 31,	
	2018	2019
Accrued compensation and benefits	\$411	\$1,043
Accrued research and development expense	111	208
Accrued professional services	106	21
Other	32	4
Total accrued expenses and other current liabilities	<u>\$660</u>	<u>\$1,276</u>

6. License Agreements

In December 2016, as further amended in February 2017 and amended and restated in July 2018, the Company entered into a license agreement (the "NYU Agreement") with New York University, pursuant to which the Company obtained a worldwide, royalty-bearing, exclusive license under certain patents and know-how of New York University to research, develop and commercialize products covered by such licensed patents. The Company is required to pay New York University an annual non-refundable license fee, which is creditable against future milestone and royalty payments. The Company is required to pay amounts up to approximately \$6,713 in the aggregate upon achievement of certain clinical and commercial milestones and pay a low single digit royalty on future net sales of any product covered by a licensed product and a lower-single digit royalty on future net sales of any product not covered by a licensed product. The NYU Agreement expires on the date of expiration of all royalty obligations.

Any potential future milestone or royalty payment amounts have not been accrued at December 31, 2019 due to the uncertainty related to the successful achievement of these milestones.

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7. Leases

The Company has historically entered into lease arrangements for its facilities and certain equipment. As of December 31, 2019, the Company had three operating leases with required future minimum payments. In applying the transition guidance under ASC 842, the Company determined the classifications of these leases to be operating leases and recorded right-of-use assets and leases liabilities as of the effective date. The Company's leases generally do not include termination or purchase options.

Operating Leases

In June 2017, the Company entered into a lease agreement for office and laboratory space in Montreal, Quebec, for a four-year term, ending in July 2021. As required under the terms of the lease agreement, the lease requires a standby letter of credit in the amount of \$208, which remains unused as of December 31, 2019.

In November 2017, and further amended in April 2018, January 2019 and August 2019, the Company entered into a lease agreement for office and laboratory space located in Montreal, Quebec, for a three-year term ending in October 2020 with the option to extend through October 2022.

In June 2019, and further amended in August 2019, the Company entered into a lease agreement for office space in Cambridge, Massachusetts, for a two-year term, ending in May 2021.

In November 2019, the Company entered into a lease agreement for office and laboratory space located in Montreal, Quebec that has not commenced as of December 31, 2019. As required under the terms of the lease agreement, the Company had prepaid rent of \$522 as of December 31, 2019 and a commitment to prepay an additional \$522 prior to lease commencement, which the current portion was accounted for within prepaid expenses and other current assets and the long-term portion was accounted for within other assets.

The following table contains a summary of the lease costs recognized under ASC 842 and other information pertaining to the Company's operating leases for the year ended December 31, 2019:

	<u>December 31, 2019</u>
Operating Leases	
Lease Cost	
Operating lease cost	\$ 411
Short-term lease cost	12
Variable lease cost	248
Total lease cost	<u>\$ 671</u>
	<u>December 31, 2019</u>
Other Operating Lease Information	
Operating cash flows for operating leases	426
Right-of-use assets obtained in exchange for lease obligations	1,074
Weighted-average remaining lease term	1.79 years
Weighted-average discount rate	7.6%

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The variable lease costs for the year ended December 31, 2019 include contingent rental usage, common area maintenance and other operating charges. As the Company's leases do not provide an implicit rate, the Company utilized its incremental borrowing rate to discount lease payments, which reflects the fixed rate at which the Company could borrow on a collateralized basis the amount of the lease payments in the same currency, for a similar term, in a similar economic environment.

Future minimum lease payments under the Company's operating leases as of December 31, 2019 were as follows:

	December 31, 2019
Maturity of Lease Liabilities	
2020	\$ 680
2021	368
2022	87
2023	—
2024	—
Thereafter	—
Total lease payments	1,135
Less: interest	(71)
Total lease liabilities	<u>\$ 1,064</u>

The table above excludes \$3,222 of legally binding minimum lease payments for the lease in Montreal, Quebec that has been executed but not yet commenced as of December 31, 2019.

As of December 31, 2018, future minimum lease payments under the Company's lease obligations under ASC 840 were as follows:

Year Ending December 31,	
2019	\$162
2020	154
2021	64
2022	—
Total	<u>\$380</u>

8. Convertible Preferred Shares

In June 2017, the Company authorized the issuance of an unlimited number of Series A Preferred Shares with no par value in connection with the sale and issuance of up to 80,246,915 Series A Preferred Shares. The Series A Preferred Share financing was structured to close in three tranches, each contingent upon the achievement of certain specified milestones.

In June 2017, in connection with the closing of the first tranche of Series A Preferred Shares, the Company issued 35,802,469 Series A Preferred Shares at \$0.81 per share for total proceeds of \$28,958, net of issuance costs of \$42 and converted previously issued and outstanding Convertible Notes amounting to \$4,455 issued in October 2016 and April 2017 into 5,500,000 Series A Preferred Shares. The terms included the obligation of the investors to purchase, and the Company to sell, up to 44,444,445 additional Series A Preferred Shares contingent

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upon the achievement of certain specified milestones. The Company concluded that the obligation and right to make future issuances of Series A Preferred Shares met the definition of a freestanding financial instrument, as the rights were legally detachable from the Series A Preferred Shares (Note 3). In January 2019, in connection with the closing of the second tranche of Series A Preferred Shares, the Company issued 25,925,926 Series A Preferred Shares at \$0.81 per share for total gross proceeds of \$21,000, and the liability related to the Series A second tranche obligation was settled and recognized at fair value as Series A Preferred Shares.

In August 2019, the Company authorized the issuance of an unlimited number of Series B Preferred Shares with no par value. In September 2019, the Company issued 63,458,580 Series B Preferred Shares to existing and new investors at \$1.30 per share for total proceeds of \$82,496. In connection with the issuance and sale of Series B Preferred Shares, the Series A third tranche obligation liability was terminated and recognized as additional paid-in-capital.

The carrying value of the Series A Preferred Shares is based on the net proceeds received at initial issuance net of the fair value of the Series A Preferred Share Tranche Obligation. At issuance of the first and second tranches, no beneficial conversion features were present. The carrying value of the Series B Preferred Shares is based on the net proceeds received. At initial issuance, no beneficial conversion features were present.

As of December 31, 2017, 2018 and 2019, preferred shares consisted of the following in the table below:

	December 31, 2017			
	Preferred Shares Issued and Outstanding	Carrying Value	Liquidation Value	Common Shares Issuable Upon Conversion
Series A Preferred Shares	41,302,469	\$ 31,873	\$ 31,750	41,302,469
	<u>41,302,469</u>	<u>\$ 31,873</u>	<u>\$ 31,750</u>	<u>41,302,469</u>
	December 31, 2018			
	Preferred Shares Issued and Outstanding	Carrying Value	Liquidation Value	Common Shares Issuable Upon Conversion
Series A Preferred Shares	41,302,469	\$ 31,873	\$ 31,750	41,302,469
	<u>41,302,469</u>	<u>\$ 31,873</u>	<u>\$ 31,750</u>	<u>41,302,469</u>
	December 31, 2019			
	Preferred Shares Issued and Outstanding	Carrying Value	Liquidation Value	Common Shares Issuable Upon Conversion
Series A Preferred Shares	67,228,395	\$ 53,749	\$ 52,750	67,228,395
Series B Preferred Shares	63,458,580	82,248	82,496	63,458,580
	<u>130,686,975</u>	<u>\$ 135,997</u>	<u>\$ 135,246</u>	<u>130,686,975</u>

The following is a summary of the rights and privileges of the holders of the preferred shares as of December 31, 2019.

Voting Rights

The holders of preferred shares are entitled to vote, together with the holders of common shares, on all matters submitted to the shareholders for a vote and are entitled to the number of votes equal to the number of whole

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common shares into which the preferred shares held by such holders could convert on the record date for determination of shareholders entitled to vote. Except for meetings at which only holders of another specified class are entitled to vote, the holders of preferred shares shall vote together with the holders of common shares and vote as a single class.

Dividends

The holders of the preferred shares are entitled to receive, prior and in preference to any dividends on any other common shares of the Company, noncumulative dividends of 8% per annum of the sum of the preferred shares issuance price and all declared but unpaid dividends accrued thereon only when and if declared by the board of directors.

Conversion

As of December 31, 2017, 2018 and 2019, the preferred shares were convertible into common shares on a one-to-one basis.

Each preferred share is convertible into common shares, at any time, at the option of the holder, and without the payment of additional consideration, at the applicable conversion ratio in effect for preferred shares, which is initially one-to-one and subject to adjustment for certain anti-dilutive events. In addition, each preferred share will be automatically converted into common shares at the applicable conversion ratio in effect for preferred shares upon either (i) the closing of a qualified initial public offering of its common shares at a price per share of at least \$2.60 per share (subject to adjustment for any share split, combination or dividend or distribution payable) resulting in \$50,000 or more in gross proceeds to the Company, or (ii) the election to convert the preferred shares by at least 70% of the holders of preferred shares.

Liquidation Rights

In the event of any liquidation, dissolution or winding-up of the affairs of the Company, or unless waived by 70% of the holders of preferred shares, a sale of the Company that results in a change of control or a sale of substantially all of the Company's assets or intellectual property, the holders of preferred shares are entitled to be paid, in priority to the holders of any other class of shares, a liquidation preference equal to the aggregate of all accrued but unpaid dividends on the preferred shares. After satisfying the liquidation preference, the holders of record of preferred shares shall be entitled to receive ratably with the holders of common shares the residual assets of the Company on an as-converted basis.

9. Common Shares

As of December 31, 2017, 2018 and 2019, the authorized capital shares of the Company was unlimited with no par value.

The following represents the historical common share transactions of the Company from its incorporation through December 31, 2019:

- In 2016, the Company issued 8,300,000 common shares for total proceeds of \$1.
- In 2016, the Company issued 365,000 common shares in exchange for the license of certain intellectual property, which was recorded as research and development expense upon issuance.
- In 2017, the Company issued 600,000 common shares in exchange of no consideration.

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Each common share entitles the holder to one vote, together with the holders of Series A Preferred Shares, on all matters submitted to the shareholders for a vote. The holders of common shares are entitled to receive dividends, as may be declared by the board of directors, if any, subject to the preferential dividend rights of convertible preferred shares. Through December 31, 2019, no cash dividends have been declared or paid.

As of December 31, 2017, 2018 and 2019, the Company has reserved common shares for the potential conversion of outstanding Series A Preferred Shares, Series B Preferred Shares and exercise of stock options in the table below.

	December 31,		
	2017	2018	2019
Series A Preferred Shares	41,302,469	41,302,469	67,228,395
Series B Preferred Shares	—	—	63,458,580
Options to purchase common shares	4,987,000	5,500,208	21,248,158
Total	<u>46,289,469</u>	<u>46,802,677</u>	<u>151,935,133</u>

10. Collaborations

In January 2019, the Company entered into a research services, license and collaboration agreement (the “Ono Agreement”) with Ono Pharmaceutical Co., Ltd. (“Ono”), a Japanese pharmaceutical company, pursuant to which the Company and Ono have agreed to collaborate in the research of potential product candidates targeting Polq and the development of the Company’s small molecule Polq inhibitor program. The Company is primarily responsible for carrying out research activities to identify a product candidate, to be licensed to Ono, in accordance with a mutually agreed upon research plan during a research term that will end upon the earlier of the date of the first submission of an Investigational New Drug application (“IND”) in the United States or Japan, or the end of the research term. In the event that Ono elects to collaborate on the subsequent development and commercialization of the proposed product candidate, Ono will be then responsible for such activities in Japan, South Korea, Taiwan, Hong-Kong, Macau and the Association of Southeast Asian Nations (collectively, the “Ono territory”), and the Company will be responsible for all such activities in the rest of the world outside the Ono territory, including the United States, Canada and European Union.

Under the terms of the Ono Agreement, the Company received non-refundable upfront payments of ¥900,000 (\$8,142), consisting of an initial upfront fee payment of ¥110 million (\$995) and an initial upfront research service payment of ¥790 million (\$7,147). Additionally, in connection with the research activities to be conducted pursuant to the Ono Agreement, the Company is eligible to receive additional research service payments of up to an aggregate of ¥750,000 (\$6,878) upon the occurrence of certain specified research triggers. The Company is also entitled to receive clinical, regulatory and commercial milestone payments of up to ¥17,210,000 (\$157,818) in the aggregate, plus a tiered percentage royalty on annual net sales in Ono’s Territory ranging from high-single digit to low-double digit, subject to certain specified reductions. All future milestone payments and royalties are payable in USD. Additionally, upon election by Ono to collaborate on the proposed product candidate, Ono shall be responsible for a specified percentage of research and development costs for the IND-enabling studies of the selected product candidate.

The Company assessed the arrangement in accordance with ASC 606 and concluded that Ono is a customer based on the arrangement structure. The Company identified a single performance obligation under the arrangement consisting of the combination of the license to develop and commercialize a selected product candidate targeting Polq and associated research services.

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The Company determined that the license and research services are not distinct within the context of the contract, and the license is the predominant good or service. Accordingly, revenue is recognized in accordance with guidance for licenses, and because the license represents functional IP, it is recognized at the point in time control of the license is transferred.

The Company determined that the transaction price at the onset of the arrangement is the total upfront payments received in the aggregate amount of \$8,142 which is recorded as deferred revenue as of December 31, 2019. The future milestone payments represent variable consideration that is fully constrained at inception of the arrangement as the achievement of the milestone events are highly uncertain. The Company will reevaluate the likelihood of achievement of the milestones at the end of each reporting period and as uncertain events are resolved or other changes in circumstances occur, and, if necessary, adjust its estimate of the transaction price.

11. Share-Based Compensation

Option Plan

In December 2016, as further amended in December 2017 and September 2019, the Company adopted the Repare Therapeutics Inc. Option Plan (the "Option Plan") for the issuance of stock options and other share-based awards to directors, officers, employees or consultants. The Option Plan authorized up to 24,697,408 shares of the Company's common shares to be issued. At December 31, 2019, there were 3,449,250 shares available for future grant under the Option Plan.

The Option Plan is administered by the board of directors. The exercise prices, vesting and other restrictions are determined by the board of directors, except that the exercise price per share of stock option may not be less than 100% of the fair value of the common share on the date of grant. Stock options awarded under the Option Plan expire 10 years after the grant and generally have vesting conditions of 25% on the first anniversary of the date of grant and 75% on a monthly basis at a rate of 1/36th unless otherwise decided by the board of directors.

Stock Option Activity

The assumptions that the Company used in the Black Scholes option-pricing model to determine the grant date fair value of stock options granted to employees and non-employees were as follows, presented on a weighted-average basis:

	<u>Year Ended December 31,</u>		
	<u>2017</u>	<u>2018</u>	<u>2019</u>
Risk-free interest rate	2.21%	2.88%	1.94%
Expected term (in years)	6.08	6.08	6.10
Expected volatility	67.77%	67.32%	71.41%
Expected dividend yield	0.00%	0.00%	0.00%

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The following table summarizes the Company's stock option activity:

	Number of Options	Weighted- Average Exercise Price	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Outstanding as of January 1, 2017	—	\$ —	—	\$ —
Granted	4,987,000	0.27	—	—
Exercised	—	—	—	—
Cancelled or forfeited	—	—	—	—
Outstanding as of December 31, 2017	<u>4,987,000</u>	\$ 0.27	9.48	\$ —
Granted	576,000	0.30	—	—
Exercised	—	—	—	—
Cancelled or forfeited	(62,792)	0.27	—	—
Outstanding as of December 31, 2018	<u>5,500,208</u>	\$ 0.27	8.56	\$ —
Granted	16,737,450	0.36	—	—
Exercised	—	—	—	—
Cancelled or forfeited	(989,500)	0.34	—	—
Outstanding as of December 31, 2019	<u>21,248,158</u>	\$ 0.34	9.16	\$ 1
Options exercisable as of December 31, 2018	1,833,744	\$ 0.27	8.47	\$ —
Options exercisable as of December 31, 2019	3,705,000	\$ 0.28	7.72	\$ —
Options unvested as of December 31, 2018	3,656,256	\$ 0.27	8.60	\$ —
Options unvested as of December 31, 2019	17,543,158	\$ 0.35	9.46	\$ 1

The aggregate intrinsic value of stock options is calculated as the difference between the exercise price of the stock options and the fair value of the Company's common shares for those stock options that had exercise prices lower than the fair value of the Company's common shares.

The weighted-average grant date fair value of the Company's stock options granted during the years ended December 31, 2017, 2018 and 2019 was \$0.17, \$0.22 and \$0.21, respectively.

The total fair value of options vested during the years ended December 31, 2017, 2018 and 2019 was \$0, \$314 and \$284, respectively.

Share-Based Compensation

Share-based compensation expense was allocated as follows:

	Year Ended December 31,		
	2017	2018	2019
Research and development	\$ 19	\$ 172	\$ 250
General and administrative	15	134	261
Total share-based compensation expense	<u>\$ 34</u>	<u>\$ 306</u>	<u>\$ 511</u>

REPARE THERAPEUTICS INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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As of December 31, 2017, 2018 and 2019, there was \$814, \$625 and \$3,557 of unrecognized share-based compensation expense related to unvested stock options, respectively. The unrecognized share-based compensation expense is expected to be recognized over a weighted-average remaining vesting period of 3.5, 2.6 and 3.2 years at December 31, 2017, 2018 and 2019, respectively.

12. Income Taxes

Loss before the provision for income taxes for the years ended December 31, 2017, 2018 and 2019 consisted of the following:

	Year Ended December 31,		
	2017	2018	2019
Canada	\$(7,208)	\$(14,416)	\$(27,355)
Foreign	(588)	168	\$ 334
	<u>\$(7,796)</u>	<u>\$(14,248)</u>	<u>\$(27,021)</u>

A reconciliation between tax expense and the product of accounting income multiplied by the statutory income tax rate for years ended December 31, 2017, 2018 and 2019 is as follows:

	Year Ended December 31,		
	2017	2018	2019
Loss before income taxes	\$(7,796)	\$(14,248)	\$(27,021)
Income tax at statutory rate	26.5%	26.5%	26.5%
Computed income tax recovery	(2,066)	(3,776)	(7,160)
Effect on income tax resulting from:			
Federal investment tax credit	(353)	(572)	(985)
Accounting charges not deductible for tax purposes	(45)	760	277
Other	(61)	108	(16)
Change in valuation allowance	2,525	3,515	8,079
Total provision for income taxes	<u>\$ —</u>	<u>\$ 35</u>	<u>\$ 195</u>

As of December 31, 2019, the Company had tax losses of approximately \$31,481, which are available to offset future taxable income in Canada. The Company has not recognized the tax benefit of these losses. These losses expire as follows:

2039	\$ 19,550
2038	6,460
2037	5,125
2036	346
Total	<u>\$ 31,481</u>

As of December 31, 2019, the Company had Scientific Research and Experimental Development (“SR&ED”) expenditures of approximately \$15,829, respectively, for Canadian federal and Quebec purposes, which have not

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been deducted. These expenditures are available to reduce future taxable income and have an unlimited carryforward period. SR&ED expenditures are subject to verification by the tax authorities and, accordingly, the amounts may vary.

As of December 31, 2019, the Company had non-refundable Canadian federal investment tax credits of approximately \$2,553, which may be utilized to reduce Canadian federal income taxes payable. The Company has not recognized the tax benefits related to the non-refundable investment tax credits. The investment tax credits expire as follows:

2039	1,369
2038	776
2037	384
2036	24
Total	<u>2,553</u>

The Company's deferred tax assets for the years ended December 31, 2018 and 2019 consisted of the following:

	2018	2019
Net operating loss carryforwards	\$ 3,010	\$ 8,442
Net research and development expenditures	1,830	4,195
Share issuance costs	9	78
Net federal investment tax credits	829	1,877
Tax basis of property and equipment in excess of carrying values	132	(204)
Operating lease right-of-use assets	—	(279)
Operating lease liability	—	287
Accrued expense and other liabilities	—	161
Total deferred tax assets	<u>5,810</u>	<u>14,557</u>
Valuation allowance	<u>(5,810)</u>	<u>(14,425)</u>
Net deferred tax assets	<u>\$ —</u>	<u>\$ 132</u>

The Company files income tax returns in Canada and in the United States. In the normal course of business, the Company could be subject to examination by federal and provincial or state jurisdictions, where applicable. There are currently no pending tax examinations. The Company may be subject to tax examination for 2016, 2017, 2018 and 2019 due to unexpired statute of limitation periods.

The calculation of the Company's tax liabilities involves dealing with uncertainties in the application of complex tax laws and regulations for both federal taxes and the provinces and states in which the Company operates or does business in. ASC 740 states that a tax benefit from an uncertain tax position may be recognized when it is more likely than not that the position will be sustained upon examination, including resolutions of any related appeals or litigation processes, on the basis of the technical merits.

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The Company records uncertain tax positions as liabilities in accordance with ASC 740 and adjusts these liabilities when the Company's judgment changes as a result of the evaluation of new information not previously available. Because of the complexity of some of these uncertainties, the ultimate resolution may result in a payment that is materially different from the current estimate of the unrecognized tax benefit liabilities. These differences will be reflected as increases or decreases to income tax expense in the period in which new information is available. As of December 31, 2018 and 2019, no uncertain tax positions have been recorded in the consolidated financial statements.

The Company recognizes interest and penalties related to unrecognized tax benefits on the income tax expense line in the accompanying consolidated statement of operations and comprehensive loss. As of December 31, 2018 and 2019, no accrued interest or penalties are included on the related tax liability line in the consolidated balance sheet.

13. Net Loss per Share and Unaudited Pro Forma Net Loss per Share

The following table summarizes the computation of basic and diluted net loss per share attributable to common shareholders of the Company:

	Year Ended December 31,		
	2017	2018	2019
Numerator:			
Net loss attributable to common shareholders	\$ (7,796)	\$ (14,283)	\$ (27,216)
Net loss attributable to common shareholders—basic and diluted	<u>\$ (7,796)</u>	<u>\$ (14,283)</u>	<u>\$ (27,216)</u>
Denominator:			
Weighted-average number of common shares outstanding—basic and diluted	<u>9,229,658</u>	<u>9,265,000</u>	<u>9,265,000</u>
Net loss per share attributable to common shareholders—basic and diluted	<u>\$ (0.84)</u>	<u>\$ (1.54)</u>	<u>\$ (2.94)</u>

The Company's potentially dilutive securities, which include Convertible Preferred Shares and stock options, have been excluded from the computation of diluted net loss per share attributable to common shareholders as the effect would be to reduce the net loss per share attributable to common shareholders. Therefore, the weighted average number of common shares outstanding used to calculate both basic and diluted net loss per share attributable to common shareholders is the same. The Company excluded the following potential common shares, presented based on amounts outstanding at each period end, from the computation of diluted net loss per share attributable to common shareholders for the periods indicated because including them would have had an anti-dilutive effect:

	Year Ended December 31,		
	2017	2018	2019
Series A preferred shares	41,302,469	41,302,469	67,228,395
Series B preferred shares	—	—	63,458,580
Options to purchase common shares	4,987,000	5,500,208	21,248,158

Unaudited pro forma net loss per share attributable to common shareholders is computed using the weighted-average number of common shares outstanding after giving effect to the conversion of all outstanding convertible

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preferred shares into common shares as if such conversion had occurred on January 1, 2019, or the date of issuance, if later.

Unaudited pro forma basic and diluted net loss per share attributable to common shareholders was calculated as follows:

	<u>Year Ended December 31, 2019</u>
Numerator:	
Net loss attributable to common shareholders	\$ (27,216)
Reversal of the change in fair value of the Series A Tranche Obligation due to the automatic conversion of convertible preferred shares to common shares upon the completion of the proposed initial public offering	1,350
Net loss attributable to common shareholders—basic and diluted	<u>\$ (25,866)</u>
Denominator:	
Weighted-average number of common shares outstanding—basic and diluted	9,265,000
Pro forma adjustment to reflect automatic conversion of convertible preferred shares to common shares upon the completion of the proposed initial public offering	<u>86,457,801</u>
Pro forma weighted-average common shares outstanding—basic and diluted	<u>95,722,801</u>
Pro forma net loss per share attributable to common shareholders—basic and diluted	<u>\$ (0.27)</u>

14. Government Assistance

The Company incurred research and development expenditures which are eligible for investment tax credits. The investment tax credits recorded are based on management's estimates of amounts expected to be recovered and are subject to audit by the taxation authorities. These amounts have been recorded as a reduction of research and development expenditures for an amount of \$162, \$330 and \$566 for the years ended December 31, 2017, 2018 and 2019, respectively.

15. Commitments and Contingencies

On February 25, 2019, the Company entered into an agreement with The Broad Institute, Inc. ("Broad"). Broad will perform specialty screening services at the Company's request over the course of a three-year term. In exchange for the specialty screening services, the Company will pay Broad \$500 per year, beginning on February 25, 2019, for a total of \$1,500.

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The contractual commitments for the Broad and other agreements as of December 31, 2019 are as follows:

<u>Year Ending December 31,</u>	
2020	\$ 525
2021	525
2022	25
2023	25
2024	25
Total	<u>\$1,125</u>

16. Currency Risk

The Company is exposed to the financial risk related to the fluctuation of foreign exchange rates and the degree of volatility of those rates. The foreign currency risk is limited to the portion of the Company's business transactions denominated in currency other than USD.

The Company incurs a portion of its expenses in Canadian dollars, as well as other currencies to a lesser extent. A change in the currency exchange rates between the USD relative to the Canadian dollar could have a significant effect on the Company's results of operations, financial position or cash flows. The Company does not enter into arrangements to hedge its currency risk exposure, although it maintains expected Canadian dollar cash requirements in Canadian dollars to form a natural hedge.

The Company is exposed to currency risk through its cash, research and development tax credits receivable, other receivables, accounts payable and accrued expenses and other current liabilities denominated in Canadian dollars as follows:

	<u>December 31,</u>	
	<u>2018</u>	<u>2019</u>
Cash	\$6,142	\$29,983
Restricted cash	270	270
Research and development tax credits receivable	651	1,403
Other receivables	800	2,566
Accounts payable	(819)	(1,026)
Accrued expenses and other current liabilities	(183)	(283)
Net financial position exposure	<u>\$6,861</u>	<u>\$32,913</u>

Based on the above net exposure at December 31, 2019, and assuming that all other variables remain constant, a 10% depreciation of the USD against the Canadian dollar would result in an increase of \$2,304 in the Company's net loss for the year ended December 31, 2019.

The Company is also exposed to currency risk through the Ono Agreement as future payments receivable under its collaboration with Ono, if any, are denominated in Japanese yen.

17. Related Parties

Details of transactions between the Company and other related parties are disclosed below and in other notes according to the nature of the transactions. All transactions are measured at the exchange amount, which is the amount of consideration determined and agreed to by the related parties.

REPARE THERAPEUTICS INC.
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For the years ended December 31, 2017, 2018 and 2019, the Company recorded expenses of \$0, \$322 and \$1,271, respectively, for research services and rent paid by the Company to entities affiliated with a shareholder. As of December 31, 2017, 2018 and 2019, there was a total of \$0, \$122 and \$170, respectively, in accounts payable and accrued expenses and other current liabilities owed to an entity affiliated with a shareholder.

18. Geographic Information

The Company's property and equipment, net by location as of December 31, 2018 and 2019 was as follows:

	December 31, 2018	December 31, 2019
Canada	\$ 1,651	\$ 2,279
United States	1	111
Total property and equipment, net	<u>\$ 1,652</u>	<u>\$ 2,390</u>

The Company's right-of-use assets by location were as follows:

	December 31, 2019
Canada	\$ 409
United States	625
Total right-of-use assets, net	<u>\$ 1,034</u>

19. Subsequent Events

Subsequent events have been evaluated up to April 3, 2020, the date that the consolidated financial statements were available to be issued.

In the first quarter of 2020, an aggregate of 1,099,166 options were exercised at a weighted average exercise price of \$0.30 per share, for aggregate proceeds of \$324.

On April 2, 2020, the board of directors of the Company authorized the issuance of an aggregate of 305,000 stock options to employees, at an exercise price of \$0.85 per share.

In March 2020, the Company executed a strategic collaboration with The University of Texas M. D. Anderson Cancer Center ("MDACC"), a comprehensive cancer research, treatment and prevention center. The collaboration will consist of preclinical and clinical studies designed by the Company and MDACC with the research completed by MDACC. The Company has agreed to commit a total of \$10,000 in funding for the performance of the study over a period of five years.

Shares



Common Shares

PRELIMINARY PROSPECTUS

Joint Book-Running Managers

Morgan Stanley

Goldman Sachs & Co. LLC

Cowen

Piper Sandler

, 2020

Through and including , 2020 (the 25th day after the commencement of this offering), all dealers that buy, sell or trade common shares, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth the costs and expenses, other than the underwriting discounts and commissions, payable by the registrant in connection with the sale of our common shares being registered. All amounts are estimates except for the Securities and Exchange Commission, or SEC, registration fee, the Financial Industry Regulatory Authority, or FINRA, filing fee and the Nasdaq Global Market, or Nasdaq, listing fee.

<u>ITEM</u>	<u>AMOUNT</u>
SEC registration fee	\$ *
FINRA filing fee	*
Nasdaq listing fee	*
Printing expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer agent fees and expenses	*
Miscellaneous expenses	*
Total	<u>\$ *</u>

* To be provided by amendment.

Item 14. Indemnification of Directors and Officers.

Under the Canada Business Corporations Act, or CBCA, and our amended and restated articles of incorporation to be in effect upon the completion of this offering, we must indemnify our current or former directors or officers or another individual who acts or acted at our request as a director or officer, or an individual acting in a similar capacity, of another entity, against all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by the individual in respect of any civil, criminal, administrative, investigative or other proceeding in which the individual is involved because of his or her association with us or another entity. The CBCA also provides that we may advance moneys to a director, officer or other individual for costs, charges and expenses reasonably incurred in connection with such a proceeding; provided that such individual shall repay the moneys if the individual does not fulfill the conditions described below.

However, indemnification is prohibited under the CBCA unless the individual:

- acted honestly and in good faith with a view to our best interests, or the best interests of the other entity for which the individual acted as director or officer or in a similar capacity at our request; and
- in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, the individual had reasonable grounds for believing that his or her conduct was lawful.

The CBCA and our bylaws authorize us to purchase and maintain insurance for the benefit of each of our current or former directors or officers and other agents and each person who acts or acted at our request as a director, officer or other agents or an individual acting in a similar capacity, of another entity.

In addition, we have entered, or intend to enter, into separate indemnity agreements with each of our directors and officers pursuant to which we agree to indemnify and hold harmless our directors and officers against any and all liability, loss, damage, cost or expense in accordance with the terms and conditions of the CBCA and our bylaws.

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The Registrant has purchased and currently intends to maintain insurance on behalf of each and every person who is or was a director or officer of the Registrant against any loss arising from any claim asserted against him or her and incurred by him or her in any such capacity, subject to certain exclusions.

The form of Underwriting Agreement for this initial public offering provides for indemnification by the underwriters of us and our officers and directors who sign this Registration Statement for specified liabilities, including matters arising under the Securities Act.

Item 15. Recent Sales of Unregistered Securities.

The following list sets forth information as to all securities we have sold since January 1, 2017 through the date of the prospectus that is a part of this registration statement:

Issuances of Common Shares

In January 2017, we issued and sold an aggregate of 600,000 of our common shares to two accredited investors at \$0.0001 per share for aggregate consideration of \$60.

Issuances of Options to Purchase Common Shares

From January 1, 2017 through the date of this registration statement, we granted options under our Repare Therapeutics Inc. Amended and Restated Option Plan to purchase an aggregate of 22,605,450 common shares, with exercise prices ranging from \$0.27 to \$0.85 per share, to our employees, directors and consultants. Of these, 1,099,166 shares have been issued upon the exercise of options, at a weighted average exercise price of \$0.30 per share, for aggregate proceeds of \$0.3 million, and 1,052,292 options have been cancelled.

Issuances of Preferred Shares

Series A Preferred Share Financing

In June 2017 and January 2019, we sold an aggregate of 61,728,395 of our Series A preferred shares in multiple closings to 12 accredited investors at a purchase price of \$0.81 per share for aggregate consideration of \$50.0 million. In connection with and as partial consideration for this financing, an aggregate principal amount of \$2.75 million of convertible promissory notes held by certain investors were redeemed and converted into 5,500,000 Series A preferred shares at a price of \$0.50 per share.

Series B Preferred Share Financing

In September 2019, we sold an aggregate of 63,458,580 of our Series B preferred shares to 21 accredited investors at a purchase price of \$1.30 per share for aggregate consideration of \$82.5 million.

None of the foregoing transactions involved any underwriters, underwriting discounts or commissions, or any public offering. Unless otherwise specified above, we believe these transactions were exempt from registration under the Securities Act in reliance on Section 4(a)(2) of the Securities Act (and Regulation D or Regulation S promulgated thereunder) or Rule 701 promulgated under Section 3(b) of the Securities Act as transactions by an issuer not involving any public offering or under benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed on the share certificates issued in these transactions. All recipients had adequate access, through their relationships with us, to information about us. The sales of these securities were made without any general solicitation or advertising.

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Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits.

The exhibits listed below are filed as part of this registration statement.

<u>EXHIBIT NUMBER</u>	<u>DESCRIPTION</u>
1.1*	Form of Underwriting Agreement.
3.1	Amended and Restated Articles of Incorporation, as currently in effect.
3.2*	Form of Amended and Restated Articles of Incorporation, to be effective immediately after the completion of this offering.
3.3	Bylaws, as currently in effect.
3.4*	Form of Amended and Restated Bylaws, to be effective immediately prior to the completion of this offering.
4.1*	Form of Common Share Certificate of the registrant.
4.2	Amended and Restated Registration Rights Agreement, by and among the registrant and certain of its shareholders, dated September 3, 2019.
5.1*	Opinion of Stikeman Elliott LLP.
10.1+	Repare Therapeutics Inc. Amended and Restated Option Plan.
10.2+	Form of Option Agreement under the Repare Therapeutics Inc. Amended and Restated Option Plan.
10.3+*	Form of 2020 Equity Incentive Plan.
10.4+*	Form of Share Option Grant Notice and Share Option Agreement under the 2020 Equity Incentive Plan.
10.5+*	Form of Restricted Share Unit Grant Notice and Restricted Share Unit Award Agreement under the 2020 Equity Incentive Plan.
10.6+*	Form of 2020 Employee Share Purchase Plan.
10.7*	Form of Indemnity Agreement by and between the registrant and its directors and officers.
10.8+*	Amended and Restated Employment Agreement between the registrant and Lloyd M. Segal, dated .
10.9+*	Amended and Restated Employment Agreement between the registrant and Michael Zinda, dated .
10.10+*	Amended and Restated Employment Agreement between the registrant and Maria Koehler, dated .
10.11+*	Separation Agreement between the registrant and Katina Dorton, dated October 21, 2019.
10.12++	Lease by and between CIG III Technoparc Nominee Inc. and Pharmascience Inc., dated May 15, 2014, as amended November 24, 2016 and November 25, 2019.
10.13++	Lease Assignment Agreement by and between the registrant and Pharmascience Inc., dated June 7, 2017.
10.14†	Research Services, License and Collaboration Agreement by and between the registrant and Ono Pharmaceutical Co., Ltd., dated January 31, 2019.
10.15†	Amended and Restated License Agreement by and between the registrant and New York University, dated July 9, 2018.

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<u>EXHIBIT NUMBER</u>	<u>DESCRIPTION</u>
21.1	Subsidiaries of the registrant.
23.1*	Consent of Ernst & Young LLP, an Independent Registered Public Accounting Firm.
23.2*	Consent of Stikeman Elliott LLP (included in Exhibit 5.1).
24.1	Power of Attorney (included on the signature page to this registration statement).

* To be filed by amendment.
+ Indicates a management contract or compensatory plan.
† Certain portions of this exhibit (indicated by asterisks) have been omitted because they are not material and would likely cause competitive harm to Repare Therapeutics Inc. if publicly disclosed.
++ Certain schedules and exhibits to this exhibit have been omitted pursuant to Item 601(a)(5) of Regulation S-K. A copy of any omitted schedule and/or exhibit will be furnished to the SEC upon request.

(b) Financial Statement Schedules.

Schedules not listed above have been omitted because the information required to be set forth therein is not applicable or is shown in the financial statements or notes thereto.

Item 17. Undertakings.

The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

1. For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this Registration Statement as of the time it was declared effective.
2. For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Montréal, Province of Québec, Canada on _____, 2020.

REPARE THERAPEUTICS INC.

By: _____
Lloyd M. Segal
President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Lloyd M. Segal and Steve Forte, and each of them, as his or her true and lawful attorneys-in-fact and agents, each with the full power of substitution, for him or her and in his or her name, place or stead, in any and all capacities, to sign any and all amendments to this registration statement (including post-effective amendments), and to sign any registration statement for the same offering covered by this registration statement that is to be effective upon filing pursuant to Rule 462(b) promulgated under the Securities Act, and all post-effective amendments thereto, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or their or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement on Form S-1 has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
_____ Lloyd M. Segal	President, Chief Executive Officer and Director <i>(Principal Executive Officer)</i>	, 2020
_____ Steve Forte	Executive Vice President, Chief Financial Officer <i>(Principal Financial Officer and Principal Accounting Officer)</i>	, 2020
_____ Jerel Davis, Ph.D.	Chairman of the Board of Directors	, 2020
_____ David Bonita, M.D.	Director	, 2020
_____ Todd Foley	Director	, 2020
_____ Samarth Kulkarni, Ph.D.	Director	, 2020

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<u>SIGNATURE</u>	<u>TITLE</u>	<u>DATE</u>
Briggs Morrison, M.D.	Director	, 2020
Kevin J. Raidy	Director	, 2020
Carol A. Schafer	Director	, 2020

SIGNATURE OF AUTHORIZED U.S. REPRESENTATIVE OF THE REGISTRANT

Pursuant to the Securities Act, the undersigned, the duly authorized representative in the United States of the registrant has signed this registration statement or amendment thereto on the _____ day of _____, 2020.

REPARE THERAPEUTICS USA INC.

By: _____
Lloyd M. Segal
President and Chief Executive Officer

Certificate of Amendment
Canada Business Corporations Act

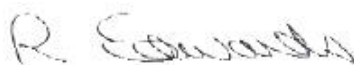
Certificat de modification
Loi canadienne sur les sociétés par actions

Repare Therapeutics Inc.
Corporate name / Dénomination sociale

989577-9
Corporation number / Numéro de société

I HEREBY CERTIFY that the articles of the above-named corporation are amended under section 178 of the *Canada Business Corporations Act* as set out in the attached articles of amendment.

JE CERTIFIE que les statuts de la société susmentionnée sont modifiés aux termes de l'article 178 de la *Loi canadienne sur les sociétés par actions*, tel qu'il est indiqué dans les clauses modificatrices ci-jointes.



Raymond Edwards

Director / Directeur

2019-08-28

Date of amendment (YYYY-MM-DD)

Date de modification (AAAA-MM-JJ)



Form 4
Articles of Amendment
Canada Business Corporations Act
(CBCA) (s. 27 or 177)

Formulaire 4
Clauses modificatrices
Loi canadienne sur les sociétés par
actions (LCSA) (art. 27 ou 177)

1 Corporate name
Dénomination sociale
Repare Therapeutics Inc.

2 Corporation number
Numéro de la société
989577-9

3 The articles are amended as follows
Les statuts sont modifiés de la façon suivante

See attached schedule / Voir l'annexe ci-jointe

4 Declaration: I certify that I am a director or an officer of the corporation.
Déclaration : J'atteste que je suis un administrateur ou un dirigeant de la société.

Original signed by / Original signé par
Lloyd M. Segal

Lloyd M. Segal

Misrepresentation constitutes an offence and, on summary conviction, a person is liable to a fine not exceeding \$5000 or to imprisonment for a term not exceeding six months or both (subsection 250 (1) of the CBCA).

Faire une fausse déclaration constitue une infraction et son auteur, sur déclaration de culpabilité par procédure sommaire, est passible d'une amende maximale de 5 000 \$ et d'un emprisonnement maximal de six mois, ou l'une de ces peines (paragraphe 250(1) de la LCSA).

You are providing information required by the CBCA. Note that both the CBCA and the *Privacy Act* allow this information to be disclosed to the public. It will be stored in personal information bank number IC/PPU-049.

Vous fournissez des renseignements exigés par la LCSA. Il est à noter que la LCSA et la *Loi sur les renseignements personnels* permettent que de tels renseignements soient divulgués au public. Ils seront stockés dans la banque de renseignements personnels numéro IC/PPU-049.

SCHEDULE

The articles of the Corporation are amended as follows:

1. An unlimited number of Class B convertible preferred shares, having the rights, privileges, restrictions and conditions set forth in the attached Schedule A, are created.
2. The rights, privileges, restrictions and conditions attached to the Class A convertible preferred shares are amended with the rights, privileges, restrictions and conditions with the attached Schedule A.
3. The rights, privileges, restrictions and conditions attached to the common shares are amended with the rights, privileges, restrictions and conditions with the attached Schedule A.
4. After giving effect to the foregoing, the authorized capital of the Corporation shall consist of:
 - Unlimited number of Class A convertible preferred shares;
 - Unlimited number of Class B convertible preferred shares; and
 - Unlimited number of common shares.
5. The schedule to the articles of amendment attached to the certificate of amendment dated June 21, 2017 is deleted and replaced with the attached Schedule A.

SCHEDULE A

DESCRIPTION OF SHARE CAPITAL

The Corporation is authorized to issue each of the following classes of shares:

- (a) An unlimited number of Class A convertible preferred shares (the “**Class A Preferred Shares**”);
- (b) An unlimited number of Class B convertible preferred shares (the “**Class B Preferred Shares**”, and, together with the Class A Preferred Shares, the “**Preferred Shares**”);
- (c) An unlimited number of common shares (the “**Common Shares**”, and, together with the Preferred Shares, the “**Shares**”).

The rights, privileges, restrictions and conditions attached to each class of Shares are as follows:

1. DEFINITIONS

For the purposes of this Schedule A:

“**Act**” means the *Canada Business Corporations Act*;

“**Additional Consideration**” has the meaning given in section 2.4.4;

“**Additional Shares**” means all Shares and Convertible Securities issued by the Corporation or deemed to be issued pursuant to sections 2.3.9 and 3.3.9, other than the Excluded Securities;

“**Affiliates**” means, with respect to any Person, any other Person that directly, or indirectly through one or more intermediaries, controls, is controlled by or is under common control with the specified Person, or any venture capital fund, investment fund and separate account now or hereafter existing that is controlled by one or more general partners or managing members of, or shares the same management company with, such Person. As used in this definition, “**control**”, “**controlled by**” and “**under common control with**” means possession, directly or indirectly, of power to direct or cause the direction of management or policies of such Person (whether through ownership of securities or other partnership or ownership interests, as trustee, personal representative or executive or by contract, credit agreement or otherwise), provided that in any event, any Person which owns directly, indirectly or beneficially 50% or more of the securities having voting power for the election of directors or other governing body of a corporation or 50% or more of the partnership interests or other ownership interests of any other Person will be deemed to control such Person;

“As-Converted Basis” means the number of Common Shares that would be issued and outstanding should the Preferred Shares be converted into Common Shares of the Corporation in accordance with their respective terms;

“Change of Control” means any sale, exchange, merger, amalgamation, consolidation, reorganization, arrangement, business combination, conveyance or similar transaction or other disposition of securities of the Corporation (other than through the issuance of equity securities by the Corporation as part of a financing transaction), in a transaction or series of related transactions after giving effect to which more than 50% of the voting power of securityholders of the Corporation is held by securityholders of the Corporation who were not voting securityholders (or Affiliates thereof) immediately prior to the first of such transactions;

“Class A Conversion Price” at any particular time means the price used to calculate the number of Common Shares resulting from the conversion of Class A Preferred Shares at such time; the Class A Conversion Price shall initially be equal to the Class A Initial Issue Price, as adjusted from time to time pursuant to the provisions hereof;

“Class A Conversion Rate” has the meaning given in section 2.3.3;

“Class A Initial Issue Price” means US\$0.81 per Class A Preferred Share (subject to adjustments for stock dividends, splits, combinations and similar events);

“Class A Original Issue Date” means the date the first Class A Preferred Share was issued by the Corporation, being June 22, 2017;

“Class A Preferred Dividends” has the meaning given in section 2.2.1;

“Class A Preferred Dividend Obligations” has the meaning given in section 2.2.1;

“Class A Preferred Shares Conversion Date” has the meaning given in section 2.3.1;

“Class A Preferred Shares Conversion Privilege” has the meaning given in section 2.3.1;

“Class A Preferred Shares Liquidation Preference” has the meaning given in section 2.4.1;

“Class B Conversion Price” at any particular time means the price used to calculate the number of Common Shares resulting from the conversion of Class B Preferred Shares at such time; the Class B Conversion Price shall initially be equal to the Class B Initial Issue Price, as adjusted from time to time pursuant to the provisions hereof;

“Class B Conversion Rate” has the meaning given in section 3.3.3;

“Class B Initial Issue Price” means US\$1.30 per Class B Preferred Share (subject to adjustments for stock dividends, splits, combinations and similar events);

“Class B Original Issue Date” means the date the first Class B Preferred Share is issued by the Corporation, being September 3, 2019;

“Class B Preferred Dividends” has the meaning given in section 3.2.1;

“Class B Preferred Dividend Obligations” has the meaning given in section 3.2.1;

“Class B Preferred Shares Conversion Date” has the meaning given in section 3.3.1;

“Class B Preferred Shares Conversion Privilege” has the meaning given in section 3.3.1;

“Class B Preferred Shares Liquidation Preference” has the meaning given in section 3.4.1;

“Converted Class A Preferred Shares” has the meaning given in section 2.3.1;

“Converted Class B Preferred Shares” has the meaning given in section 3.3.1;

“Convertible Securities” means any right, unit, option, warrant or any other security, including, without limitation, any debenture, loan, note or any other instrument or agreement evidencing indebtedness of the Corporation, which may be converted or exchanged into shares in the capital of the Corporation or which carries a right to acquire shares in the capital of the Corporation;

“Effective Price” of Additional Shares means the quotient determined by dividing the total number of Additional Shares issued or sold, or deemed to have been issued or sold by the Corporation under section 2.3.9 or 3.3.9, into the aggregate consideration received, or deemed to have been received by the Corporation for such issue under section 2.3.9 or 3.3.9 for such Additional Shares;

“Excluded Securities” means (i) any securities of the Corporation offered to the public pursuant to a Qualified IPO, (ii) any securities or options to subscribe for securities of the Corporation issued to employees, officers, directors or consultants of the Corporation pursuant to an incentive stock option plan, an employment or consulting agreement or such other incentive program duly adopted

by the Corporation with Requisite Board Majority, (iii) Common Shares issuable upon the conversion of Preferred Shares, (iv) any securities of the Corporation issued to holders of Shares in connection with (a) any stock split, share dividend or similar transactions approved with the Requisite Board Majority, or (b) any other adjustment set forth in sections 2.3 and 3.3, (v) any securities of the Corporation issued as consideration in an acquisition of any business or assets, mergers, licenses, strategic partnerships or corporate partnering agreements or similar transactions which (a) are not part of a financing transaction and (b) have been approved by the Requisite Board Majority, (vi) any securities of the Corporation issued to financial institutions or lessors in connection with commercial credit arrangements, equipment financings, commercial property leases or similar transactions which have been approved by the Requisite Board Majority, (vii) any securities of the Corporation issued or issuable upon conversion, exercise or exchange of securities covered by (i)-(vi) above or that are outstanding on the Class B Original Issue Date, or (viii) any securities of the Corporation deemed to be Excluded Securities at the time of issuance by the Requisite Majority Preferred Shareholders;

“Forced Class A Preferred Shares Conversion Date” has the meaning given in section 2.3.2.1;

“Forced Class B Preferred Shares Conversion Date” has the meaning given in section 3.3.2.1;

“Forced Preferred Shares Conversion Event” means (i) a conversion of the Preferred Shares requested and approved in writing by the Requisite Majority Preferred Shareholders (which shall, for purposes of a forced conversion of the Class B Preferred Shares in an event other than a Public Offering only, include at least one of Cowen Healthcare Investments II L.P. or OrbiMed Private Investments VII, LP), or (ii) the closing of a Qualified IPO;

“holder”, **“securityholder”** or **“registered holder”** means a person who is registered on the securities register of a body corporate as the owner of securities;

“Initial Consideration” has the meaning given in section 2.4.4;

“Liquidation Event” means the liquidation, dissolution or winding-up of the affairs of the Corporation or, unless waived by the Requisite Majority Preferred Shareholders, a Sale of the Corporation;

“Merger Agreement” has the meaning given in section 2.4.3;

“person” means any individual, partnership, limited partnership, joint venture, syndicate, sole proprietorship, company or corporation with or without share capital, unincorporated association, trust, trustee, executor, administrator or other legal personal representative, regulatory body or agency, government or governmental agency, authority or entity however designated or constituted;

“Preferred Shares Liquidation Preference” means the Class A Preferred Shares Liquidation Preference and the Class B Preferred Shares Liquidation Preference;

“Preferred Shares Triggering Event” has the meaning given in section 2.3.6;

“Public Offering” means:

- (a) the filing by the Corporation of a prospectus with the securities regulatory authority in any province of Canada for the purpose of qualifying a distribution of securities; or
- (b) the filing by the Corporation of a registration statement with the Securities and Exchange Commission of the United States of America for the purpose of qualifying a distribution of securities;

“Qualified IPO” means a firm commitment underwritten Public Offering (i) with a price per share not less than two times the Class B Initial Issue Price, (ii) that results in gross proceeds to the Corporation of not less than US\$50,000,000 (before deduction of underwriters’ commission and expenses), and (iii) is accompanied by a listing of Common Shares on a recognized stock exchange acceptable to the Requisite Majority Preferred Shareholders;

“Requisite Board Majority” means the majority of the Board of Directors of the Corporation, including at least three (3) of the Preferred Directors (as defined in the Unanimous Shareholders’ Agreement), provided they are not prevented from voting in accordance with the Act (or if at least three (3) Preferred Directors are prevented from voting in accordance with the Act, then the majority of the non-interested directors);

“Requisite Majority Preferred Shareholders” means at any relevant time the shareholders of record holding at least 70% of the issued and outstanding Preferred Shares;

“Sale of the Corporation” means any merger, amalgamation, consolidation, reorganization, arrangement, business combination or similar transaction that results in a Change of Control or a sale, lease, exclusive license, transfer or other disposition of all or substantially all of the assets or intellectual property of the Corporation and its respective subsidiaries, taken as a whole (except to an Affiliate);

“**Unanimous Shareholders’ Agreement**” means the second amended and restated unanimous shareholders’ agreement dated September 3, 2019, and entered into among the Corporation and all of its shareholders, as amended, supplemented, restated or replaced from time to time.

2. CLASS A PREFERRED SHARES

2.1 Voting Rights.

2.1.1 The holders of Class A Preferred Shares shall be entitled to receive notice of, attend and vote at all meetings of shareholders, except meetings at which only holders of another specified class of Shares are entitled to vote.

2.1.2 The holders of Class A Preferred Shares, the holders of Class B Preferred Shares and the holders of Common Shares shall vote as a single class, except for meetings at which only holders of another specified class of Shares are entitled to vote. Each Class A Preferred Share shall entitle its holder to such number of votes equal to the number of Common Shares issuable upon the exercise of any conversion rights attaching to the Class A Preferred Shares at the date of such vote, using the Class A Conversion Rate as determined reasonably and in good faith by the board of directors of the Corporation.

2.1.3 Holders of Preferred Shares of any class shall not be entitled to vote separately as a class, or to exercise dissent rights under section 190 of the Act, upon a proposal to amend the articles (whether by articles of amendment or articles of amalgamation) of the Corporation to: (i) increase or decrease any maximum number of authorized Shares of such class, or increase any maximum number of authorized shares of a class having rights or privileges equal or superior to the Shares of such class; (ii) effect an exchange, reclassification or cancellation of all or part of the Shares of such class and (iii) create a new class or series of shares equal or superior to the Shares of such class.

2.2 Dividends.

2.2.1 The holders of Class A Preferred Shares shall be entitled, on a *pari passu* basis with the holders of Class B Preferred Shares, to receive fixed preferential and non-cumulative dividends prior and in preference to any declaration or payment of any dividend on the Common Shares, as and when declared by the directors of the Corporation, payable on each anniversary of the Class A Original Issue Date on each Class A Preferred Share at the rate of eight percent (8%) per annum payable on the sum of (i) the Class A Initial Issue Price of such Class A Preferred Share and (ii) all declared but unpaid

dividends accrued thereon pursuant to this section 2.2.1 (the “**Class A Preferred Dividends**” and the total amount of dividends declared and payable and the rights and preferences provided under this section 2.2.1 to all holders of Class A Preferred Shares at any time are herein referred to as the “**Class A Preferred Dividend Obligations**”). Such Class A Preferred Dividends shall be payable out of the monies legally available for this purpose. Except as otherwise provided herein, if at any time the Corporation pays less than the total amount of dividends then declared but unpaid with respect to the Class A Preferred Shares, such payment shall be distributed ratably among the holders of Class A Preferred Shares on a pro rata basis. No other dividend declared by the Corporation shall be paid on the Common Shares, in respect of any year ending on the anniversary of the Class A Original Issue Date where no preferential dividend was declared in respect of the Class A Preferred Shares or where the Class A Preferred Dividend Obligations for such year have not been fully satisfied (unless such obligations are waived in whole or in part pursuant to a prior written consent of the Requisite Majority Preferred Shareholders). Subject to the Act, any Class A Preferred Dividends declared but not yet paid shall be paid in cash, on a *pari passu* basis with the holders of Class B Preferred Shares, in priority to any distribution of the property or assets of the Corporation or any distribution of funds to the holders of Common Shares upon the occurrence of a Liquidation Event, and prior to the payment of dividends on the Common Shares. Upon the exercise by any holder of Class A Preferred Shares of such holder’s Class A Preferred Shares Conversion Privilege, any further entitlement of such holder of Class A Preferred Shares associated with the converted Class A Preferred Shares shall automatically be cancelled.

2.2.2 In addition to the Class A Preferred Dividends, each Class A Preferred Share entitles the holder to receive, on a *pari passu* basis with the holders of Class B Preferred Shares, any dividend declared and paid on the Common Shares whether payable in cash, in kind or by way of issuance of fully-paid shares at such times and in such manner as the directors may determine in their discretion, ratably and on an As-Converted Basis with the holders of Class B Preferred Shares and Common Shares.

2.2.3 All dividends on the Class A Preferred Shares and the Class B Preferred Shares shall be declared and paid at the same time, payable in the same form, whether in cash, in kind or by the issue of fully paid shares of the Corporation, and on a ratably basis if the full amount of the dividend is not being paid in respect of the year in question (determined by reference to the fraction which the aggregate Class A Preferred Shares Liquidation Preference or Class B Preferred Shares Liquidation Preference, as the case may be, bears to the Preferred Shares Liquidation Preference), unless otherwise approved by the Requisite Majority Preferred Shareholders.

2.3 Conversion into Common Shares.

2.3.1 *Class A Preferred Shares Conversion Privilege.* Subject to the terms and conditions hereof, each holder of Class A Preferred Shares shall have the right, at any time and from time to time, at the holder's discretion, to convert, without payment of any additional consideration, in whole or in part, such holder's Class A Preferred Shares into fully-paid and non-assessable Common Shares in accordance with the provisions set forth in this section 2.3 at the then applicable Class A Conversion Rate (the "**Class A Preferred Shares Conversion Privilege**"). The Class A Preferred Shares Conversion Privilege may be exercised by notice in writing to the Corporation accompanied by a certificate or certificates representing the Class A Preferred Shares in respect of which the holder thereof desires to exercise such right of conversion. Such notice shall be signed by the holder of the Class A Preferred Shares in respect of which such right is being exercised and shall specify the number of Class A Preferred Shares which the holder desires to have converted (the "**Converted Class A Preferred Shares**"). Upon receipt of such notice by the Corporation, the Converted Class A Preferred Shares shall be irrevocably cancelled and the corresponding fully-paid and non-assessable Common Shares issued, and the Corporation shall issue certificates representing such Common Shares upon the basis herein prescribed and in accordance with the provisions hereof to the holder of Class A Preferred Shares represented by the certificate or certificates accompanying such notice. Such conversion shall be deemed to have been made immediately prior to the close of business on the date of such surrender of the certificates representing the Class A Preferred Shares to be converted (the "**Class A Preferred Shares Conversion Date**"), and the person or persons entitled to receive the Common Shares issuable upon such conversion shall be treated for all purposes as the holder or holders of record of such Common Shares as of such date. If fewer than all of the Class A Preferred Shares represented by any certificate are to be converted, the holder shall be entitled to receive a new certificate for the Class A Preferred Shares representing the shares comprised in the original certificate which are not to be converted. All Class A Preferred Shares that shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding, and all rights with respect to such shares, including the rights, if any, to receive notices and to vote, shall immediately cease and terminate on the Class A Preferred Shares Conversion Date, except only the right of the holders thereof to receive Common Shares in exchange therefor. Any Class A Preferred Shares so converted shall be retired and cancelled.

2.3.2 *Forced Class A Preferred Shares Conversion.* Subject to the terms and conditions hereof, Class A Preferred Shares shall be converted automatically into Common Shares at the then applicable Class A Conversion Rate, without payment of any additional consideration, in accordance with the provisions set forth in this section 2.3.2, upon the occurrence of a Forced Preferred Shares Conversion Event.

2.3.2.1 Upon the occurrence of a Forced Preferred Shares Conversion Event, all the then issued and outstanding Class A Preferred Shares shall be converted automatically without any further action by the holders thereof and whether or not the certificates representing such shares are surrendered to the Corporation or its transfer agent; provided, however, that all holders of Class A Preferred Shares being converted shall be given written notice of the occurrence of a Forced Preferred Shares Conversion Event, including the date such event occurred or is scheduled to occur (in the case of a Qualified IPO) (the “**Forced Class A Preferred Shares Conversion Date**”), and the Corporation shall not be obligated to issue certificates evidencing the Common Shares issuable upon such conversion unless certificates evidencing such Class A Preferred Shares being converted are either delivered to the Corporation, or its transfer agent, or the holder notifies the Corporation, or its transfer agent, that such certificates have been lost, stolen or destroyed and executes an agreement satisfactory to the Corporation to indemnify the Corporation (and its transfer agent (if applicable)) from any loss incurred by it in connection therewith.

On the Forced Class A Preferred Shares Conversion Date, all rights with respect to the Class A Preferred Shares so converted shall terminate, except for any of the rights of the holder thereof, upon surrender of the holder’s certificate or certificates therefor, to receive certificates for the number of Common Shares into which such Class A Preferred Shares have been converted. Upon the automatic conversion of the Class A Preferred Shares, the holders of such Class A Preferred Shares shall surrender the certificates representing such shares at the registered office of the Corporation or of its transfer agent. Upon surrender of such certificates, the Corporation shall promptly issue and deliver to such holder, in such holder’s name as shown on such surrendered certificate or certificates, a

certificate or certificates for the number of Common Shares into which the Class A Preferred Shares surrendered were converted on the Forced Class A Preferred Shares Conversion Date. Such conversion shall be deemed to have been made upon the occurrence of the Forced Preferred Shares Conversion Event and the person or persons entitled to receive the Common Shares issuable upon conversion shall be treated for all purposes as the record holder or holders of such Common Shares at such time.

2.3.3 *Class A Conversion Rate.* Unless and until adjusted as provided for in this section 2.3, the Class A Preferred Shares shall be converted into that number of Common Shares determined by multiplying the number of Class A Preferred Shares being converted by the quotient of (i) the Class A Initial Issue Price, plus any declared but unpaid dividends on each Class A Preferred Share being converted, divided by (ii) the Class A Conversion Price (as determined reasonably and in good faith by the board of directors of the Corporation) in effect at the time of conversion (the “**Class A Conversion Rate**”).

2.3.4 *Fractional Shares.* No fractional Common Shares shall be issued upon conversion of the Class A Preferred Shares pursuant to this section 2.3. All Common Shares (including fractions thereof) issuable upon conversion of more than one Class A Preferred Share by a holder thereof shall be aggregated for the purpose of determining whether the conversion would result in the issuance of any fractional share. If, after the aforementioned aggregation, the conversion would result in the issuance of any fractional Common Share, the Corporation shall, in lieu of issuing such fractional share, pay cash in an amount equal to the product of such fraction multiplied by the then applicable Class A Conversion Rate.

2.3.5 *Adjustment for Stock Splits and Combinations.* If the Corporation shall at any time or from time to time effect a subdivision of the outstanding Common Shares, the Class A Conversion Price in effect immediately before that subdivision shall be proportionately decreased. If the Corporation shall at any time or from time to time combine the outstanding Common Shares, the Class A Conversion Price in effect immediately before the combination shall be proportionately increased. Any adjustment under this paragraph shall become effective at the close of business on the date the subdivision or combination becomes effective.

2.3.6 *Adjustment for Certain Dividends and Distributions.* In the event the Corporation at any time or from time to time shall make or issue, or fix a record date for the determination of holders of Common Shares entitled to receive, a dividend or other distribution payable in additional Common Shares (for the purposes of this Section 2.3.6 and Section 3.3.6, a “**Preferred Shares Triggering Event**”), then and in each such event, the Class A Conversion Price in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the Class A Conversion Price then in effect by a fraction:

2.3.6.1 the numerator of which shall be the total number of Common Shares issued and outstanding, on an As-Converted Basis, immediately prior to the time of the Preferred Shares Triggering Event, and

2.3.6.2 the denominator of which shall be the total number of Common Shares issued and outstanding, on an As-Converted Basis, immediately prior to the time of such Preferred Shares Triggering Event plus the number of Common Shares issuable in payment of such dividend or distribution, on an As-Converted Basis.

2.3.7 *Adjustment for Reclassification, Exchange, or Substitution.* If the Common Shares of the Corporation shall be changed into the same or a different number of shares of any class, whether by capital reorganization, reclassification, or otherwise (other than a subdivision or combination of shares or stock dividend provided for above, or a reorganization, merger, amalgamation, arrangement, consolidation, business combination or sale of assets provided for below), then and in each such event, holders of Class A Preferred Shares shall have the right thereafter to convert such shares into the kind and amount of shares or other securities or property receivable, upon such reorganization, reclassification or other change, that would have otherwise been receivable by the holders of the number of Common Shares into which such Class A Preferred Shares would have been converted immediately prior to such reorganization, reclassification or change, all subject to further adjustment as provided herein.

2.3.8 *Adjustment for Merger or Reorganization, etc.* In case of any merger, amalgamation, consolidation, arrangement, reorganization or other business combination involving the Corporation and any other corporation or other entity or person (other than a Liquidation Event), each Class A Preferred Share shall thereafter be convertible (or shall be converted into a security which shall be convertible) into the kind and amount of shares or other securities or property to which a holder of the number of Common Shares of the Corporation that would have otherwise been deliverable upon conversion of such Class A

Preferred Shares would have been entitled upon such event; and, in such case, appropriate adjustment (as determined in good faith by the board of directors of the Corporation) shall be made in the application of the provisions in this section 2.3 set forth with respect to the rights and interest thereafter of the holders of the Class A Preferred Shares, to the end that the provisions set forth in this section 2.3 (including provisions with respect to changes in and other adjustments of the Class A Conversion Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any shares or other securities or property thereafter deliverable upon the conversion of the Class A Preferred Shares.

2.3.9 *Anti-Dilution.*

2.3.9.1 Unless otherwise agreed by the Requisite Majority Preferred Shareholders, if, at any time or from time to time, the Corporation issues or sells, or is deemed by the express provisions of this section 2.3.9 to have issued or sold, Additional Shares other than in connection with an event referred to in sections 2.3.5, 2.3.6, 2.3.7 and 2.3.8 above and except for Excluded Securities, at an Effective Price which is less than the Class A Conversion Price in effect prior to such issuance or sale, then and in each such case, the then effective Class A Conversion Price shall be reduced as of the opening of business on the date of such issue or sale, to an amount (calculated to the nearest one-hundredth of a cent) determined in accordance with the following formula:

$$CP2 = CP1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

“CP2” means the Class A Conversion Price in effect immediately after such issue of Additional Shares;

“CP1” means the Class A Conversion Price in effect immediately before such issue of Additional Shares;

“A” means the number of Common Shares outstanding immediately before such issue of Additional Shares (treating for this purpose as outstanding all Common Shares issuable upon exercise and/or conversion of Convertible Securities outstanding immediately before such issue (including the Preferred Shares outstanding immediately before such issue));

“B” means the number of Common Shares that would have been issued if such Additional Shares had been issued at a price per share equal to CP1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP1); and

“C” means the number of such Additional Shares issued in such transaction.

2.3.9.2 For the purpose of making any adjustment required under this section 2.3.9, the consideration received by the Corporation for any issue or sale of securities shall (A) to the extent it consists of cash, be computed at the net amount of cash received by the Corporation after deduction of any underwriting or similar commissions, compensation or concessions paid or allowed by the Corporation in connection with such issue or sale but without deduction of any other expenses payable by the Corporation, (B) to the extent it consists of property other than cash, be computed at the fair value of that property as determined in good faith by the board of directors of the Corporation, and (C) to the extent that Additional Shares are issued or sold together with other shares or securities or other assets of the Corporation for a consideration which covers both, be computed at the portion of the consideration so received that may be reasonably determined in good faith by the board of directors of the Corporation to be allocable to such Additional Shares.

2.3.9.3 For the purpose of the adjustment required under this section 2.3.9, if the Corporation issues or sells shares or other Convertible Securities convertible into Additional Shares, in each case other than in connection with an event referred to in sections 2.3.5, 2.3.6, 2.3.7 and 2.3.8 above and except for Excluded Securities, and if the Effective Price of such Additional Shares is less than the Class A Conversion Price then in effect, in each case the Corporation shall be deemed to have issued at the time of the issuance of such Convertible Securities the maximum number of Additional Shares issuable upon exercise or conversion thereof and to have received as consideration for the issuance of such shares an amount equal to the total amount of the consideration, if any, received by the Corporation for the issuance of such Convertible Securities, plus the minimum amounts of consideration, if any, payable to the Corporation upon the conversion thereof; provided, however, that if the minimum amount of consideration payable to the Corporation upon the exercise or conversion of Convertible Securities is

reduced over time or on the occurrence or non-occurrence of specified events other than by reason of anti-dilution adjustments, the Effective Price shall be recalculated using the number to which such minimum amount of consideration is reduced; provided further that if the minimum amount of consideration payable to the Corporation upon the exercise or conversion of such Convertible Securities is subsequently increased, the Effective Price shall be recalculated using the increased minimum amount of consideration payable to the Corporation upon the exercise or conversion of such Convertible Securities; provided further that in no event shall a Class A Conversion Price be adjusted above the Class A Conversion Price in effect immediately prior to the particular adjustment required under this section 2.3.9. No further adjustment of a Class A Conversion Price as adjusted upon the issuance of such Convertible Securities shall be made as a result of the actual issuance of Additional Shares on the exercise or conversion of any such Convertible Securities. If any such conversion privilege represented by any such Convertible Securities shall expire without having been exercised, the Class A Conversion Price as adjusted upon the issuance of such Convertible Securities shall be readjusted to the Class A Conversion Price which would have been in effect had an adjustment been made on the basis that the only Additional Shares so issued were the Additional Shares, if any, actually issued or sold on the exercise of such rights of conversion of such Convertible Securities, and such Additional Shares, if any, were issued or sold for: (A) the consideration, if any, actually received by the Corporation upon the exercise or conversion of such Convertible Securities, plus (B) the consideration, if any, actually received by the Corporation for the granting or the issue and sale of the Convertible Securities, whether or not exercised or converted, provided that such readjustment shall not apply to prior conversions of Class A Preferred Shares.

2.3.10 *Certificate of Adjustment.* In each case of an adjustment or readjustment of a Class A Conversion Price, as the case may be, or the number of Common Shares or other securities issuable upon conversion of the Class A Preferred Shares, the Corporation, at its expense, shall compute such adjustment or readjustment in accordance with the provisions hereof and prepare a certificate showing such adjustment or readjustment, and shall mail such certificate, by first class mail, postage prepaid, to each registered holder of Class A Preferred Shares at the holder's address as shown in the Corporation's books. The certificate shall set forth such adjustment or readjustment showing in reasonable detail the facts upon which such adjustment or readjustment is based.

2.3.11 *Effect of Conversion.* All Class A Preferred Shares that shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding, and all rights with respect to such shares, including the rights, if any, to receive notices and to vote, shall immediately cease and terminate on the Class A Preferred Shares Conversion Date, except only the right of the holders thereof to receive Common Shares in exchange therefor. Any Class A Preferred Shares so converted shall be retired and cancelled.

2.4 Liquidation Event.

2.4.1 In the event of a Liquidation Event, each holder of outstanding Class A Preferred Shares shall be entitled, on a *pari passu* basis with the holders of Class B Preferred Shares, to receive, in priority to any distribution of the property or assets of the Corporation to the holders of Common Shares, out of the assets of the Corporation legally available for distribution to the holders of Shares of the capital of the Corporation an amount per Class A Preferred Share in cash (the “**Class A Preferred Shares Liquidation Preference**”) calculated as follows:

$$\text{Class A Preferred Shares Liquidation Preference} = A + B$$

where:

“**A**” means the aggregate of all declared but unpaid dividends on said Class A Preferred Share up to and including the date of said Liquidation Event;

“**B**” means the Class A Initial Issue Price of said Class A Preferred Share.

If, upon any Liquidation Event, the amount available for distribution among the holders of all outstanding Preferred Shares is insufficient to permit the payment of the Preferred Shares Liquidation Preference in full, then the amount available for distribution shall be distributed among holders of the Preferred Shares on a *pari passu* and pro rata basis determined by reference to the fraction which the aggregate Class A Preferred Shares Liquidation Preference or Class B Preferred Shares Liquidation Preference, as the case may be, bears to the Preferred Shares Liquidation Preference.

2.4.2 After satisfying the Preferred Shares Liquidation Preference, the holders of record of Class A Preferred Shares shall be entitled to receive ratably with the holders of Class B Preferred Shares and Common Shares the residual assets of the Corporation upon the occurrence of a Liquidation Event on an As-Converted Basis.

2.4.3 The Corporation shall not have the power to effect a Liquidation Event that constitutes a merger, amalgamation, arrangement or consolidation in which the Corporation is a constituent party unless the agreement or plan of merger, arrangement or consolidation for such transaction (the “**Merger Agreement**”) provides that the consideration payable to the Shareholders shall be allocated among the Shareholders in accordance with this section 2.4.

2.4.4 In the event of a Liquidation Event pursuant to this section 2.4, if any portion of the consideration payable to the Shareholders is payable only upon satisfaction of contingencies (the “**Additional Consideration**”), the Merger Agreement shall provide that (i) the portion of such consideration that is not Additional Consideration (such portion, the “**Initial Consideration**”) shall be allocated among the Shareholders in accordance with section 2.4.1 as if the Initial Consideration were the only consideration payable in connection with such Liquidation Event; and (ii) any Additional Consideration which becomes payable to the Shareholders upon satisfaction of such contingencies shall be allocated among the Shareholders in accordance with section 2.4 after taking into account the previous payment of the Initial Consideration as part of the same transaction. For the purposes of this section 2.4.4, consideration placed into escrow or retained as a holdback to be available for satisfaction of indemnification or similar obligations in connection with such Liquidation Event shall be deemed to be Additional Consideration.

2.4.5 After payment has been made in full as provided in sections 2.4.1 and 2.4.2, the Corporation shall have satisfied its obligations with respect to the Class A Preferred Shares Liquidation Preference.

2.4.6 In the event of a Liquidation Event, no dividend or other distribution of any amount shall be made in respect of Common Shares until the Corporation has satisfied its obligations with respect to the Preferred Shares Liquidation Preference.

2.4.7 In the event of distribution of property and assets other than cash pursuant to any provision of this Schedule A, the valuation of such property and assets shall be determined in good faith by the board of directors of the Corporation.

3. CLASS B PREFERRED SHARES

3.1 Voting Rights.

3.1.1 The holders of Class B Preferred Shares shall be entitled to receive notice of, attend and vote at all meetings of shareholders, except meetings at which only holders of another specified class of Shares are entitled to vote.

3.1.2 The holders of Class B Preferred Shares, the holders of Class A Preferred Shares and the holders of Common Shares shall vote as a single class, except for meetings at which only holders of another specified class of Shares are entitled to vote. Each Class B Preferred Share shall entitle its holder to such number of votes equal to the number of Common Shares issuable upon the exercise of any conversion rights attaching to the Class B Preferred Shares at the date of such vote, using the Class B Conversion Rate as determined reasonably and in good faith by the board of directors of the Corporation.

3.1.3 Holders of Preferred Shares of any class shall not be entitled to vote separately as a class, or to exercise dissent rights under section 190 of the Act, upon a proposal to amend the articles (whether by articles of amendment or articles of amalgamation) of the Corporation to: (i) increase or decrease any maximum number of authorized Shares of such class, or increase any maximum number of authorized shares of a class having rights or privileges equal or superior to the Shares of such class; (ii) effect an exchange, reclassification or cancellation of all or part of the Shares of such class and (iii) create a new class or series of shares equal or superior to the Shares of such class.

3.2 Dividends.

3.2.1 The holders of Class B Preferred Shares shall be entitled, on a *pari passu* basis with the holders of Class A Preferred Shares, to receive fixed preferential and non-cumulative dividends prior and in preference to any declaration or payment of any dividend on the Common Shares, as and when declared by the directors of the Corporation, payable on each anniversary of the Class B Original Issue Date on each Class B Preferred Share at the rate of eight percent (8%) per annum payable on the sum of (i) the Class B Initial Issue Price of such Class B Preferred Share and (ii) all declared but unpaid dividends accrued thereon pursuant to this section 3.2.1 (the “**Class B Preferred Dividends**” and the total amount of dividends declared and payable and the rights and preferences provided under this section 3.2.1 to all holders of Class B Preferred Shares at any time are herein referred to as the “**Class B Preferred Dividend Obligations**”). Such

Class B Preferred Dividends shall be payable out of the monies legally available for this purpose. Except as otherwise provided herein, if at any time the Corporation pays less than the total amount of dividends then declared but unpaid with respect to the Class B Preferred Shares, such payment shall be distributed ratably among the holders of Class B Preferred Shares on a pro rata basis. No other dividend declared by the Corporation shall be paid on the Common Shares, in respect of any year ending on the anniversary of the Class B Original Issue Date where no preferential dividend was declared in respect of the Class B Preferred Shares or where the Class B Preferred Dividend Obligations for such year have not been fully satisfied (unless such obligations are waived in whole or in part pursuant to a prior written consent of the Requisite Majority Preferred Shareholders). Subject to the Act, any Class B Preferred Dividends declared but not yet paid shall be paid in cash, on a *pari passu* basis with the holders of Class A Preferred Shares, in priority to any distribution of the property or assets of the Corporation or any distribution of funds to the holders of Common Shares upon the occurrence of a Liquidation Event, and prior to the payment of dividends on the Common Shares. Upon the exercise by any holder of Class B Preferred Shares of such holder's Class B Preferred Shares Conversion Privilege, any further entitlement of such holder of Class B Preferred Shares associated with the converted Class B Preferred Shares shall automatically be cancelled.

3.2.2 In addition to the Class B Preferred Dividends, each Class B Preferred Share entitles the holder to receive, on a *pari passu* basis with the holders of Class A Preferred Shares, any dividend declared and paid on the Common Shares whether payable in cash, in kind or by way of issuance of fully-paid shares at such times and in such manner as the directors may determine in their discretion, ratably and on an As-Converted Basis with the holders of Class A Preferred Shares and Common Shares.

3.2.3 All dividends on the Class A Preferred Shares and the Class B Preferred Shares shall be declared and paid at the same time, payable in the same form, whether in cash, in kind or by the issue of fully paid shares of the Corporation, and on a ratably basis if the full amount of the dividend is not being paid in respect of the year in question (determined by reference to the fraction which the aggregate Class A Preferred Shares Liquidation Preference or Class B Preferred Shares Liquidation Preference, as the case may be, bears to the Preferred Shares Liquidation Preference), unless otherwise approved by the Requisite Majority Preferred Shareholders.

3.3 Conversion into Common Shares.

3.3.1 *Class B Preferred Shares Conversion Privilege.* Subject to the terms and conditions hereof, each holder of Class B Preferred Shares shall have the right, at any time and from time to time, at the holder's discretion, to convert, without payment of any additional consideration, in whole or in part, such holder's Class B Preferred Shares into fully-paid and non-assessable Common Shares in accordance with the provisions set forth in this section 3.3 at the then applicable Class B Conversion Rate (the "**Class B Preferred Shares Conversion Privilege**"). The Class B Preferred Shares Conversion Privilege may be exercised by notice in writing to the Corporation accompanied by a certificate or certificates representing the Class B Preferred Shares in respect of which the holder thereof desires to exercise such right of conversion. Such notice shall be signed by the holder of the Class B Preferred Shares in respect of which such right is being exercised and shall specify the number of Class B Preferred Shares which the holder desires to have converted (the "**Converted Class B Preferred Shares**"). Upon receipt of such notice by the Corporation, the Converted Class B Preferred Shares shall be irrevocably cancelled and the corresponding fully-paid and non-assessable Common Shares issued, and the Corporation shall issue certificates representing such Common Shares upon the basis herein prescribed and in accordance with the provisions hereof to the holder of Class B Preferred Shares represented by the certificate or certificates accompanying such notice. Such conversion shall be deemed to have been made immediately prior to the close of business on the date of such surrender of the certificates representing the Class B Preferred Shares to be converted (the "**Class B Preferred Shares Conversion Date**"), and the person or persons entitled to receive the Common Shares issuable upon such conversion shall be treated for all purposes as the holder or holders of record of such Common Shares as of such date. If fewer than all of the Class B Preferred Shares represented by any certificate are to be converted, the holder shall be entitled to receive a new certificate for the Class B Preferred Shares representing the shares comprised in the original certificate which are not to be converted. All Class B Preferred Shares that shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding, and all rights with respect to such shares, including the rights, if any, to receive notices and to vote, shall immediately cease and terminate on the Class B Preferred Shares Conversion Date, except only the right of the holders thereof to receive Common Shares in exchange therefor. Any Class B Preferred Shares so converted shall be retired and cancelled.

3.3.2 *Forced Class B Preferred Shares Conversion.* Subject to the terms and conditions hereof, Class B Preferred Shares shall be converted automatically into Common Shares at the then applicable Class B Conversion Rate, without payment of any additional consideration, in accordance with the provisions set forth in this section 3.3.2, upon the occurrence of a Forced Preferred Shares Conversion Event.

3.3.2.1 Upon the occurrence of a Forced Preferred Shares Conversion Event, all the then issued and outstanding Class B Preferred Shares shall be converted automatically without any further action by the holders thereof and whether or not the certificates representing such shares are surrendered to the Corporation or its transfer agent; provided, however, that all holders of Class B Preferred Shares being converted shall be given written notice of the occurrence of a Forced Preferred Shares Conversion Event, including the date such event occurred or is scheduled to occur (in the case of a Qualified IPO) (the “**Forced Class B Preferred Shares Conversion Date**”), and the Corporation shall not be obligated to issue certificates evidencing the Common Shares issuable upon such conversion unless certificates evidencing such Class B Preferred Shares being converted are either delivered to the Corporation, or its transfer agent, or the holder notifies the Corporation, or its transfer agent, that such certificates have been lost, stolen or destroyed and executes an agreement satisfactory to the Corporation to indemnify the Corporation (and its transfer agent (if applicable)) from any loss incurred by it in connection therewith.

On the Forced Class B Preferred Shares Conversion Date, all rights with respect to the Class B Preferred Shares so converted shall terminate, except for any of the rights of the holder thereof, upon surrender of the holder’s certificate or certificates therefor, to receive certificates for the number of Common Shares into which such Class B Preferred Shares have been converted. Upon the automatic conversion of the Class B Preferred Shares, the holders of such Class B Preferred Shares shall surrender the certificates representing such shares at the registered office of the Corporation or of its transfer agent. Upon surrender of such certificates, the Corporation shall promptly issue and deliver to such holder, in such holder’s name as shown on such surrendered certificate or certificates, a certificate or certificates for the number of Common Shares into which the Class B Preferred Shares surrendered were converted on the Forced Class B Preferred Shares Conversion Date. Such conversion shall be deemed to have been made upon the occurrence of the Forced Preferred Shares Conversion Event and the person or persons entitled to receive the Common Shares issuable upon conversion shall be treated for all purposes as the record holder or holders of such Common Shares at such time.

3.3.3 *Class B Conversion Rate.* Unless and until adjusted as provided for in this section 3.3, the Class B Preferred Shares shall be converted into that number of Common Shares determined by multiplying the number of Class B Preferred Shares being converted by the quotient of (i) the Class B Initial Issue Price, plus any declared but unpaid dividends on each Class B Preferred Share being converted, divided by (ii) the Class B Conversion Price (as determined reasonably and in good faith by the board of directors of the Corporation) in effect at the time of conversion (the “**Class B Conversion Rate**”).

3.3.4 *Fractional Shares.* No fractional Common Shares shall be issued upon conversion of the Class B Preferred Shares pursuant to this section 3.3. All Common Shares (including fractions thereof) issuable upon conversion of more than one Class B Preferred Share by a holder thereof shall be aggregated for the purpose of determining whether the conversion would result in the issuance of any fractional share. If, after the aforementioned aggregation, the conversion would result in the issuance of any fractional Common Share, the Corporation shall, in lieu of issuing such fractional share, pay cash in an amount equal to the product of such fraction multiplied by the then applicable Class B Conversion Rate.

3.3.5 *Adjustment for Stock Splits and Combinations.* If the Corporation shall at any time or from time to time effect a subdivision of the outstanding Common Shares, the Class B Conversion Price in effect immediately before that subdivision shall be proportionately decreased. If the Corporation shall at any time or from time to time combine the outstanding Common Shares, the Class B Conversion Price in effect immediately before the combination shall be proportionately increased. Any adjustment under this paragraph shall become effective at the close of business on the date the subdivision or combination becomes effective.

3.3.6 *Adjustment for Certain Dividends and Distributions.* Upon the occurrence of a Preferred Shares Triggering Event, then and in each such event, the Class B Conversion Price in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the Class B Conversion Price then in effect by a fraction:

3.3.6.1 the numerator of which shall be the total number of Common Shares issued and outstanding, on an As-Converted Basis, immediately prior to the time of the Preferred Shares Triggering Event, and

3.3.6.2 the denominator of which shall be the total number of Common Shares issued and outstanding, on an As-Converted Basis, immediately prior to the time of such Preferred Shares Triggering Event plus the number of Common Shares issuable in payment of such dividend or distribution, on an As-Converted Basis.

3.3.7 *Adjustment for Reclassification, Exchange, or Substitution.* If the Common Shares of the Corporation shall be changed into the same or a different number of shares of any class, whether by capital reorganization, reclassification, or otherwise (other than a subdivision or combination of shares or stock dividend provided for above, or a reorganization, merger, amalgamation, arrangement, consolidation, business combination or sale of assets provided for below), then and in each such event holders of Class B Preferred Shares shall have the right thereafter to convert such shares into the kind and amount of shares or other securities or property receivable, upon such reorganization, reclassification or other change, that would have otherwise been receivable by the holders of the number of Common Shares into which such Class B Preferred Shares would have been converted immediately prior to such reorganization, reclassification or change, all subject to further adjustment as provided herein.

3.3.8 *Adjustment for Merger or Reorganization, etc.* In case of any merger, amalgamation, consolidation, arrangement, reorganization or other business combination involving the Corporation and any other corporation or other entity or person (other than a Liquidation Event), each Class B Preferred Share shall thereafter be convertible (or shall be converted into a security which shall be convertible) into the kind and amount of shares or other securities or property to which a holder of the number of Common Shares of the Corporation that would have otherwise been deliverable upon conversion of such Class B Preferred Shares would have been entitled upon such event; and, in such case, appropriate adjustment (as determined in good faith by the board of directors of the Corporation) shall be made in the application of the provisions in this section 3.3 set forth with respect to the rights and interest thereafter of the holders of the Class B Preferred Shares, to the end that the provisions set forth in this section 3.3 (including provisions with respect to changes in and other adjustments of the Class B Conversion Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any shares or other securities or property thereafter deliverable upon the conversion of the Class B Preferred Shares.

3.3.9 Anti-Dilution.

3.3.9.1 Unless otherwise agreed by the Requisite Majority Preferred Shareholders, if, at any time or from time to time, the Corporation issues or sells, or is deemed by the express provisions of this section 3.3.9 to have issued or sold, Additional Shares other than in connection with an event referred to in sections 3.3.5, 3.3.6, 3.3.7 and 3.3.8 above and except for Excluded Securities, at an Effective Price which is less than the Class B Conversion Price in effect prior to such issuance or sale, then and in each such case, the then effective Class B Conversion Price shall be reduced as of the opening of business on the date of such issue or sale, to an amount (calculated to the nearest one-hundredth of a cent) determined in accordance with the following formula:

$$CP2 = CP1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

“CP2” means the Class B Conversion Price in effect immediately after such issue of Additional Shares;

“CP1” means the Class B Conversion Price in effect immediately before such issue of Additional Shares;

“A” means the number of Common Shares outstanding immediately before such issue of Additional Shares (treating for this purpose as outstanding all Common Shares issuable upon exercise and/or conversion of Convertible Securities outstanding immediately before such issue (including the Preferred Shares outstanding immediately before such issue));

“B” means the number of Common Shares that would have been issued if such Additional Shares had been issued at a price per share equal to CP1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP1); and

“C” means the number of such Additional Shares issued in such transaction.

3.3.9.2 For the purpose of making any adjustment required under this section 3.3.9, the consideration received by the Corporation for any issue or sale of securities shall (A) to the extent it consists of cash, be computed at the net amount of cash received by the Corporation after deduction of any underwriting or similar commissions, compensation or concessions paid or allowed by the Corporation in connection with such issue or sale but without deduction of any other expenses payable by the Corporation, (B) to the extent it consists of property other than cash, be computed at the fair value of that property as determined in good faith by the board of directors of the Corporation, and (C) to the extent that Additional Shares are issued or sold together with other shares or securities or other assets of the Corporation for a consideration which covers both, be computed at the portion of the consideration so received that may be reasonably determined in good faith by the board of directors of the Corporation to be allocable to such Additional Shares.

3.3.9.3 For the purpose of the adjustment required under this section 3.3.9, if the Corporation issues or sells shares or other Convertible Securities convertible into Additional Shares, in each case other than in connection with an event referred to in sections 3.3.5, 3.3.6, 3.3.7 and 3.3.8 above and except for Excluded Securities, and if the Effective Price of such Additional Shares is less than the Class B Conversion Price then in effect, in each case the Corporation shall be deemed to have issued at the time of the issuance of such Convertible Securities the maximum number of Additional Shares issuable upon exercise or conversion thereof and to have received as consideration for the issuance of such shares an amount equal to the total amount of the consideration, if any, received by the Corporation for the issuance of such Convertible Securities, plus the minimum amounts of consideration, if any, payable to the Corporation upon the conversion thereof; provided, however, that if the minimum amount of consideration payable to the Corporation upon the exercise or conversion of Convertible Securities is reduced over time or on the occurrence or non-occurrence of specified events other than by reason of anti-dilution adjustments, the Effective Price shall be recalculated using the number to which such minimum amount of consideration is reduced; provided further that if the minimum amount of consideration payable to the Corporation upon the exercise or conversion of such Convertible Securities is subsequently increased, the Effective Price shall be recalculated using the increased minimum amount of consideration payable to the Corporation upon the

exercise or conversion of such Convertible Securities; provided further that in no event shall a Class B Conversion Price be adjusted above the Class B Conversion Price in effect immediately prior to the particular adjustment required under this section 3.3.9. No further adjustment of a Class B Conversion Price as adjusted upon the issuance of such Convertible Securities shall be made as a result of the actual issuance of Additional Shares on the exercise or conversion of any such Convertible Securities. If any such conversion privilege represented by any such Convertible Securities shall expire without having been exercised, the Class B Conversion Price as adjusted upon the issuance of such Convertible Securities shall be readjusted to the Class B Conversion Price which would have been in effect had an adjustment been made on the basis that the only Additional Shares so issued were the Additional Shares, if any, actually issued or sold on the exercise of such rights of conversion of such Convertible Securities, and such Additional Shares, if any, were issued or sold for: (A) the consideration, if any, actually received by the Corporation upon the exercise or conversion of such Convertible Securities, plus (B) the consideration, if any, actually received by the Corporation for the granting or the issue and sale of the Convertible Securities, whether or not exercised or converted, provided that such readjustment shall not apply to prior conversions of Class B Preferred Shares.

3.3.10 *Certificate of Adjustment.* In each case of an adjustment or readjustment of a Class B Conversion Price, as the case may be, or the number of Common Shares or other securities issuable upon conversion of the Class B Preferred Shares, the Corporation, at its expense, shall compute such adjustment or readjustment in accordance with the provisions hereof and prepare a certificate showing such adjustment or readjustment, and shall mail such certificate, by first class mail, postage prepaid, to each registered holder of Class B Preferred Shares at the holder's address as shown in the Corporation's books. The certificate shall set forth such adjustment or readjustment showing in reasonable detail the facts upon which such adjustment or readjustment is based.

3.3.11 *Effect of Conversion.* All Class B Preferred Shares that shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding, and all rights with respect to such shares, including the rights, if any, to receive notices and to vote, shall immediately cease and terminate on the Class B Preferred Shares Conversion Date, except only the right of the holders thereof to receive Common Shares in exchange therefor. Any Class B Preferred Shares so converted shall be retired and cancelled.

3.4 Liquidation Event.

3.4.1 In the event of a Liquidation Event, each holder of outstanding Class B Preferred Shares shall be entitled, on a *pari passu* basis with the holders of Class A Preferred Shares, to receive, in priority to any distribution of the property or assets of the Corporation to the holders of Common Shares, out of the assets of the Corporation legally available for distribution to the holders of Shares of the capital of the Corporation an amount per Class B Preferred Share in cash (the “**Class B Preferred Shares Liquidation Preference**”) calculated as follows:

$$\text{Class B Preferred Shares Liquidation Preference} = A + B$$

where:

“**A**” means the aggregate of all declared but unpaid dividends on said Class B Preferred Share up to and including the date of said Liquidation Event;

“**B**” means the Class B Initial Issue Price of said Class B Preferred Share.

If, upon any Liquidation Event, the amount available for distribution among the holders of all outstanding Preferred Shares is insufficient to permit the payment of the Preferred Shares Liquidation Preference in full, then the amount available for distribution shall be distributed among holders of the Preferred Shares on a *pari passu* and pro rata basis determined by reference to the fraction which the aggregate Class A Preferred Shares Liquidation Preference or Class B Preferred Shares Liquidation Preference, as the case may be, bears to the Preferred Shares Liquidation Preference.

3.4.2 After satisfying the Preferred Shares Liquidation Preference, the holders of record of Class B Preferred Shares shall be entitled to receive ratably with the holders of Class A Preferred Shares and Common Shares the residual assets of the Corporation upon the occurrence of a Liquidation Event on an As-Converted Basis.

3.4.3 The Corporation shall not have the power to effect a Liquidation Event that constitutes a merger, amalgamation, arrangement or consolidation in which the Corporation is a constituent party unless the Merger Agreement provides that the consideration payable to the Shareholders shall be allocated among the Shareholders in accordance with this section 3.4.

3.4.4 In the event of a Liquidation Event pursuant to this section 3.4, if any Additional Consideration is payable to the Shareholders only upon satisfaction of contingencies, the Merger Agreement shall provide that (i) the Initial Consideration shall be allocated among the Shareholders in accordance with section 3.4.1 as if the Initial Consideration were the only consideration payable in connection with such Liquidation Event; and (ii) any Additional Consideration which becomes payable to the Shareholders upon satisfaction of such contingencies shall be allocated among the Shareholders in accordance with section 3.4 after taking into account the previous payment of the Initial Consideration as part of the same transaction. For the purposes of this section 3.4.4, consideration placed into escrow or retained as a holdback to be available for satisfaction of indemnification or similar obligations in connection with such Liquidation Event shall be deemed to be Additional Consideration.

3.4.5 After payment has been made in full as provided in sections 3.4.1 and 3.4.2, the Corporation shall have satisfied its obligations with respect to the Class B Preferred Shares Liquidation Preference.

3.4.6 In the event of a Liquidation Event, no dividend or other distribution of any amount shall be made in respect of Common Shares until the Corporation has satisfied its obligations with respect to the Preferred Shares Liquidation Preference.

3.4.7 In the event of distribution of property and assets other than cash pursuant to any provision of this Schedule A, the valuation of such property and assets shall be determined in good faith by the board of directors of the Corporation.

4. COMMON SHARES

4.1 Voting Rights.

4.1.1 The holders of Common Shares shall be entitled to receive notice of attend and vote at all meetings of shareholders, except meetings at which only holders of another specified class of Shares are entitled to vote.

4.1.2 The holders of Preferred Shares and the holders of Common Shares shall vote as a single class, except for meetings at which only holders of a specified class of shares are entitled to vote. Each Common Share shall entitle its holder to one vote.

4.1.3 Holders of Common Shares of any class shall not be entitled to vote separately as a class, or to exercise dissent rights under section 190 of the Act, upon a proposal to amend the articles (whether by articles of amendment or articles of amalgamation) of the Corporation to: (i) increase or decrease any maximum number of authorized Shares of such class, or increase any maximum number of authorized shares of a class having rights or privileges equal or superior to the Shares of such class; (ii) effect an exchange, reclassification or cancellation of all or part of the Shares of such class and (iii) create a new class or series of shares equal or superior to the Shares of such class.

4.2 Dividends.

Subject to the Class A Preferred Dividend Obligations and Class B Preferred Dividend Obligations, the holders of Common Shares shall be entitled to receive any dividends payable in cash, in kind or by way of issuance of fully-paid shares at such times and in such manner as the board of directors may determine in their discretion ratably and on an As-Converted Basis with the holders of Preferred Shares. For the avoidance of doubt, no dividend shall be paid on the Common Shares unless (a) the payment of any outstanding Class A Preferred Dividend Obligations and Class B Preferred Dividend Obligations has been fully satisfied (unless such obligations are waived in whole or in part pursuant to a prior written consent of the Requisite Majority Preferred Shareholders), and (b) the dividends are at the same time paid with respect to the Common Shares and the Preferred Shares on an As-Converted Basis.

4.3 Liquidation.

Subject to the Preferred Shares Liquidation Preference, the holders of record of Preferred Shares shall be entitled to receive ratably with the holders record of Common Shares the residual assets of the Corporation upon the occurrence of a Liquidation Event on an As-Converted Basis.

5. LIQUIDATION OF PROPERTY

In the event of distribution of property and assets other than cash pursuant to any provision of this Schedule A, the valuation of such property and assets shall be determined in good faith by the board of directors of the Corporation.

BY-LAW NO. 1
of
REPARE THERAPEUTICS INC.
(the “Corporation”)

1. INTERPRETATION

1.1 Expressions used in this By-law shall have the same meanings as corresponding expressions in the *Canada Business Corporations Act* (the “Act”).

2. CORPORATE SEAL

2.1 The directors may, but need not, adopt a corporate seal, and may change a corporate seal that is adopted.

3. FINANCIAL YEAR

3.1 Until changed by the directors, the financial year of the Corporation shall end on the last day of December in each year.

4. DIRECTORS

4.1 **Number.** The number of directors shall be not fewer than the minimum and not more than the maximum provided in the articles. At each election of directors the number elected shall be the number of directors then in office unless the directors or the shareholders otherwise determine.

4.2 **Quorum.** A quorum of directors shall be a majority of directors or, such greater or lesser number as the directors or shareholders may from time to time determine.

4.3 **Calling of Meetings.** Meetings of the directors shall be held at such time and place as the Chair of the Board, the President or any two directors may determine.

4.4 **Notice of Meeting.** Notice of the time and place of each meeting of directors shall be given to each director by telephone not less than 48 hours before the time of the meeting or by written notice not less than four days before the date of the meeting, provided that the first meeting immediately following a meeting of shareholders at which directors are elected may be held without notice if a quorum is present. Meetings may be held without notice if the directors waive or are deemed to waive notice.

4.5 **Meeting by Telephonic or Electronic Facility.** If all the directors of the Corporation consent, a meeting of directors or of a committee of directors may be held by means of a telephonic, electronic or other communication facility that permits all persons participating in the meeting to communicate adequately with each other, and a director participating in a meeting by such means is deemed to be present at that meeting.

4.6 **Chair.** The Chair of the Board, or in the Chair's absence the President if a director, or in the President's absence a director chosen by the directors at the meeting, shall be chair of any meeting of directors.

4.7 **Voting at Meetings.** At meetings of directors each director shall have one vote and questions shall be decided by a majority of votes. In case of an equality of votes, the chair of the meeting shall not have a second or casting vote.

5. OFFICERS

5.1 **General.** The directors may from time to time appoint a Chair of the Board, a President, one or more Vice-Presidents, a Secretary, a Treasurer and such other officers as the directors may determine.

5.2 **Chair of the Board.** The Chair of the Board, if any, shall be appointed from among the directors and when present shall be chair of meetings of directors and shareholders and shall have such other powers and duties as the directors may determine.

5.3 **The President.** Unless the directors otherwise determine, the President shall be appointed from among the directors and shall be the chief executive officer of the Corporation and shall have general supervision of its business and affairs and in the absence of a Chair of the Board shall be chair at meetings of directors and shareholders when present.

5.4 **Vice-President.** A Vice-President shall have such powers and duties as the directors or the chief executive officer may determine.

5.5 **Secretary.** The Secretary shall give required notices to shareholders, directors, auditors and members of committees; act as secretary of meetings of directors and shareholders when present, keep and enter minutes of such meetings, maintain the corporate records of the Corporation, have custody of the corporate seal, if any, and shall have such other powers and duties as the directors or the chief executive officer may determine.

5.6 **Treasurer.** The Treasurer shall keep proper accounting records in accordance with the Act, have supervision over the safekeeping of securities and the deposit and disbursement of funds of the Corporation; report as required on the financial position of the Corporation; and have such other powers and duties as the directors or the chief executive officer may determine.

5.7 **Assistants.** Any of the powers and duties of an officer to whom an assistant has been appointed may be exercised and performed by such assistant unless the directors or the chief executive officer otherwise direct.

5.8 **Variation of Duties.** The directors may, from time to time, vary, add to or limit the powers and duties of any officer.

5.9 **Term of Office.** Each officer shall hold office until the officer's successor is elected or appointed, provided that the directors may at any time remove any officer from office but such removal shall not affect the rights of such officer under any contract of employment with the Corporation.

6. INDEMNIFICATION AND INSURANCE

6.1 **Indemnification of Directors and Officers.** The Corporation shall indemnify a director or officer, a former director or officer, or another individual who acts or acted at the Corporation's request as a director or officer, or in a similar capacity of another entity, and the heirs and legal representatives of such individual to the extent permitted by the Act.

6.2 **Insurance.** The Corporation may purchase and maintain insurance for the benefit of any person referred to in Section 6.1 to the extent permitted by the Act.

7. SHAREHOLDERS

7.1 **Quorum.** A quorum for the transaction of business at a meeting of shareholders shall be two persons present and each entitled to vote at the meeting.

7.2 **Casting Vote.** In case of an equality of votes at a meeting of shareholders the Chair of the meeting shall not have a second or casting vote.

7.3 **Scrutineers.** The Chair at any meeting of shareholders may appoint one or more persons (who need not be shareholders) to act as scrutineer or scrutineers at the meeting.

8. DIVIDENDS AND RIGHTS

8.1 **Declaration of Dividends.** Subject to the Act, the directors may from time to time declare dividends payable to the shareholders according to their respective rights and interests in the Corporation.

8.2 **Cheques.** A dividend payable in money shall be paid by cheque to the order of each registered holder of shares of the class or series in respect of which it has been declared and mailed by prepaid ordinary mail to such registered holder at the address of such holder in the Corporation's securities register, unless such holder otherwise directs. In the case of joint holders the cheque shall, unless such joint holders otherwise direct, be made payable to the order of all such joint holders and mailed to them at their address in the Corporation's securities register. The mailing of such cheque as aforesaid, unless the same is not paid on due presentation, shall satisfy and discharge the liability for the dividend to the extent of the sum represented thereby plus the amount of any tax which the Corporation is required to and does withhold.

8.3 **Non-Receipt of Cheques.** In the event of non-receipt of any dividend cheque by the person to whom it is sent as aforesaid, the Corporation shall issue to such person a replacement cheque for a like amount on such terms as to indemnity, reimbursement of expenses and evidence of non-receipt and of title as the directors may from time to time prescribe, whether generally or in any particular case.

8.4 **Unclaimed Dividends.** To the extent permitted by applicable law, any dividends unclaimed after a period of two years from the date on which the same has been declared to be payable shall be forfeited and shall revert to the Corporation.

9. EXECUTION OF INSTRUMENTS

9.1 Deeds, transfers, assignments, agreements, proxies and other instruments may be signed on behalf of the Corporation by any two directors or by a director and an officer or by one of the Chair of the Board, the President and a Vice-President together with one of the Secretary and the Treasurer or in such other manner as the directors may determine.

10. NOTICES

10.1 **Omissions and Errors.** Accidental omission to give any notice to any shareholder, director, auditor or member of a committee, or non-receipt of any notice or any error in a notice not affecting the substance thereof shall not invalidate any action taken at any meeting held pursuant to such notice.

RESOLVED THAT the foregoing by-law is made a by-law of the Corporation by the signatures hereto of all the directors of the Corporation pursuant to the *Canada Business Corporations Act*, this 6th day of September, 2016.

/s/ Lloyd M. Segal

Lloyd M. Segal

/s/ Jerel C. Davis

Jerel Davis

RESOLVED THAT the foregoing by-law is confirmed as a by-law of the Corporation by the signature hereto of the sole shareholder of the Corporation pursuant to the *Canada Business Corporations Act*, this 6th day of September, 2016.

/s/ Jerel C. Davis

Jerel Davis, in trust for Versant Venture Capital V, L.P.

REPARE THERAPEUTICS INC.

AMENDED AND RESTATED
REGISTRATION RIGHTS AGREEMENT

September 3, 2019

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**AMENDED AND RESTATED
REGISTRATION RIGHTS AGREEMENT**

THIS AGREEMENT made as of the 3rd day of September, 2019.

AMONG:

REPARE THERAPEUTICS INC., a corporation incorporated *under the Canada Business Corporations Act* (the “**Corporation**”)

-and -

Each of the Persons listed on Schedule A (the “**Class A Investors**”) and Schedule B (the “**Class B Investors**”) and any Person who becomes a party pursuant to Section 7.7 (collectively, the “**Investors**” and individually, an “**Investor**”)

WHEREAS the Class A Investors and the Corporation are parties to a registration rights agreement dated June 22, 2017 (the “**Original Registration Rights Agreement**”);

WHEREAS the Class B Investors have agreed to purchase Class B Preferred Shares as set out and pursuant to a Class B Share subscription agreement dated August 27, 2019 (the “**Class B Share Subscription Agreement**”);

WHEREAS as an inducement to the Class B Investors to complete the transactions contemplated by the Class B Share Subscription Agreement, the Corporation and the Class A Investors have agreed to amend and restate the Original Registration Rights Agreement as herein provided for;

AND WHEREAS the parties hereto desire to amend and restate the Original Registration Rights Agreement and to enter into this Agreement,

NOW THEREFORE IN CONSIDERATION of the mutual covenants and agreements contained in this Agreement and for other good and valuable consideration (the receipt and sufficiency of which are acknowledged), the parties hereto agree as follows:

**ARTICLE 1
INTERPRETATION**

1.1 Construction

In this Agreement, except as otherwise expressly provided:

- (a) words denoting the singular only shall include the plural and vice versa and words denoting any gender shall include all genders;

- (b) words importing persons shall include individuals, partnerships, associations, joint ventures, syndicates, sole proprietorships, trusts, unincorporated organizations, limited liability companies, corporations, trustees, executors, administrators or other legal personal regulatory bodies and agencies, governments or governmental agencies, authorities and entities however designated or constituted, and unless the context otherwise requires, any reference in this Agreement to a person shall include, and be deemed to be a reference also to, any successor or assign of such person;
- (c) except as otherwise provided, all amounts in this Agreement are stated and shall be paid in the currency of the United States of America;
- (d) the division of this Agreement into Articles and Sections and the insertion of headings are for convenience of reference only and shall not affect the construction or interpretation of this Agreement. Unless the subject matter or context requires otherwise, references to Articles or Sections are to Articles and Sections of this Agreement;
- (e) references to “herein”, “hereby”, “hereunder”, “hereof” and similar expressions are references to this Agreement and not to any particular Article or Section of this Agreement;
- (f) the word “including” shall mean “including without limitation” and “includes” shall mean “includes without limitation”;
- (g) the expressions “the aggregate”, “the total”, “the sum”, “collectively” and expressions of similar meaning shall mean “the aggregate (or total or sum) without duplication”;
- (h) in the computation of periods of time, unless otherwise expressly provided, the word “from” means “from and including” and the words “to” and “until” mean “to but excluding”;
- (i) whenever a provision of this Agreement requires an approval or consent by a party and notification of such approval or consent is not delivered within the applicable time limit, then, unless otherwise specified, the party whose consent or approval is required shall be conclusively deemed to have withheld its consent or approval; and
- (j) whenever any payment is to be made or action to be taken under this Agreement is required to be made or taken on a day other than a Business Day, then such payment shall be made or action shall be taken on or before the requisite time on the next Business Day immediately following.

1.2 Severability

If any provision of this Agreement is, or becomes, illegal, invalid or unenforceable, such provision shall be severed from this Agreement and be ineffective to the extent of such illegality, invalidity or unenforceability. The remaining provisions hereof shall be unaffected by such provision and shall continue to be valid and enforceable.

1.3 Governing Laws

- (a) This Agreement shall be governed by, and interpreted in accordance with, the Laws of the Province of Ontario and the federal Laws of Canada applicable therein.
- (a) The parties hereby irrevocably attorn and submit to the non-exclusive jurisdiction of the courts of the Province of Ontario with respect to any matter arising under or related to this Agreement.

ARTICLE 2 CERTAIN DEFINITIONS

2.1 Definitions

As used in this Agreement, the following terms shall have the following respective meanings:

“Additional Parties” has the meaning given to that term in Section 7.7.

“Affiliate” means, with respect to any Person, any other Person that directly, or indirectly through one or more intermediaries, controls, is controlled by or is under common control with the specified Person, or any venture capital fund, investment fund and separate account now or hereafter existing that is controlled by one or more general partners or managing members of, or shares the same management company with, such Person. As used in this definition, “control”, “controlled by” and “under common control with” means possession, directly or indirectly, of power to direct or cause the direction of management or policies of such Person (whether through ownership of securities or other partnership or ownership interests, as trustee, personal representative or executive or by contract, credit agreement or otherwise), provided that in any event, any Person which owns directly, indirectly or beneficially 50% or more of the securities having voting power for the election of directors or other governing body of a corporation or 50% or more of the partnership interests or other ownership interests of any other Person will be deemed to control such Person.

“As-Converted Basis” means, for the purposes of this Agreement, that if a calculation of a number of securities is to be made on an “as-converted basis”, the number of securities is determined as the number of Common Shares that would be held by the applicable Holder if all securities held by such Holder that are, directly or indirectly, exercisable or exchangeable for or convertible into Common Shares are so exercised, exchanged or converted.

“Articles of Incorporation” means the articles of incorporation of the Corporation, as amended and restated from time to time.

“Business Day” means any day on which banks are generally open for business, other than a Saturday, a Sunday or a statutory holiday in the Provinces of Quebec and Ontario or the State of New York.

“Canadian Prospectus” means a preliminary prospectus and a final prospectus (including the short forms thereof) prepared in accordance with applicable Canadian Securities Laws for the purposes of qualifying securities for distribution or distribution to the public, as the case may be, in any province or territory of Canada, including all amendments and supplements thereto.

“**Canadian Securities Laws**” means statutes and regulations applicable to the trading of securities in any province or territory of Canada including applicable rules, instruments, rulings, policy statements, blanket rulings, orders, communiqués and interpretation notes issued thereunder or in relation thereto, promulgated by the Commissions in Canada, as the same may hereinafter be amended from time to time or replaced.

“**Class A Investors**” has the meaning given to that term in the preamble.

“**Class A Preferred Shares**” means the Class A convertible preferred shares in the capital of the Corporation and any other securities issued or issuable thereon or in respect thereof (whether by way of a share dividend or share split or in exchange for or upon conversion of such shares or otherwise in connection with a combination of shares, distribution, recapitalization, merger, consolidation or other corporate reorganization), and for greater certainty, a reference to Class A Preferred Shares includes Common Shares issued on conversion of such Class A Preferred Shares.

“**Class B Investors**” has the meaning given to that term in the preamble.

“**Class B Preferred Shares**” means the Class B convertible preferred shares in the capital of the Corporation and any other securities issued or issuable thereon or in respect thereof (whether by way of a share dividend or share split or in exchange for or upon conversion of such shares or otherwise in connection with a combination of shares, distribution, recapitalization, merger, consolidation or other corporate reorganization), and for greater certainty, a reference to Class B Preferred Shares includes Common Shares issued on conversion of such Class B Preferred Shares.

“**Class B Share Subscription Agreement**” has the meaning given to that term in the recitals.

“**Common Shares**” means the Common Shares in the capital of the Corporation and any other securities issued or issuable thereon or in respect thereof (whether by way of a share dividend or share split or in exchange for or upon conversion of such shares or otherwise in connection with a combination of shares, distribution, recapitalization, merger, consolidation or other corporate reorganization).

“**Commissions**” means (i) the SEC, and (ii) any securities commission or securities regulatory authority in each applicable province and territory of Canada, or, in each case, any successor regulatory authorities having similar powers in the United States or Canada, as the case may be.

“**Corporation**” has the meaning given to that term in the preamble and includes the Corporation’s successors by merger, amalgamation, acquisition, reorganization or otherwise.

“**Delay Certificate**” has the meaning given to that term in Section 3.1(c).

“**Demand Registration**” has the meaning given to that term in Section 3.1(a).

“**Final Prospectus**” has the meaning given to that term in Section 6.1.

“**Holder**” means:

- (i) each of the Persons listed on Schedule A or Schedule B;
- (ii) any other permitted person to whom the rights under this Agreement have been transferred by any of them (or their respective successors or permitted assigns) in accordance with Section 3.4; and
- (iii) any Person that becomes a party to this Agreement in accordance with Section 7.7.

“**Holder Indemnified Parties**” has the meaning given to that term in Section 6.1.

“**Indemnified Party**” has the meaning given to that term in Section 6.3(a).

“**Indemnifying Party**” has the meaning given to that term in Section 6.3(a).

“**Initial Offering**” means the initial public offering of securities of the Corporation in any jurisdiction.

“**Initiating Holder**”, for the purposes of Section 3.1, has the meaning given to that term in Section 3.1(a), and for the purposes of Section 3.2, has the meaning given to that term in Section 3.2(a).

“**Investor Shares**” means the Preferred Shares and the Common Shares issuable upon conversion of the Preferred Shares.

“**Investors**” has the meaning given to that term in the preamble.

“**Law**” means any and all laws, including all federal, state, provincial, territorial and local statutes, codes, ordinances, guidelines, decrees, rules, regulations and municipal by-laws and all judicial, arbitral, administrative, ministerial, departmental or regulatory judgments, orders, directives, decisions, rulings or awards or other requirements of any person binding on or affecting the person referred to in the context in which the term is used.

“**Major Investors**” has the meaning given to it in Section 5.1 of the Shareholders Agreement;

“**NI 44-101**” means National Instrument 44-101 of the Canadian Securities Administrators entitled “Short Form Prospectus Distributions”, and any successor policy, rule, regulation or similar instrument.

“**NI 45-102**” means National Instrument 45-102 of the Canadian Securities Administrators entitled “Resale of Securities”, and any successor policy, rule, regulation or similar instrument.

“**NI 51-102**” means National Instrument 51-102 of the Canadian Securities Administrators entitled “Continuous Disclosure Obligations”, and any successor policy, rule, regulation or similar instrument.

“**Notice**” has the meaning given to that term in Section 7.1.

“**Original Registration Rights Agreement**” has the meaning given to that term in the preamble.

“**Person**” means any individual or any entity, including any partnership, limited partnership, joint venture, syndicate, sole proprietorship, company or corporation with or without share capital, unincorporated association or trust and any trustee, executor, administrator or other legal personal representative, regulatory body or agency, government or governmental agency, authority or entity however designated or constituted;

“**Piggy-Back Registration**” has the meaning given to that term in Section 3.3(a)(i).

“**Preferred Shares**” means, collectively, the Class A Preferred Shares and the Class B Preferred Shares;

“**Register**”, “**registered**” and “**registration**” refer to a registration effected by preparing and filing a registration statement in compliance with the U.S. Securities Act, and the declaration or ordering of the effectiveness of such registration statement. In addition, unless inconsistent with the context: (i) the term “registration” and any references to the act of registering include the qualification under Canadian Securities Laws of a Canadian Prospectus in respect of a distribution or distribution to the public, as the case may be, of securities; (ii) the term “registered” as applied to any securities includes a distribution or distribution to the public, as the case may be, of securities so qualified; (iii) the term “registration statement” includes a Canadian Prospectus; and (iv) any references to a registration statement having become effective, or similar references, shall include a Canadian Prospectus for which a final receipt has been obtained from the relevant Canadian Commissions. Any registration of securities that occurs concurrently in Canada and the United States shall be counted as a single registration for the purposes of this Agreement.

“**Registrable Securities**” means, with respect to any Holder, (i) the Common Shares held by such Holder, (ii) the Common Shares or other securities of the Corporation issued or issuable to such Holder upon the conversion or exchange of such Holder’s Investor Shares or as a dividend or other distribution on such Investor Shares or with respect to, in exchange for, or in replacement of such Preferred Shares; and (iii) any Common Shares or other securities of the Corporation issued as a dividend or other distribution on such Common Shares or other securities that are Registrable Securities pursuant to (ii) above, or with respect to, in exchange for, or in replacement of any of the Common Shares or other securities that are Registrable Securities pursuant to the above. As to any particular Registrable Securities, such securities shall cease to be Registrable Securities when they have been distributed to the public pursuant to a registration or sold to the public through a dealer or market maker in compliance with applicable Securities Laws. For purposes of this Agreement, a Person shall be deemed to be the holder of Registrable Securities, and the Registrable Securities shall be deemed to be in existence, whenever such Person has the right to acquire such Registrable Securities (upon conversion or exercise or otherwise, but disregarding any restrictions or limitations upon exercise of such right), whether or not the acquisition has actually been effected, and such Person shall be entitled to exercise the rights of a holder of Registrable Securities hereunder.

“Registration Expenses” means all expenses incurred by the Corporation that are associated with, or related to, the Corporation’s performance of, or compliance with, this Agreement, including, without limitation, all registration, qualification, filing, listing and Financial Industry Regulatory Authority, Inc. fees, all fees and expenses of complying with the Securities Laws (including, without limitation, the securities or blue sky Laws of the United States), all duplicating and printing expenses, all translation fees and expenses, all fees of transfer agents and registrars, all costs of insurance, all escrow fees and expenses, all messenger and delivery expenses, any stock exchange fees, the fees and expenses of the Corporation’s legal counsel and auditors, including the expenses of any regular or special audits or “cold comfort” letters required by or incident to such performance and compliance, up to US\$35,000 for reasonable fees and disbursements of not more than one counsel for all of the selling Holders, such counsel to be selected by the holders of the majority of the Investor Shares included in a registration, or if no such securities are included in the applicable registration, by the holders of the majority of Registrable Securities included in the applicable registration, in each case on an As-Converted Basis; provided however that the foregoing cap shall not apply in connection with the Initial Offering of the Corporation, and any reasonable fees and disbursements of underwriters customarily paid by Corporations or sellers of securities; provided, however, that Registration Expenses shall not include Selling Expenses.

“Rule 144” has the meaning given to it in Section 3.1(c);

“SEC” means the United States Securities and Exchange Commission or any other federal agency at the time administering the U.S. Securities Act.

“Securities Laws” means, collectively, the Canadian Securities Laws and the U.S. Securities Laws.

“Selling Expenses” means underwriting fees, discounts and commissions, fees and disbursements of the selling Holders’ counsel (other than the one counsel selected to represent all selling Holders) and any transfer taxes relating to the disposition of the Registrable Securities, each incurred in connection with a registration pursuant to Sections 3.1, 3.2 and 3.3.

“Shareholders Agreement” means the second amended and restated unanimous shareholders’ agreement dated as of the date hereof and entered into among the Corporation and all of its shareholders, as amended, supplemented, restated or replaced from time to time;

“Short Form Registration” means a registration effected using (i) Form S-3, Form F-3 or Form F-10 (or any comparable or successor form or forms under the applicable Securities Laws), if the Initial Offering was completed in the United States, or (ii) a short form Canadian Prospectus in the form of Form 44-101F1 pursuant to NI 44-101 (or any comparable or successor form or forms under the Canadian Securities Laws).

“**Subsidiary**” or “**Subsidiaries**” in respect of any Holder means any entity of which such Holder and/or any of its other Subsidiaries directly or indirectly owns at the time outstanding securities of such entity representing at least fifty percent (50%) of the voting power of such entity.

“**U.S. Exchange Act**” means the Securities Exchange Act of 1934, as amended, or any similar federal statute, and the rules and regulations of the SEC promulgated thereunder, as they each may, from time to time, be in effect.

“**U.S. Securities Act**” means the Securities Act of 1933, as amended, or any similar federal statute and the rules and regulations of the SEC promulgated thereunder, as they each may, from time to time, be in effect.

“**U.S. Securities Laws**” means all U.S. federal and state securities Laws and regulations, including, without limitation, the U.S. Securities Act and the U.S. Exchange Act.

ARTICLE 3 REGISTRATIONS

3.1 Demand Registrations

- (a) **Request for Registration.** Subject to the provisions set out in this Section 3.1, at any time or from time to time after the date that is the earlier of (i) five years from the date hereof and (ii) six months after the completion of the Initial Offering, any one or more of the Holders holding at least 50.1% of the then-outstanding Registrable Securities held by all Holders (for the purposes of this Section 3.1, collectively, if applicable, the “**Initiating Holder**”) may require the Corporation to file and take such other steps as may be necessary under the Securities Laws to facilitate a public offering (including an Initial Offering) with respect to all or part of such Initiating Holder’s Registrable Securities (each such registration, a “**Demand Registration**”), by giving written notice of such Demand Registration to the Corporation, which written notice shall:
- (i) specify the number of Registrable Securities which the Initiating Holder intends to offer and sell;
 - (ii) specify whether the Demand Registration is to be effected in Canada and / or the United States;
 - (iii) express the intention of the Initiating Holder to offer or cause the offering of such number of Registrable Securities; and
 - (iv) if the Registrable Securities to be offered and sold by the Initiating Holder are to be issued pursuant to the conversion, exchange or exercise of Preferred Shares or any other securities convertible into Registrable Securities, be accompanied by appropriate notices of such conversion, exchange or exercise, as applicable, which notices may be contingent upon the sale of that number of Registrable Securities in the Demand Registration.

- (b) **Response to Registration Request.** Upon receipt of the written notice of the Initiating Holder pursuant to Section 3.1(a), the Corporation shall:
- (i) promptly, and in any event, within three Business Days of receipt, give written notice of the proposed Demand Registration to the other Holders to provide the other Holders with the opportunity to participate in such registration with respect to the Registrable Securities held by such other Holders; and
 - (ii) as soon as practicable, but in any event within 60 days (or 120 days in the case of an Initial Offering) after receipt of the request from the Initiating Holder, file with the applicable Commissions and use its commercially reasonable efforts to effect the registration, qualification or compliance (including, without limitation, filing post-effective amendments, appropriate qualifications under applicable blue sky or other state securities Laws and appropriate compliance with applicable Securities Laws and any other governmental requirements or regulations) as may be so requested and as would permit or facilitate the sale and distribution of all or that portion of the Registrable Securities as are specified in the Initiating Holder's request, together with all or that portion of the Registrable Securities of the other Holders, if joining in that request and as are specified in a written request received by the Corporation within five Business Days after receipt by such other Holders of the written notice from the Corporation referred to in Section 3.1(b)(i).
- (c) **Limitations on Registration Obligations.** The Corporation shall not be required to effect more than two Demand Registrations pursuant to this Section 3.1; provided, for greater certainty, that participating in a registration pursuant to the exercise of piggy-back rights by a Holder shall not constitute a Demand Registration; and provided further, subject to Section 3.2, that a registration shall not constitute a Demand Registration requested under this Section 3.1 unless and until it has become effective and the Initiating Holders are able to register and sell at least 90% of the Registrable Securities requested to be included in such registration. In addition, the Corporation will not be obligated to take any action to effect any registration pursuant to this Section 3.1 if the Corporation furnishes to the Initiating Holder a certificate signed by the Chief Executive Officer of the Corporation stating that (a) in the good faith judgment of the Board of Directors of the Corporation, acting reasonably, any such action to effect a registration in the immediate future would materially interfere with a material bona fide financing, acquisition or other transaction being considered at the time of receipt of the request from the Initiating Holder or would require disclosure of non-public information, the premature disclosure of which could materially adversely affect the Corporation or materially interfere with such transaction; or (b) the Corporation is engaged in an issuer bid, self-tender or exchange offer and the proposed registration would cause a violation of applicable Securities Laws (each of (a) and (b), a "**Delay Certificate**"), then the Corporation's obligation to file a registration statement under this Section 3.1 may be deferred, and any time periods with respect to filing

or effectiveness thereof shall be tolled accordingly, for a period not to exceed 90 days from the date the Corporation would have been required to file such registration statement after its receipt of the written request to file such registration statement from the Initiating Holder, provided that the Corporation may not exercise this deferral right more than once in any consecutive 12-month period. The Corporation shall not be required to effect any Demand Registration pursuant to this Section 3.1 (i) if such request is made within 180 days after the Corporation effects the Initial Offering; (ii) if the Corporation delivers notice to the holders of Registrable Securities within 30 days of receipt of such request of the Corporation's intent to file a registration statement for the Initial Offering within 90 days of such notice; (iii) if such securities become eligible for sale in the U.S. pursuant to Rule 144 under the U.S. Securities Act ("**Rule 144**") without the volume or manner-of-sale restrictions and without the requirement for the Corporation to be in compliance with the current public information requirement under Rule 144(c)(1); or (iv) if such Demand Registration will not cover Registrable Securities having an anticipated aggregate gross offering price of at least US\$50,000,000 (before deduction of underwriters' commissions and expenses).

(d) **Underwriting.**

- (i) If the Initiating Holder intends to dispose of the Registrable Securities for which a Demand Registration has been requested under Section 3.1(a) by means of an underwriting, the Initiating Holder shall so advise the Corporation as part of its request pursuant to Section 3.1(a) and the Corporation will advise the other Holders as part of the notice given pursuant to Section 3.1(b)(i) that the right of the other Holders to registration pursuant to Section 3.1 will be conditioned upon that Holder's participation in the underwriting arrangements required by this Section 3.1(d), and the inclusion of that Holder's Registrable Securities in the underwriting to the extent requested will be limited to the extent provided in this Agreement.
- (ii) The Holders of a majority of the Registrable Securities included in any Demand Registration (on an As-Converted Basis) will have the right to select the investment banker(s), underwriter(s), and manager(s) to administer the offering, subject to prior consultation with the Corporation.
- (iii) The Corporation (together with the Holders proposing or required to distribute their Registrable Securities through such underwriting) shall enter into an underwriting agreement in customary form with the underwriters selected for that underwriting by the Corporation, acting reasonably, such agreement to be in form and substance satisfactory to the Holders requesting such registration, acting reasonably, and to contain such representations and warranties and indemnity and contribution provisions by the Corporation and such other terms as are customarily contained in agreements of that type. Each Holder shall be a party to such underwriting agreement and may, at its option, require that any or all of the representations and warranties by,

and the other agreements on the part of, the Corporation to and for the benefit of such underwriters shall also be made to and for the benefit of each Holder and that any or all of the conditions precedent to the obligations of such underwriters under such underwriting agreement be conditions precedent to the obligations of each Holder. No Holder requesting a Demand Registration shall be required to make any representations or warranties to or agreements with the Corporation or the underwriters other than representations, warranties or agreements regarding such Holder and its intended method of distribution and any other representation required by the applicable Securities Laws.

- (iv) Notwithstanding any other provision of this Section 3.1, if the underwriters, acting reasonably and in good faith, determine in writing that, in their opinion, the number of securities to be included in a Demand Registration exceeds the number of securities that can be sold in the offering relating to such Demand Registration and that the number of securities proposed to be included in the offering in respect of such Demand Registration would adversely affect the price per security to be sold in such offering in respect of such Demand Registration, the underwriters may exclude some or all of the Registrable Securities from the registration. The Corporation will advise the Holders of Registrable Securities of this exclusion and the number and estimated dollar value of Registrable Securities that may be included in the registration. The underwriting will be allocated (i) first, among the Holders of Registrable Securities, in respect of their Registrable Securities, on a pro rata basis based on the number of Registrable Securities held by all such Holders calculated on an As-Converted Basis, or in such manner as they otherwise agree, (ii) second, to the Corporation if it elects to participate in such registration, and (iii) third, among any other holders of the securities to be included in such offering, allocated among such holders pro rata based on the number of securities held by all such holders calculated on an as converted basis or in such manner as they may otherwise agree. In no event shall any Registrable Securities be excluded from such underwriting unless all other securities are first excluded.
- (v) If each of the Holders has included all of the Registrable Securities which such Holder desires to include in that registration, then the Corporation may include additional securities in the registration for sale for the Corporation's account on the same terms as the Holders' Registrable Securities, provided the underwriters advise the Corporation and the Holders in writing that the inclusion does not adversely affect the marketing and the orderly sale of the Holders' Registrable Securities included in that registration at a price range acceptable to the Holders, acting reasonably. If the Corporation determines to include Registrable Securities to be sold by it in any registration requests pursuant to this Section 3.1, such registration shall be deemed to have been a Piggy-Back Registration under Section 3.3, and not a Demand Registration under this Section 3.1. To facilitate the allocation of Registrable Securities in accordance with the above provisions, the Corporation or the underwriters may round the number of Registrable Securities allocated to any Holder to the nearest appropriate "round number" integral.

- (vi) If any Holder disapproves of the terms of the underwriting, such Holder may elect to withdraw from the underwriting and registration by written notice to the Corporation and the Initiating Holders. Those Registrable Securities of such withdrawing Holder shall continue to be subject to the terms of this Agreement.

3.2 Short Form Registrations

- (a) **Request for Registration.** If, at any time while the Corporation is eligible to complete a Short Form Registration, the Corporation shall receive from any one or more of the Holders (in this Section 3.2, the “**Initiating Holder**”) a written request or requests that the Corporation effect a Short Form Registration with respect to all or a part of the Registrable Securities owned by such Holder or Holders, the Corporation shall:
 - (i) promptly, and in any event, within three Business Days of receipt, give written notice of the proposed Short Form Registration to the other Holders offering them the opportunity to participate in such registration with respect to the Registrable Securities held by such other Holders; and
 - (ii) as soon as practicable, but in any event within 45 days after receipt of the request from the Initiating Holder, file with the applicable Commissions and use its best efforts to effect the registration, qualification or compliance (including, without limitation, filing post-effective amendments, appropriate qualifications under applicable blue sky or other state securities Laws and appropriate compliance with applicable Securities Laws and any other governmental requirements or regulations) as may be so requested and as would permit or facilitate the sale and distribution of all or that portion of the Registrable Securities as are specified in the Initiating Holder’s request, together with all or that portion of the Registrable Securities of the other Holders (if any) joining in that request as are specified in a written request received by the Corporation within five Business Days after receipt by the other Holders of the written notice from the Corporation referred to in Section 3.1(b)(i). The Corporation shall use its best efforts to keep such registration effective until the earlier of 120 days from the date of effectiveness or until the Holders have completed the distribution described in such registration statement.
- (b) **Limitations on Short Form Registration Obligations.** The Corporation shall not be required to complete any Short Form Registration pursuant to this Section 3.2:
 - (i) if the Corporation is not eligible to complete a Short Form Registration pursuant to applicable Securities Laws;

- (ii) if the Holders propose to sell Registrable Securities pursuant to such Short Form Registration such that the aggregate offering price is less than US\$5,000,000;
- (iii) if the Corporation furnishes a Delay Certificate to the Holders, in which event the Corporation's obligation to file a registration statement under this Section 3.2 may be deferred for a period not to exceed 90 days from the date of receipt of the written request to file such registration statement from the Initiating Holder, provided that the Corporation may not exercise this deferral right more than once in any consecutive twelve-month period;
- (iv) if the Corporation has, within the twelve-month period preceding the date of such request, already effected two Short Form Registrations for the Holders pursuant to this Section 3.2;
- (v) if the request is made within 180 days after the Corporation effects the Initial Offering; or
- (vi) if such Registrable Securities may be sold pursuant to Rule 144 without the volume or manner-of-sale restrictions and without the requirement for the Corporation to be in compliance with the current public information requirement under Rule 144(c)(1).

For greater certainty, a registration shall not constitute a Short Form Registration requested under this Section 3.2 unless and until it has become effective and the Initiating Holders are able to register and sell at least 90% of the Registrable Securities requested to be included in such registration.

- (c) **Underwritings.** If the Initiating Holder intends to distribute the Registrable Securities covered by its request by means of an underwriting, it shall so advise the Corporation as a part of its request made pursuant to Section 3.2(a) and the Corporation shall include such information in the written notice referred to in Section 3.2(a)(i). The provisions of Section 3.1(d) shall be applicable to such request mutatis mutandis.

3.3 Piggy-Back Registrations

- (a) **Notice of Registration.** If at any time or from time to time the Corporation determines to register any of its securities (other than pursuant to a Registration Statement on Form S-8, Form S-4 or Form F-4 or their successors or any other form for a similar limited purpose, or any registration statement covering only securities in exchange for securities or assets of another corporation), either for its own account or the account of a security holder or holders or both (other than pursuant to a Demand Registration requested under Section 3.1 or a Short Form Registration required under Section 3.2) including any Initial Offering, on each occasion the Corporation shall:

- (i) promptly, and in any event, within three Business Days of such determination, give written notice of the proposed registration to each of the Holders (each such registration, a “**Piggy-Back Registration**”), provided such notice must be given no later than 30 days prior to the filing of the registration statement by the Corporation in connection with such registration; and
- (ii) include in that registration (and any related qualification or compliance under applicable blue sky Laws or other state securities Laws or other Securities Laws), and use its best efforts to include in any underwriting involved in the registration, all or any portion of the Registrable Securities specified in a written request made by any of the Holders and received by the Corporation within 15 Business Days after receipt by such Holder of the written notice delivered by the Corporation pursuant to Section 3.3(a)(i). Such written request may specify that such Holder wishes to include all or a part of the Holder’s Registrable Securities.

(b) Underwriting.

- (i) If the Piggy-Back Registration of which the Corporation gives notice pursuant to Section 3.3(a)(i) is for a registered offering involving an underwriting, the Corporation will so advise each of the Holders as a part of such written notice. In such event, the right of any Holder to registration pursuant to this Section 3.3 will be conditioned upon that Holder’s participation in the underwriting arrangements required by this Section 3.3(b) and the inclusion of that Holder’s Registrable Securities in the underwriting to the extent requested will be limited to the extent provided in this Agreement.
- (ii) In any Piggy-Back Registration initiated by the Corporation, the Corporation will have the right to select the investment banker(s), underwriter(s), and manager(s) to administer the offering, subject to the approval of the Holders of a majority of the Registrable Securities included in such registration (on an As-Converted Basis), which in each case will not be unreasonably withheld.
- (iii) The Holders proposing to distribute their securities through such underwriting will (together with the Corporation and the other shareholders distributing their securities through that underwriting) enter into an underwriting agreement in customary form with the underwriters, such agreement to be in form and substance satisfactory to all shareholders requesting such registration, acting reasonably, and to contain such representations and warranties and indemnity and contribution provisions by the Corporation and such other terms as are customarily contained in agreements of that type. Each such shareholder (including the Holders) shall be a party to such underwriting agreement and may, at its option, require that any or all of the representations and warranties by, and the other

agreements on the part of, the Corporation to and for the benefit of such underwriters shall also be made to and for the benefit of each such Holder and that any or all of the conditions precedent to the obligations of such underwriters under such underwriting agreement be conditions precedent to the obligations of each such Holder. No Holder requesting a registration shall be required to make any representations or warranties to or agreements with the Corporation or the underwriters other than representations, warranties or agreements regarding such Holder and its intended method of distribution and any other representation required by the applicable Securities Laws.

- (iv) Notwithstanding any other provision of this Section 3.3, if the underwriters and the Corporation, acting reasonably and in good faith, together determine in writing that, in their opinion, the number of securities to be included in the offering relating to such Piggy-Back Registration exceeds the number of securities that can be sold in such offering and that the number of securities proposed to be included in such offering would adversely affect the price per security to be sold in such offering, the Corporation shall be required to include in the offering only that number of such Registrable Securities that the underwriters and the Corporation determine, acting reasonably and in good faith, will not jeopardize the success of the offering. The Corporation will advise the Holders of Registrable Securities distributing their securities through such underwriting of this exclusion and the number and estimated dollar value of the Holders' securities that may be included in the registration. The underwriting will be allocated (i) first, to the Corporation (but only if it initiates such offering failing which the priority set forth in Section 3.1(d)(iv) shall apply), (ii) second, among the Holders of Registrable Securities, in respect of their Registrable Securities, on a pro rata basis based on the number of Registrable Securities held by all such Holders calculated on an As-Converted Basis, or in such manner as they may otherwise agree, and (iii) third, among all other holders of the securities to be included in such offering, allocated among such holders pro rata based on the number of securities held by all such holders calculated on an as converted basis or in such manner as they may otherwise agree; provided in each case that, unless the registration is in respect of the Initial Offering, in no event shall the Registrable Securities owned by the Holders included in such underwriting be reduced below 30% of the total number of securities included in such underwriting. To facilitate the allocation of Registrable Securities in accordance with the above provisions, the Corporation may round the number of Registrable Securities allocated to any Holder to the nearest appropriate "round number" integral.
- (v) If a Holder disapproves of the terms of the underwriting, such Holder may elect to withdraw from that underwriting by written notice to the Corporation, the other Holders, the underwriters and the other participating shareholders. Any Registrable Securities of such withdrawing Holder excluded or withdrawn from that underwriting will be withdrawn from registration, and will continue to be subject to the terms of this Agreement.

- (c) **Right to Terminate Registration.** The Corporation has the right to terminate or withdraw any registration initiated by it under this Section 3.3 prior to the effectiveness of the registration whether or not any Holder or other shareholder has elected to include securities in that registration. The Corporation shall have no liability to any Holder in respect of such withdrawal other than in respect of the reasonable pro-rata Registration Expenses incurred by any Holder if such Holder has elected to include securities in that registration.

3.4 Transfer of Registration Rights

The rights to cause the Corporation to register securities granted to any Holder under Sections 3.1, 3.2, and 3.3 may (if agreed to by such Holder) be transferred or assigned to a transferee or assignee to whom a Holder transfers or assigns (A) not less than 1,000,000 (subject to adjustments for stock dividends, splits, combinations and similar events) of such Holder's Registrable Securities (other than a transfer under Rule 144 of the U.S. Securities Act or a registration effected pursuant to this Agreement or any other transfer under which securities will cease to be Registrable Securities), or (B) all or part of such Holder's Registrable Securities where such transferee or assignee is (i) a Subsidiary or Affiliate of such Holder or, where the Holder is a limited or general partnership, where such transferee or assignee is a constituent Affiliated limited or general partner or retired partner of the Holder or an Affiliated partnership, (ii) a Major Investor, (iii) any member or former member of any Holder, where the Holder is a limited liability company, or (iv) any family member or trust for the benefit of any Holder, where the Holder is an individual; in each case provided, that: (i) the transfer may otherwise be effected in accordance with applicable Securities Laws and the Shareholders Agreement; (ii) the Corporation is given written notice at least three Business Days prior to such transfer stating the name and address of the transferee and identifying the securities with respect to which such registration rights are being transferred; (iii) the transferee agrees in writing to be bound by the provisions of this Agreement and, to the extent required under the Shareholders' Agreement, by the provisions of the Shareholders Agreement; and (iv) the total number of registrations to be exercised by all persons under this Agreement may not be increased other than in accordance with the terms of this Agreement.

3.5 Co-operation

Each Holder requesting inclusion of Registrable Securities in a registration statement will furnish to the Corporation information regarding such Holder as the Corporation, acting reasonably, may from time to time request in writing, and will do such reasonable acts and things as the Corporation may from time to time request, with respect to any registration, qualification or compliance referred to in this Agreement and in order to permit the Corporation to comply with the requirements of applicable Laws.

3.6 Termination of Registration Rights

All obligations of the Corporation (except those pursuant to Article 6) shall terminate and be of no further force and effect on the date which is the earlier of (i) the closing of a Liquidation Event, as such term is defined in the Articles of Incorporation; (ii) such time after the consummation of a Qualified IPO as Rule 144 or another similar exemption under the Securities Act is available for the sale of all such Holder's shares without limitation during a three-month period without registration,; or (iii) the date which is three years after the date of completion of a Qualified IPO (as such term is defined in the Articles of Incorporation).

3.7 Limitations on Subsequent Registration Rights.

From and after the date of this Agreement, the Corporation shall not, without the prior written consent of the Holders of the majority of Registrable Securities, on an As-Converted Basis, (i) enter into any other agreement with any holder or prospective holder of any securities of the Corporation which would allow such holder or prospective holder to participate in any registration of securities of the Corporation or (ii) enter into any agreement, take any action, or permit any change to occur, with respect to its securities that violates, subordinates or otherwise affects the rights granted to the Holders of the Registrable Securities in this Agreement.

ARTICLE 4 ADDITIONAL PROVISIONS FOR REGISTRATIONS

4.1 Rule 144 Reporting and Form S-3, Form F-3 and Form F-10 Requirements

With a view to making available the benefits of certain rules and regulations of the SEC which may at any time permit the sale of the Registrable Securities to the public in the United States without registration, or pursuant to a registration on Form S-3, Form F-3 or Form F-10, including, without limitation, Rule 144 under the U.S. Securities Act, the Corporation agrees at its expense, but only if and to the extent that the Initial Offering was completed in the United States or the Corporation has otherwise registered securities under the U.S. Exchange Act:

- (a) to make and keep public information available, as those terms are understood and defined in Rule 144 under the U.S. Securities Act, at all times after the date that the Corporation becomes subject to the reporting requirements of the U.S. Exchange Act;
- (b) to file with the SEC in a timely manner all reports and other documents required of the Corporation under the U.S. Securities Act and the U.S. Exchange Act (at any time after it has become subject to such reporting requirements); and
- (c) so long as any Holder owns any Registrable Securities, to furnish to the Holders, promptly upon request, a written statement by the Corporation as to its compliance with the reporting requirements of Rule 144 under the U.S. Securities Act (at any time after the Corporation becomes subject to the reporting requirements of the U.S. Exchange Act), a copy of the most recent annual or quarterly report of the Corporation, and any other reports and documents of the Corporation and other information in the possession of or reasonably obtainable by the Corporation as any Holder may reasonably request in availing itself of any rule or regulation of the SEC allowing the Holders to sell any securities without registration or pursuant to such form.

4.2 NI 44-101 and NI 51-102 Requirements

With a view to making available the benefits of certain Canadian Securities Laws which may at any time permit the sale of the Registrable Securities to the public in any one or more province and territory of Canada without registration, or pursuant to a short form Canadian Prospectus in the form of Form 44-101F1 pursuant to NI 44-101, upon the completion of the Initial Offering, the Corporation agrees to, at its expense, but only if and to the extent that the Initial Offering was completed in Canada or the Corporation has otherwise become a “reporting issuer” in any province or territory of Canada, meet the eligibility criteria set out in NI 44-101 for the use of a short form prospectus in connection with the sale of its securities by, among other things, filing an initial annual information form and all renewal annual information forms, as all as other relevant and applicable continuous disclosure documents with the applicable Commissions pursuant to the requirements of NI 44-101 and NI 51-102.

ARTICLE 5 REGISTRATION PROCEDURES AND EXPENSES

5.1 Registration Procedures

In the case of each registration effected by the Corporation pursuant to this Agreement, the Corporation will keep each Holder advised in writing as to the initiation of each registration and as to the completion of that registration. The Corporation shall at its expense and as expeditiously as is practicable:

- (a) subject to Sections 3.1(b) and 3.2(a)(ii), prepare and file with the applicable Commissions a registration statement with respect to those Registrable Securities and use its best efforts to cause that registration statement to become and remain effective for at least 180 days (or 120 days in the case of a Short Form Registration) or until the distribution described in the registration statement has been completed, whichever occurs first; provided, however, that: (i) such 180-day period (or 120-day period in the case of a Short Form Registration) shall be extended for a period of time equal to the period between the time that the Corporation notifies the Holders of the happening of any event described in Section 5.1(g) and the time that the Corporation provides the Holders with a corrective supplement or amendment pursuant to such Section; and (ii) in the case of any Short Form Registration, which are intended to be offered on a continuous or delayed basis, such 120-day period shall be extended, if necessary, to keep the registration statement effective until all such Registrable Securities are sold, provided that Rule 415 under the U.S. Securities Act (or any successor rule) or Canadian Securities Laws, as applicable, permit an offering on a continuous or delayed basis, and provided further that applicable rules under the U.S. Securities Act or Canadian Securities Laws, as applicable, governing the obligation to file a post-effective amendment permit the incorporation by reference in the registration statement of information required to be included in (x) and below, to be contained in periodic reports filed pursuant to

Section 13 or 15(d) of the U.S. Exchange Act or NI 51-102, as applicable, in lieu of filing a post-effective amendment that: (x) includes any prospectus required by Section 10(a)(3) of the U.S. Securities Act, or (y) reflects facts or events representing a material or fundamental change in the information set forth in the registration statement;

- (b) prepare and file with the applicable Commissions such amendments (including post-effective amendments) and supplements to such registration statement and the prospectus used in connection with such registration statement, as may be necessary to comply with the provisions of the Securities Laws and this Agreement with respect to the disposition of all Registrable Securities covered by such registration statement;
- (c) furnish to the Holders participating in such registration and to the underwriters of the Registrable Securities being registered such numbers of copies of the registration statement, preliminary prospectus, final prospectus (including all documents incorporated by reference therein) and any other documents as such Holders and underwriters may reasonably request in order to facilitate the public offering of those securities;
- (d) use its best efforts to register and qualify the Registrable Securities covered by such registration statement under such other state or provincial securities Laws or blue sky Laws of such jurisdictions as shall be reasonably requested by the Holders, provided that the Corporation shall not be required in connection therewith or as a condition thereto to qualify to do business or to file a general consent to service of process in any such states or provinces or jurisdictions or subject itself to taxation in any such jurisdiction;
- (e) in the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the underwriters of such offering;
- (f) notify each selling Holder of Registrable Securities, promptly after the Corporation receives notice thereof, of the time when a registration statement relating to such Holders' Registrable Securities has been declared effective or a supplement to any prospectus forming a part of such registration statement has been filed;
- (g) as soon as possible after becoming aware of such an event notify each Holder of Registrable Securities covered by such registration statement at any time when a prospectus relating thereto is required to be delivered under the applicable Securities Laws, of the happening of any event as a result of which the prospectus included in such registration statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing or if it is necessary to amend or supplement such prospectus to comply with the Securities Laws (a "10b-5 Event"), and to use its best efforts to promptly prepare a supplement or amendment of such document

correcting such untrue statement or eliminate such omission and so that such document, as amended or supplemented, will comply with the applicable Securities Laws (a “10b-5 Correction”), and furnish to each Holder as many copies of such supplement or amendment as each such Holder may request; provided, further, that each Holder of Registrable Securities that is aware of a 10b-5 Event shall not sell its Registrable Securities until a 10b-5 Correction;

- (h) use its best efforts to cause all such Registrable Securities registered pursuant to this Agreement to be listed on each securities exchange or national market system, if any, on which similar securities issued by the Corporation are then listed or, if the Corporation’s securities are not then listed, on a securities exchange or national market system selected by the Holders of a majority of the Registrable Securities (on an As-Converted Basis);
- (i) provide a transfer agent and registrar for all Registrable Securities registered pursuant hereunder and provide a CUSIP number for all Registrable Securities, in each case, not later than the effective date of such registration;
- (j) at the request of any Holder requesting registration of Registrable Securities pursuant to a Demand Registration, on the date that such Registrable Securities are delivered to the underwriters for sale in connection with a Demand Registration, if such securities are being sold through underwriters, use its best efforts to cause to be delivered: (i) an opinion, dated such date, of the counsel representing the Corporation (including an opinion from each local state, provincial and/or territorial counsel in each of the jurisdictions in which the registration is effected) for the purposes of such registration, in form and substance as is customarily given to underwriters in an underwritten public offering, addressed to the underwriters and to the Holders requesting registration of Registrable Securities; (ii) a letter dated such date, from the auditors of the Corporation, in form and substance as is customarily given by auditors to underwriters in an underwritten public offering, addressed to the underwriters, if any, and to the Holders requesting registration of Registrable Securities; and (iii) such corporate certificates and other documents and instruments, each dated such date, as are customarily furnished to underwriters in an underwritten public offering or as such Holder may otherwise reasonably request, addressed to the underwriters, if any, and to the Holders requesting registration of Registrable Securities;
- (k) use its best efforts to prevent the issuance of any stop order or other suspension of effectiveness of a registration statement, and, if such an order is issued, to obtain the withdrawal of such order at the earliest possible moment and to notify each Holder who holds Registrable Securities being sold (or, in the event of an underwritten offering, the underwriters) of the issuance of such order and the resolution thereof;

- (l) in connection with the preparation and filing of each registration statement pursuant to this Article 5, give each Holder who holds Registrable Securities being sold, and its counsel, accountants and other agents, the opportunity to participate, acting reasonably, in the preparation of the registration statement, and each amendment thereof or supplement thereto, and will give each of them such access to its books and records and such opportunities to discuss the business of the Corporation with its directors, officers, key employees, attorneys, consultants and the independent public accountants of the Corporation who have issued a report on its financial statements as shall be necessary, in the opinion of such Holders and such underwriters or their respective counsel, to conduct a reasonable investigation;
- (m) hold in confidence and not make any disclosure of information concerning a Holder provided to the Corporation unless: (i) disclosure of such information is necessary to comply with Securities Laws; (ii) the disclosure of such information is necessary to avoid or correct a misstatement or omission in any registration statement; (iii) the release of such information is ordered pursuant to a subpoena or other order from a court or governmental body of competent jurisdiction; or (iv) such information has been made generally available to the public other than by disclosure in violation of this Agreement or any other agreement. The Corporation agrees that it shall, upon learning that disclosure of such information concerning a Holder is sought in or by a court or governmental body of competent jurisdiction or through other means, give prompt notice to such Holder prior to making such disclosure, and allow the Holder, at its expense, to undertake appropriate action to prevent disclosure of, or to obtain a protective order for, such information;
- (n) promptly make available for inspecting by the selling Holders, any managing underwriter(s) participating in any disposition pursuant to such registration statement, and any attorney or accountant or other agent retained by any such underwriter or selected by the selling Holders, all financial and other records, pertinent corporate documents, and properties of the Corporation, and cause the Corporation's officers, directors, employees, and independent accountants to supply all information reasonably requested by any such seller, underwriter, attorney, accountant, or agent, in each case, as necessary or advisable to verify the accuracy of the information in such registration statement and to conduct appropriate due diligence in connection therewith;
- (o) within a reasonable time before each filing of the registration statement or prospectus or amendments or supplements thereto with the applicable Commissions, furnish to one counsel, selected by the majority of holders of Registrable Securities included in such registration (on an As-Converted Basis), copies of such documents proposed to be filed, which documents shall be subject to the approval of such counsel with such approval not to be unreasonably withheld or delayed;
- (p) otherwise use its best efforts to comply with all applicable rules and regulations of each applicable Commission and make generally available to its security holders, in each case as soon as practicable, but not later than 30 days after the close of the period covered thereby, an earnings statement of the Corporation which will satisfy the provisions of Section 11(a) of the U.S. Securities Act and Rule 158 thereunder (or any comparable successor provisions);

- (q) in connection with an underwritten offering, participate, to the extent reasonably requested by the managing underwriter for the offering or the Holders, in customary efforts to sell the securities being offered, and cause such steps to be taken as to ensure such good faith participation of senior management officers of the Corporation in “road shows” as is customary;
- (r) permit any Holder of Registrable Securities which holder, in its sole and exclusive judgment, might be deemed to be an “underwriter” (as such term is defined in the applicable Securities Laws) or a “controlling person” (as such term is defined in the applicable Securities Laws) of the Corporation, to participate in the preparation of such registration statement and to require the insertion therein of language furnished to the Corporation in writing, which in the reasonable judgment of such Holder and its counsel should be included; and
- (s) otherwise use its best efforts to take all other steps necessary to effect the registration of such Registrable Securities contemplated hereby.

5.2 Expenses of Registration

All Registration Expenses will be borne by the Corporation, including the fees of one special counsel of the Holder of Registrable Securities in an amount not to exceed US\$35,000 (plus disbursements and applicable taxes) for each registration undertaken pursuant to this Agreement; provided, however, that the Corporation shall not be required to pay for Selling Expenses relating to Registrable Securities. In addition, if requested by one or more Major Investors, the Corporation shall bear the reasonable fees, expenses and disbursements of one special counsel of the Major Investors in connection with the Initial Offering in an amount not to exceed US\$50,000 (plus applicable taxes), whether or not any of the Registrable Securities are included in the Initial Offering.

ARTICLE 6 INDEMNIFICATION

6.1 Indemnification Provided by the Corporation in Favour of the Holders

In the event any Registrable Securities are included in a registration statement under this Agreement, the Corporation will indemnify, to the extent permitted by applicable law, each Holder that participates in such offering, each of its officers and directors and partners (or, in the case of a Holder that is a limited partnership, each of the partners and the officers and directors of the general partner of the limited partnership and its affiliates), each person controlling any Holder within the meaning of Section 15 of the U.S. Securities Act or Section 20 of the U.S. Exchange Act, and each underwriter, if any, and each person who controls any underwriter within the meaning of Section 15 of the U.S. Securities Act or Section 20 of the U.S. Exchange Act (collectively, the “**Holder Indemnified Parties**”), against all expenses, claims, losses, damages and liabilities (or actions in respect of expenses, claims, losses, damages or liabilities), including any of the foregoing incurred in settlement of any litigation, commenced or threatened, arising out of or based on (i) any untrue statement (or alleged untrue statement) of a material fact contained in any registration statement, prospectus, offering circular “free writing prospectus” (as defined in

Rule 405 under the U.S. Securities Act) or other document, or any amendment or supplement to any document, incident to the registration, qualification or compliance, or (ii) any omission (or alleged omission) to state in a document a material fact required to be stated or necessary to make the statements, in light of the circumstances in which they were made, not misleading, or any violation by the Corporation of the U.S. Securities Laws, the Canadian Securities Laws, or any rule or regulation promulgated under any Laws applicable to the Corporation in connection with any registration, qualification or compliance, and in each case the Corporation will reimburse each of such Holder Indemnified Parties, for any legal and any other expenses reasonably incurred, as such expenses are incurred, in connection with investigating, preparing or defending any such claim, loss, damage, liability or action, provided, however, that the indemnity contained in this Section 6.1 will not apply to amounts paid in settlement of any such loss, claim, damage, liability or action if such settlement is effected without the consent of the Corporation, which consent will not be unreasonably withheld and provided that the Corporation will not be liable in any case to the extent that any claim, loss, damage, liability or expense arises out of or is based on any untrue statement or omission or alleged untrue statement or omission, made in reliance upon and in conformity with written information furnished to the Corporation by any Holder, controlling person thereof or underwriter to be specifically for use in any such document; and provided further, however, that the foregoing indemnity is subject to the condition that, insofar as it relates to any untrue statement, alleged untrue statement, omission or alleged omission made in a prospectus on file with the Commissions at the time the registration statement becomes effective or the amended prospectus filed with the SEC pursuant to Rule 424(b) under the U.S. Securities Act (the “**Final Prospectus**”), that indemnity will not enure to the benefit of any underwriter or any Holder, if there is no underwriter, if any such underwriter or Holder failed to furnish a copy of the Final Prospectus to the person asserting the loss, liability, claim or damage at or prior to the time the action is required by the applicable Securities Laws, and if the Final Prospectus would have cured the defect giving rise to the loss, liability, claim or damage. The indemnification provided for under this Section 6.1 shall remain in full force and effect regardless of any investigation made by or on behalf of any of the Holder Indemnified Parties and shall survive the transfer of the Registrable Securities by the Investors and their transferees.

6.2 Indemnification Provided by the Holders in Favour of the Corporation

In the event any Registrable Securities are included in a registration statement under this Agreement, each Holder will, if Registrable Securities held by that Holder are included in the securities as to which the registration, qualification or compliance is being effected, indemnify, to the extent permitted by applicable law, the Corporation, each of its directors and officers, each underwriter, if any, of the Corporation’s securities covered by that registration statement, each person who controls the Corporation or the underwriter within the meaning of Section 15 of the U.S. Securities Act or Section 20 of the U.S. Exchange Act, and the other Holders selling securities in such registration statement, each of its officers and directors and partners (or, in the case of a Holder that is a limited partnership, each of the partners and the officers and directors of the general partner of the limited partnership and its affiliates) and each person controlling such other Holders within the meaning of Section 15 or Section 20 of the U.S. Securities Act, against all expenses, claims, losses, damages and liabilities (or actions in respect of expenses, claims, losses, damages and liabilities), including any of the foregoing incurred in settlement of any litigation, commenced or threatened, arising out of or based on (i) any untrue statement (or alleged untrue statement), of a material fact contained in any registration statement, prospectus, offering circular, “free writing

prospectus” (as defined in Rule 405 under the U.S. Securities Act) or other document, or any amendment or supplement to any document incident to the registration, qualification or compliance, or (ii) any omission (or alleged omission) to state in a document a material fact required to be stated or necessary to make the statements, in light of the circumstances in which they were made, not misleading, *in each case to the extent, but only to the extent*, that each untrue statement (or alleged untrue statement) or omission (or alleged omission) is made in a registration statement, prospectus, offering circular or other document in reliance upon and in conformity with written information furnished to the Corporation by the Holder and to be specifically for use in any such document, and *in each case* such Holder will reimburse the Corporation, the other Holders, the directors, officers, partners, underwriters or control persons for any legal or any other expenses reasonably incurred, as such expenses are incurred, in connection with investigating or defending any claim, loss, damage, liability or action, *provided, however*, that the indemnity contained in this Section 6.2 will not apply to amounts paid in settlement of any loss, claim, damage, liability or action if the settlement is effected without the consent of the Holder, which consent will not be unreasonably withheld; provided, that the obligation to indemnify under this Section 6.2 shall be several, not joint and several, for each Holder and shall be limited to the net proceeds (after underwriting fees, commissions or discounts) actually received by such Holder from the sale of the Registrable Securities pursuant to such registration.

6.3 Indemnification Procedure

- (a) Each party entitled to indemnification under this Article 6 (the “**Indemnified Party**”) will give notice to the party required to provide indemnification (the “**Indemnifying Party**”) promptly after that Indemnified Party has actual knowledge of any claim as to which indemnity may be sought, and, if the Indemnifying Party acknowledges its liability hereunder, will permit the Indemnifying Party to assume the defense of any claim or any litigation, provided that counsel for the Indemnifying Party, who will conduct the defense of the claim or litigation, will be approved by the Indemnified Party (whose approval will not be unreasonably withheld), and the Indemnified Party may participate in the defense at that party’s expense, and provided further that the failure of any Indemnified Party to give notice as provided in this Agreement will not relieve the Indemnifying Party of its obligations under this Agreement unless the failure to give the notice is materially prejudicial to an Indemnifying Party’s ability ‘to defend that action and provided further, that the Indemnifying Party will not assume the defense for matters in which there is, in the reasonable opinion of outside counsel to the Indemnified Party, a conflict of interest or separate and different defenses. No Indemnifying Party, in the defense of any such claim or any resulting litigation, will, except with the consent of each Indemnified Party, consent to entry of any judgment or enter into any settlement which does not include as an unconditional term from the claimant or plaintiff to the Indemnified Party of a release from all liability in respect of the claim or litigation.
- (b) If the indemnification provided for in this Article 6 is held by a court of competent jurisdiction to be unavailable to an Indemnified Party with respect to any loss, liability, claim, damage, or expense referred to herein, then the Indemnifying Party, in lieu of indemnifying the Indemnified Party hereunder, will contribute to the

amount paid or payable by the Indemnified Party as a result of the loss, liability, claim, damage, or expense in the proportion as is appropriate to reflect the relative fault of the Indemnifying Party on the one hand and of the Indemnified Party on the other in connection with the statements or omissions that resulted in the loss, liability, claim, damage, or expense as well as any other relevant equitable considerations. The relative fault of the Indemnifying Party and of the Indemnified Party will be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission to state a material fact relates to information supplied by the Indemnifying Party or by the Indemnified Party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent the statement or omission, provided however, that, in any case, (i) no Holder will be required to contribute any amount in excess of the gross proceeds of all the Registrable Securities offered and sold by the Holder pursuant to the registration statement that are received by such Holder; and (ii) no person or entity guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the U.S. Securities Act) will be entitled to contribution from any person or entity who was not guilty of fraudulent misrepresentation.

- (c) The obligations of the Corporation and the Holders under this Article 6 shall survive the completion of any offering of Registrable Securities in a registration statement under Article 3 of this Agreement.

ARTICLE 7 GENERAL PROVISIONS

7.1 Notices

All notices provided for in this Agreement (“**Notices**”) shall be in writing and will be sufficiently given if delivered (by hand, by overnight international courier service), or if by e-mail to the following addresses:

- (a) in the case of a Notice to the Corporation at:

REPARE THERAPEUTICS INC.

7210 Frederick-Banting Street
Suite 100
Saint-Laurent (Québec) H4S 2A1

Attention: Lloyd Segal

Email:

With a copy to (which copy shall not constitute a Notice to the Corporation):

STIKEMAN ELLIOTT LLP

1155 René-Lévesque Blvd. West
41st Floor

Montréal, Québec H3B 3V2

Attention: Sidney Horn and Jeremy Sculnick

Email:

- (b) in the case of any Holder, at the address, e-mail address contained in Schedule A or Schedule B or, if not set out in Schedule A or Schedule B, to the most recent address or e-mail address known to the Person sending the Notice.

Any Notice delivered or transmitted to a party as provided above is deemed to have been given and received on the day it is delivered or transmitted if it is delivered or transmitted on a Business Day prior to 5:00 p.m. local time in the place of delivery or receipt. If the Notice is delivered or transmitted after 5:00 p.m. local time or if such day is not a Business Day, then the Notice is deemed to have been given and received on the next Business Day. Any Notice given by e-mail shall also promptly be given by hand delivery or overnight international courier service. Any party may, from time to time, change its address by giving Notice to the other parties in accordance with the provisions of this Section 7.1.

7.2 Enurement

This Agreement shall enure to the benefit of and be binding upon the parties hereto and their respective successors. This Agreement shall be binding upon any assigns, and enure to the benefit of any permitted assigns, of each party hereto.

7.3 Counterparts

This Agreement may be executed in one or more counterparts (whether by facsimile signature or otherwise), each of which shall be deemed an original and all of which, taken together, shall constitute one and the same instrument.

7.4 Assignment

Except as otherwise provided herein, none of the rights or obligations hereunder shall be assignable or transferable by any party without the prior written consent of the other parties.

7.5 Entire Agreement

This Agreement constitutes the entire agreement between the parties hereto pertaining to the subject matter of this Agreement. This Agreement annuls and replaces any prior or current registration rights agreement entered into between the Holders (or any of them) and the Corporation, including the Original Registration Rights Agreement.

7.6 Amendments, Modifications, etc.

This Agreement may not be amended, modified or waived except by written agreement of the Corporation and Holders holding at least 60% of the then-outstanding Registrable Securities (on an As-Converted Basis). No waiver of any provision of this Agreement shall constitute a waiver of any other provision nor shall any waiver of any provision of this Agreement constitute a continuing waiver unless otherwise expressly provided.

7.7 Additional Parties

The parties acknowledge that, subsequent to the date of this Agreement, the Corporation may, subject to compliance with the Shareholders Agreement, issue additional shares in the capital of the Corporation to one or more permitted transferees of the Investors, as described in Sections 3.5, 3.6 and 3.7 of the Shareholders Agreement as amended and restated on the date hereof or as described in any successor provision of the Shareholders Agreement, as it may be amended and restated from time to time, relating to permitted transferees of the Investors (the “**Additional Parties**”). Without needing the consent of any of the parties hereto (whether pursuant to Section 3.7 or 7.6 or otherwise), each such Additional Party may become a party to this Agreement by executing a counterpart signature page substantially in the form attached as Schedule C and acceptance by the Corporation of such counterpart signature page as signified by its execution thereof. Upon execution and delivery of the counterpart signature page and acceptance by the Corporation, such Additional Party will be a party to this Agreement as an Investor and be subject to the terms and conditions of this Agreement as if it were an original signatory.

7.8 Further Assurances

Each of the parties hereto shall promptly do, make, execute or deliver, or cause to be done, made, executed or delivered, all such further acts, documents and things as the other party hereto may reasonably require from time to time for the purpose of giving effect to this Agreement and shall use reasonable efforts and take all such steps as may be reasonably within its power to implement to their full extent the provisions of this Agreement.

7.9 Specific Performance

The Corporation recognizes that the rights of the Holders under this Agreement are unique, and, accordingly, the Holders will, in addition to such other remedies available to them at law or in equity, have the right to enforce their rights under this Agreement by actions for injunctive relief and specific performance to the extent permitted by law. This Agreement is not intended to limit or abridge any rights of the Holders that exist apart from this Agreement.

[THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK.]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement by their respective officers thereunto duly authorized.

VERSANT VENTURE CAPITAL V, L.P.

By Its General Partner
VERSANT VENTURES V, LLC

By: /s/ Jerel C. Davis
Name: Jerel C. Davis
Title: Agent

[Signature Page – Repare Therapeutics Inc. – Amended and Restated Registration Rights Agreement]

VERSANT VENTURE CAPITAL VI, L.P.

By Its General Partner
VERSANT VENTURES VI GP, L.P.,

By Its General Partner
VERSANT VENTURES VI GP-GP, LLC

By: /s/ Jerel C. Davis
Name: Jerel C. Davis
Title: Managing Director

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VERSANT AFFILIATES FUND V, L.P.

**By Its General Partner
VERSANT VENTURES V, LLC**

By: /s/ Jerel C. Davis

Name: Jerel C. Davis

Title: Agent

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**VERSANT OPHTHALMIC AFFILIATES
FUND I, L.P.**

**By Its General Partner
VERSANT VENTURES V, LLC**

By: /s/ Jerel C. Davis
Name: Jerel C. Davis
Title: Agent

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**VERSANT VENTURE CAPITAL V
(CANADA) LP**

**By Its General Partner
VERSANT VENTURES V (CANADA), L.P.**

**By Its General Partner
VERSANT VENTURES V GP-GP
(CANADA), INC.**

By: /s/ Jerel C. Davis
Name: Jerel C. Davis
Title: Agent

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VERSANT VANTAGE I, L.P.

**By Its General Partner
VERSANT VANTAGE I GP, L.P.,**

**By Its General Partner
VERSANT VANTAGE I GP-GP, LLC**

By: /s/ Jerel C. Davis
Name: Jerel C. Davis
Title: Managing Director

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MPM BIOVENTURES 2014, L.P.

**By: MPM BIOVENTURES 2014 GP LLC,
its general partner**

**By: MPM BIOVENTURES 2014 LLC,
its managing member**

By: /s/ Kristen Laguerre
Name: Kristen Laguerre
Title: Managing Director, Finance

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MPM BIOVENTURES 2014 (B), L.P.

**By: MPM BIOVENTURES 2014 GP LLC,
its general partner**

**By: MPM BIOVENTURES 2014 LLC,
its managing member**

By: /s/ Kristen Laguerre

Name: Kristen Laguerre

Title: Managing Director, Finance

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**MPM ASSET MANAGEMENT
INVESTORS BV2014 LLC**

**By: MPM BIOVENTURES 2014 LLC,
its manager**

By: /s/ Howard Rubin

Name: Howard Rubin

Title: Authorized Signatory

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UBS ONCOLOGY IMPACT FUND, L.P.

**By: ONCOLOGY IMPACT FUND
(CAYMAN) MANAGEMENT L.P.,
its general partner**

**By: MPM ONCOLOGY IMPACT
MANAGEMENT LP,
its general partner**

**By: MPM ONCOLOGY IMPACT
MANAGEMENT GP LLC,
its general partner**

By: /s/ Kristen Laguerre

Name: Kristen Laguerre

Title: Managing Director, Finance

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BDC CAPITAL INC.

By: /s/ Jean-Francois Pariseau

Name: Jean-Francois Pariseau

Title: Partner, Amplitude Ventures

By: /s/ Dion Madsen

Name: Dion Madsen

Title: Partner, Amplitude Ventures

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**FONDS DE SOLIDARITÉ DES
TRAVAILLEURS DU QUÉBEC
(F.T.Q.)**

By: */s/ Didier Leconte*

Name: Didier Leconte

Title: Vice-President, Investments,
Life Sciences

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CELGENE SWITZERLAND LLC

By: /s/ Kevin Mello

Name: Kevin Mello

Title: Manager

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**COWEN HEALTHCARE
INVESTMENTS II LP**

**By Its General Partner
COWEN HEALTHCARE
INVESTMENTS II GP LLC**

By: /s/ Kevin Raidy

Name: Kevin Raidy

Title: Managing Partner

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CHIEF II LP

**By Its General Partner
COWEN HEALTHCARE
INVESTMENTS II GP LLC**

By: /s/ Kevin Raidy

Name: Kevin Raidy

Title: Managing Partner

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ORBIMED PRIVATE INVESTMENTS VII, LP

**By Its General Partner
ORBIMED CAPITAL GP VII LLC**

**By Its Managing Member
ORBIMED ADVISORS LLC**

By: /s/ Carl L. Gordon
Name: Carl L. Gordon
Title: Member

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REDMILE BIOPHARMA INVESTMENTS II, L.P.

By Its General Partner

**REDMILE BIOPHARMA INVESTMENTS II
(GP), LLC**

By: /s/ Christopher O'Connor

Name: Christopher O'Connor

Title: Partner

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BIOTECHNOLOGY VALUE FUND, LP

**By Its General Partner
BVF PARTNERS L.P.**

**By Its General Partner
BVF INC.**

By: /s/ Mark Lampert

Name: Mark Lampert

Title: President of BVF Inc., General Partner of BVF
Partners L.P., itself GP of Biotechnology Value
Fund, LP

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BIOTECHNOLOGY VALUE FUND II, LP

**By Its General Partner
BVF PARTNERS L.P.**

**By Its General Partner
BVF INC.**

By: /s/ Mark Lampert

Name: Mark Lampert

Title: President of BVF Inc., General Partner of BVF
Partners L.P., itself GP of Biotechnology Value
Fund II, LP

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**BIOTECHNOLOGY VALUE TRADING
FUND OS, LP**

**By Its General Partner
BVF PARTNERS OS LTD.**

**By Its Sole Member
BVF PARTNERS L.P.**

**By Its General Partner
BVF INC.**

By: /s/ Mark Lampert

Name: Mark Lampert

Title: President of BVF Inc., General Partner of BVF
Partners L.P., itself sole member of BVF
Partners OS Ltd., itself GP of Biotechnology
Trading Fund OS, L.P.

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MSI BVF SPV LLC

**By Its Attorney-in-fact
BVF PARTNERS L.P.**

**By Its General Partner
BVF INC.**

By: /s/ Mark Lampert

Name: Mark Lampert

Title: President of BVF Inc., itself General Partner of
BVF Partners L.P., itself attorney-in-fact for
MSI BVF SPV, L.L.C.

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LOGOS OPPORTUNITIES FUND I, L.P.

By Its General Partner
LOGOS OPPORTUNITIES GP, LLC

By: /s/ Graham Walmsley
Name: Graham Walmsley
Title: Manager

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REPARE THERAPEUTICS INC.

Per: /s/ Lloyd M. Segal
Name: Lloyd M. Segal
Title: Chief Executive Officer, President and
Secretary

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SCHEDULE A

CLASS A INVESTORS

VERSANT VENTURE CAPITAL V, L.P.

One Sansome Street, Suite 3630
San Francisco, CA 94104

VERSANT OPHTHALMIC AFFILIATES FUND I, L.P.

One Sansome Street, Suite 3630
San Francisco, CA 94104

VERSANT AFFILIATES FUND V, L.P.

One Sansome Street, Suite 3630
San Francisco, CA 94104

VERSANT VENTURE CAPITAL V (CANADA) LP

One Sansome Street, Suite 3630
San Francisco, CA 94104

VERSANT VENTURE CAPITAL VI, L.P.

One Sansome Street, Suite 3630
San Francisco, CA 94104

MPM BIOVENTURES 2014, L.P.

450 Kendall St.
Cambridge, MA, 02142

MPM BIOVENTURES 2014 (B), L.P.

450 Kendall St.
Cambridge, MA, 02142

MPM ASSET MANAGEMENT INVESTORS BV2014 LLC

450 Kendall St.
Cambridge, MA, 02142

UBS ONCOLOGY IMPACT FUND, L.P.

450 Kendall St.
Cambridge, MA, 02142

BDC CAPITAL INC.

c/o Business Development Bank of Canada
5 Place Ville Marie
Bureau 400
Montréal, QC H3B 5E7

FONDS DE SOLIDARITÉ DES TRAVAILLEURS DU QUÉBEC (F.T.Q.)

545, boul. Crémazie Est
Bureau 200
Montréal, QC H2M 2W4

CELGENE SWITZERLAND LLC

AON House
30 Woodbourne Ave
Pembroke HM 08
Bermuda

SCHEDULE B

CLASS B INVESTORS

VERSANT VENTURE CAPITAL V, L.P.

One Sansome Street, Suite 3630
San Francisco, CA 94104

VERSANT OPHTHALMIC AFFILIATES FUND I, L.P.

One Sansome Street, Suite 3630
San Francisco, CA 94104

VERSANT AFFILIATES FUND V, L.P.

One Sansome Street, Suite 3630
San Francisco, CA 94104

VERSANT VENTURE CAPITAL V (CANADA) LP

One Sansome Street, Suite 3630
San Francisco, CA 94104

VERSANT VENTURE CAPITAL VI, L.P.

One Sansome Street, Suite 3630
San Francisco, CA 94104

MPM BIOVENTURES 2014, L.P.

450 Kendall St.
Cambridge, MA, 02142

MPM BIOVENTURES 2014 (B), L.P.

450 Kendall St.
Cambridge, MA, 02142

MPM ASSET MANAGEMENT INVESTORS BV2014 LLC

450 Kendall St.
Cambridge, MA, 02142

UBS ONCOLOGY IMPACT FUND, L.P.

450 Kendall St.
Cambridge, MA, 02142

BDC CAPITAL INC.

c/o Business Development Bank of Canada
5 Place Ville Marie
Bureau 400
Montréal, QC H3B 5E7

FONDS DE SOLIDARITÉ DES TRAVAILLEURS DU QUÉBEC (F.T.Q.)

545, boul. Crémazie Est
Bureau 200
Montréal, QC H2M 2W4

COWEN HEALTHCARE INVESTMENTS II L.P.

599 Lexington Avenue, 19th Floor
New York, NY 10022

CHIEF II LP

599 Lexington Avenue, 19th Floor
New York, NY 10022

VERSANT VANTAGE I, L.P.

One Sansome Street, Suite 3630
San Francisco, CA 94104

ORBIMED PRIVATE INVESTMENTS VII, LP

c/o OrbiMed Advisors LLC
601 Lexington Avenue, 54th Floor
New York, NY 10022

REDMILE BIOPHARMA INVESTMENTS II, L.P.

c/o Redmile Group, LLC
One Letterman Drive, Suite D3-300
The Presidio, San Francisco, CA 94129

BIOTECHNOLOGY VALUE FUND, LP

44 Montgomery Street, 40th Floor
San Francisco, CA 94104

BIOTECHNOLOGY VALUE FUND II, LP

44 Montgomery Street, 40th Floor
San Francisco, CA 94104

BIOTECHNOLOGY VALUE TRADING FUND OS, LP

PO Box 309 Uglund House
Grand Cayman, KY1- 1104, Cayman Islands

MSI BVF SPV LLC

c/o Magnitude Capital
200 Park Avenue, 56th Floor
New York, NY 10166

LOGOS OPPORTUNITIES FUND I, L.P.

345 California Street, Suite 600

San Francisco, CA 94104

SCHEDULE C

COUNTERPART SIGNATURE PAGE TO THE AMENDED AND RESTATED REGISTRATION RIGHTS AGREEMENT

The undersigned hereby acknowledges receipt of a copy of the amended and restated registration rights agreement dated as of September 3, 2019 (the “**Agreement**”) between Repare Therapeutics Inc. and certain other parties and, by executing this Counterpart Signature Page, the undersigned agrees to become a party to the Agreement, thereby having all of the rights and benefits, and being subject to all of the obligations, of an Investor (as such term is defined in the Agreement) contained in the Agreement as if the undersigned were an original signatory.

DATED this ____ day of _____, 2019.

If an individual:

Signature: _____
Name (please Print): _____

If a corporation, limited partnership or other legal entity:

Name of Subscriber: _____
By: _____
Name: _____
Title: _____

Accepted as of _____, _____.

REPAIRE THERAPEUTICS INC.

Per: _____
Name: _____
Title: _____

REPARE THERAPEUTICS INC.
AMENDED AND RESTATED OPTION PLAN

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**REPARE THERAPEUTICS INC.
AMENDED AND RESTATED OPTION PLAN**

Section 1. Interpretation and Administrative Provisions

1.1 Purpose

The purposes of the Plan are to (i) support the achievement of the Company's performance objectives, (ii) promote the alignment of interests of key directors, officers, employees and consultants with the success of the Company, and (iii) provide compensation opportunities to attract, retain and motivate directors, officers, employees, and consultants of the Company and its Affiliates.

1.2 Definitions

For the purposes of the Plan, the following terms have the following meanings:

"Act" means the *Canada Business Corporations Act*, as the same may be amended from time to time and any successor legislation thereto, except where otherwise expressly provided.

"Affiliate" has the meaning attributed to that term in the Act.

"Arbitration Notice" has the meaning specified in Section 3.11.

"Board" means the board of directors of the Company, as constituted from time to time.

"Cause" means, with respect to any Participant, "Cause" as defined in any employment or consulting agreement between a Participating Company and such Participant (or any Person through whom such Participant's services are contracted), or in the absence of such a definition, in the case of a Participant that is an employee of a Participating Company, anything that would constitute cause for the termination of employment at common law as interpreted by the Courts of the Province of Ontario from time to time (including, any sexual harassment or violence in the workplace), or in the case of a Participant that provides consulting services to a Participating Company, anything that would constitute a material breach of terms of the engagement in respect of such consulting services. For greater certainty, the definition of "Cause" where not defined in any employment or consulting agreement shall include, but shall not be limited to:

- (a) Participant's conviction of a felony or indictable offence;
- (b) Participant's commission of any fraud, as confirmed by a court of competent jurisdiction, against any Participating Company or any of their respective employees, agents, collaborators, shareholders, contractors or customers or use or intentional appropriation for Participant's personal use or benefit of any funds or properties of any Participating Company; or
- (c) Participant's commission of a criminal act of dishonesty or any reprehensible behavior or activity that could reasonably be expected to have an adverse effect, either directly or indirectly, on any Participating Company.

“Change of Control” means the occurrence of any of the following events:

- (a) the acquisition of the Company by another entity by means of any transaction or series of related transactions (including any reorganization, amalgamation, arrangement, business combination, merger or consolidation or share transfer, but excluding any such transaction effected primarily for the purpose of changing the domicile of the Company), unless the Company’s shareholders of record immediately prior to such transaction or series of related transactions (Affiliates thereof) hold, immediately after such transaction or series of related transactions, at least 50% of the voting power of the surviving or acquiring entity (provided that the sale by the Company of its securities for the purposes of raising additional funds shall not constitute a Change of Control hereunder, including any sale of securities in consideration for the cancellation or conversion of any indebtedness of the Company); or
- (b) the sale, lease, exclusive license, transfer or other disposition of all or substantially all of the assets or Intellectual Property Rights (as defined in the Shareholders Agreement) of the Company and any of its subsidiaries, on a consolidated basis (except to an Affiliate).

“Code” means the United States Internal Revenue Code of 1986, and the regulations promulgated thereunder, as amended from time to time.

“Company” means Repare Therapeutics Inc. and includes any successor to Repare Therapeutics Inc. resulting from any amalgamation, merger, arrangement or other reorganization of or including Repare Therapeutics Inc. or any continuance of Repare Therapeutics Inc. under the laws of another jurisdiction.

“Consultant” means any natural person providing consulting services (excluding services as a director) to a Participating Company and such services are not in connection with the offer or sale of securities in a capital-raising transaction and do not directly or indirectly promote or maintain a market for the Company’s securities.

“Convertible Securities” means any share, right, unit, option, warrant or any other security, including, without limitation, any debenture, loan, note or any other instrument or agreement evidencing indebtedness of the Company, which may be converted or exchanged into Shares or which carries a right to acquire Shares.

“Disability” means the mental or physical state of an individual such that:

- (a) the Board or the Board of any Subsidiary Corporation, other than such individual, determines that such individual has been unable, due to illness, disease, mental or physical disability or similar cause, to fulfill his or her obligations as an employee or officer or director of the Company or any Subsidiary Corporation either for any consecutive four month period or for any period of six months (whether or not consecutive) in any consecutive 12 month period; or
- (b) a court of competent jurisdiction has declared such individual to be mentally incompetent or incapable of managing his or her affairs.

“Dispute” has the meaning specified in Section 3.11.

“Eligible Person” means any employee, officer, independent director or Consultant of or to a Participating Company (and includes any such Person who is on a leave of absence authorized by the Board) who is described in Section 701 of the United States Securities Act of 1933, as amended.

“Exercise Price” means the price an optionholder must pay to exercise an Option to acquire a Share as determined by the Board at the date of grant of such Option provided that in no event shall the exercise price be less than the fair value of a Share at the date of grant of such Option as determined by the Board.

“Fair Market Value” means the fair market value of the Shares determined in good faith by the Board based on the reasonable application of a reasonable valuation method not inconsistent with Section 409A of the Code.

“Fully Diluted Basis” means the number of Shares outstanding at any time on an as-converted basis assuming that all Convertible Securities have been converted or exchanged into Shares.

“Incentive Stock Option” means an option that meets the requirements of Section 422 of the Code or any successor provision and is designated as such in the applicable Option Agreement.

“Liquidity Event” means, to the extent approved in accordance with the terms of the Shareholders Agreement:

- (a) a voluntary or involuntary liquidation, dissolution or winding-up of the affairs of the Company;
- (b) a Change of Control;
- (c) any other event so designated by the Board.

“Non Qualified Stock Option” means an option that is not intended to be or does not meet the requirements of an Incentive Stock Option. Any Option granted by the Board that is not designated as an Incentive Stock Option in the applicable Option Agreement will be a Non Qualified Stock Option.

“Notice of Exercise” has the meaning set out in Section 2.9.

“Notice of Surrender” has the meaning set out in Section 2.10.

“Option” means a right granted to an Eligible Person to purchase one or more Shares pursuant to the terms of the Plan.

“Option Agreement” has the meaning set out in Section 2.8.

“Parent Corporation” has the meaning set forth in Section 424(e) of the Code, and any successor Code sections.

“Participant” means any Person to whom an Option has been granted.

“Participating Company” means any of Repare Therapeutics Inc. and such of its Affiliates as are designated by the Board from time to time.

“Person” means any individual, partnership, limited partnership, joint venture, syndicate, sole proprietorship, company or corporation with or without share capital, unincorporated association, trust, trustee, executor, administrator or other legal personal representative, regulatory body or agency, government or governmental agency, authority or entity however designated or constituted.

“**Plan**” means this Amended and Restated Option Plan of the Company, as amended from time to time.

“**Share**” means a common share of the Company.

“**Shareholders Agreement**” means the second amended and restated unanimous shareholders agreement of the Company and all schedules and appendices, if any, attached thereto, in each case as they may be amended, restated, supplemented or replaced from time to time.

“**Subsidiary Corporation**” has the meaning set forth in Section 424(f) of the Code, and any successor Code sections.

“**Substitution Event**” has the meaning specified in Section 2.7.

“**Termination Date**” means (i) with respect to a Participant who is an employee or officer of a Participating Company, such Participant’s last day of active employment and does not include any period of statutory, reasonable or contractual notice or any period of deemed employment or salary continuance, (ii) with respect to a Participant who is a Consultant, the date such Consultant ceases to provide services to a Participating Company, and (iii) with respect to a Participant who is a director, the date such Person ceases to be a director of a Participating Company, and “**Terminate**” and “**Terminated**” have corresponding meanings.

“**Transfer**” includes any sale, exchange, assignment, gift, disposition, mortgage, charge, pledge, encumbrance, grant of security interest or any arrangement by which possession, legal title or ownership passes from one Person to another, or to the same Person in a different capacity, whether or not voluntary and whether or not for value, and any Agreement to effect any of the foregoing; and the words “**Transferred**”, “**Transferring**” and similar words have corresponding meanings.

“**U.S. Participant**” means any Eligible Person who is a United States citizen or United States resident alien as defined for purposes of Section 7701(b)(1)(A) of the Code.

In the Plan, unless the context otherwise requires, words importing the singular include the plural and vice versa, and words importing gender include all genders.

1.3 Administration

The Plan will be administered by the Board which has the sole and absolute discretion to: (i) grant Options to Eligible Persons; (ii) determine all attributes of such Options, including the Exercise Price, vesting, terms, limitations, restrictions and conditions of such grants; (iii) interpret and administer the Plan; (iv) establish, amend and rescind any rules and regulations relating to the Plan (subject to obtaining any required regulatory approval or shareholder approval, including any approval required pursuant to the Shareholders Agreement); and (v) make any other determinations that the Board deems necessary or desirable for the administration of the Plan. The Board may correct any defect or supply any omission or reconcile any inconsistency in the Plan, in the manner and to the extent the Board deems, in its sole and absolute discretion, necessary or desirable (subject to obtaining any required regulatory approval or shareholder approval, including any approval required pursuant to the Shareholders Agreement). Any decision of the Board with respect to the administration and interpretation of the Plan shall be conclusive and binding on the Participants.

1.4 Governing Law

The Plan is to be governed by and interpreted in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein.

1.5 Section 409A

Compensation payable under the Plan to U.S. Participants is intended not to be subject to U.S. federal income tax under Section 409A of the Code and the Plan shall be construed, interpreted and administered in compliance with such intent. The Board is hereby authorized to amend the Plan or any Option granted to a U.S. Participant under the Plan to achieve such intent. A Non Qualified Stock Option shall not be granted to a U.S. Participant unless the exercise price equals or exceeds the Fair Market Value of the Shares on the date of grant and the Shares constitute “service recipient stock” within the meaning of Section 409A of the Code.

1.6 Shares Reserved for Issuance

A number of authorized and unissued Shares representing 24,697,408 Shares will be reserved and available for issuance upon exercise of Options granted under the Plan and shall be the maximum number of Shares that may be issued under this Plan, provided that Shares reserved for issuance pursuant to Options which are cancelled or terminated without having been exercised will again be available for issuance under the Plan. Up to a maximum number of 24,697,408 Shares may be issued pursuant to the Incentive Stock Options.

Section 2. Options

2.1 Grant of Options

- (a) The Board may grant Options to any Eligible Person in accordance with principles to be established by the Board from time to time, in its sole discretion. The award of an Option to an Eligible Person at any time shall neither entitle such Eligible Person to receive nor preclude such Eligible Person from receiving a subsequent grant of an Option and shall not restrict in any way the right of a Participating Company to terminate the Eligible Person’s employment, engagement or directorship.
- (b) Unless otherwise determined by the Board in accordance with the Shareholders Agreement, Options shall vest as provided in the form of Option Agreement attached as Schedule A; provided that, subject to the terms of any employment or other agreement between the Participant and a Participating Company or the Board expressly providing to the contrary, Options which are not vested prior to a Participant’s Termination Date shall not become vested thereafter.
- (c) Notwithstanding the other provisions of this Section 2.1, Options must be exercised no later than 10 years after the date of grant or such shorter period as the Board may determine in its sole discretion.

2.2 Incentive Stock Options

The following additional provisions will apply only to Incentive Stock Options granted under the Plan:

- (a) No Incentive Stock Option may be granted to any Eligible Person who, at the time such Option is granted, (i) is not an employee of the Company or any Parent Corporation or Subsidiary Corporation of the Company or (ii) owns (or is deemed to own by reason of the attribution rules of Section 424(d) of the Code) securities possessing more than ten percent (10%) of the total combined voting power of all classes of securities of the Company or any Parent Corporation or Subsidiary Corporation of the Company, except that with respect to provision (ii) hereof such an Option may be granted to an employee if, at the time the Option is granted, the Exercise Price is at least one hundred ten percent (110%) of the fair value of the Shares subject to the Option, and the Option by its terms is not exercisable after the expiration of five (5) years from the date the Option is granted.
- (b) To the extent that the aggregate Fair Market Value of the Shares with respect to which Incentive Stock Options (without regard to this Section 2.2(b)) are exercisable for the first time during any calendar year (under all plans of the Company or any Parent Corporation or Subsidiary Corporation of the Company) exceeds U.S. \$100,000 (such fair value to be determined as of the grant date of the respective Incentive Stock Options), such Options will be treated as Non Qualified Stock Options. This Section 2.2(b) will be applied by taking Options into account in the order in which they were granted. If some but not all Options granted on any one day are subject to this Section 2.2(b), then such Options will be apportioned between Incentive Stock Option and Non Qualified Stock Option treatment in such manner as the Board will determine, subject to applicable Code requirements.
- (c) No Incentive Stock Option may be granted more than ten (10) years from the date the Plan is adopted or the date the Plan is approved by shareholders, whichever is earlier.
- (d) The exercise price per share for any Incentive Stock Options shall not be less than 100 percent of the Fair Market Value of such Shares on the date of grant, subject to increase as provided in Section 2.2(a)(ii).
- (e) No Incentive Stock Option may be granted which is exercisable more than (i) 12 months following the date on which the Participant's employment terminates, if such termination is due to death or disability (within the meaning of Code § 422(c)), or (ii) three months following the date on which the Participant's employment terminates, if such termination is due to any reason other than death or disability (within the meaning of Code § 422(c)).

2.3 Prohibition on Transfer or Assignment of Options

Options are personal to the Participant and only exercisable by the Participant during his or her lifetime. No Participant may deal with any Option or any interest in it or Transfer any Option now or hereafter held by the Participant other than by will or the laws of descent and distribution. A purported Transfer of any Option will not be valid, and the Company will not issue any Share upon the attempted exercise of a Transferred Option.

2.4 Cessation of Employment

If a Participant ceases to be an Eligible Person for any reason whatsoever other than death, Disability or termination for Cause, each vested portion of an Option held by the Participant will cease to be exercisable 60 days after the Termination Date or such longer period as the Board may determine in its sole discretion. If any portion of an Option has not vested by the Termination Date, that portion of the Option shall be terminated and may not under any circumstances be exercised by the Participant. The previous sentence will apply regardless of whether the Participant was dismissed with or without Cause. If a Participant dies or ceases to be an Eligible Person due to Disability, the legal representatives of the Participant may exercise the Participant's vested portion of Options within six months (or such longer period as the Board may determine in its sole discretion) after the date of the Participant's death or the date the Participant ceases to be an Eligible Person due to Disability, to the extent such Options were by their terms exercisable as of the date of death or the date the Participant ceases to be an Eligible Person due to Disability, as applicable. If a Participant is terminated for Cause, each Option held by the Participant, whether vested or unvested, shall immediately be terminated and may not be exercised by the Participant. Notwithstanding the foregoing, no Option may be exercised after its stated expiration. Prior to receipt of any Shares on the exercise of any Option, the Participant must agree to be bound by the Shareholders Agreement (if such Participant is not already a party to such agreement). All Shares issued on the exercise of the Option will be subject to all of the provisions of the Shareholders Agreement, including restrictions on voting, transfer and liquidity and repurchase provisions.

2.5 End of Participation

At the time a Participant ceases to hold Options which are or may become exercisable, the Participant ceases to be a Participant.

2.6 Liquidity Event

- (a) Subject to satisfaction of the terms of the Shareholders Agreement, in the event of a Liquidity Event or a potential Liquidity Event, the Board shall have the power to accelerate the vesting of any unvested Options in connection with such Liquidity Event in its sole discretion and/or to make such changes to the terms of the Options as it considers fair and appropriate in the circumstances, acting reasonably, including but not limited to: (i) otherwise modifying the terms of the Options to assist the Participants to participate in any transaction or arrangement leading to a Liquidity Event; (ii) upon written notice to Participants, provide that all unexercised vested (and if so determined by the Board, unvested) Options will terminate prior to the consummation of the Liquidity Event without payment of any consideration unless those Options which have vested are exercised by respective Participants within a specified number of days following the date of the notice, (iii) in a case where holders of Shares will receive cash or other consideration for each Share surrendered in connection with a Liquidity Event, provide for the delivery to each Participant of the cash or other consideration that the Participant would have received had the Participant exercised all of the Participant's outstanding vested (and if determined by the Board, unvested) Options immediately prior to such Liquidity Event (less the amount the Participant would have been required to pay to the Company on that exercise, in cash or in a portion of any other consideration having a fair value equal to the amount), in exchange for termination of all of the Participant's Options; (iv) suspend early exercise rights and/or option exercises during a limited period of time preceding the Liquidity Event if administratively necessary to facilitate the closing of the Liquidity Event transaction; (v) providing for any escrow, holdback, indemnification, earn-out or other similar provisions to apply to any payments to be made to Participants with respect to their Options to the same extent and in the same proportionate manner as such provisions apply to the shareholders selling shares in the capital of the Company; and/or (vi) terminating, conditionally or otherwise, the Options not exercised upon the successful completion of such Liquidity Event.

- (b) The Company shall provide a Participant with not less than ten days' prior written notice of any proposed Liquidity Event together with such information respecting the proposed transaction as may reasonably be required by the Participant to determine whether to exercise the Options in connection with such event. Any exercise of the Options by a Participant may be conditioned upon the closing of such Liquidity Event. If the Liquidity Event is not completed within the time contemplated by such event, if any (as the same may be extended), any Options for which vesting was accelerated shall be reinstated as unvested Options and if any such Options were exercised, the Shares issued upon exercise shall be returned by the Participant to the Company and reinstated as authorized but unissued Shares and the original terms applicable to such Options shall be reinstated.

2.7 Assumption or Substitution

In the event of (i) a merger, amalgamation, or other transaction pursuant to which the Shares as a whole are converted into other property, whether in the form of securities of another Person, cash or otherwise, which is not a Liquidity Event, or (ii) a Liquidity Event in respect of which the Board does not exercise its discretion to accelerate the vesting of any unvested Options in full (each, a "**Substitution Event**"), then any successor or acquiring Person shall assume any Option outstanding under the Plan or shall substitute similar Options (including an award to acquire the same net after tax consideration paid to the securityholders in the transaction effecting the Substitution Event) for those Options outstanding under the Plan. Any such assumption or substitution of Options shall, to the extent applicable, be made in accordance with Sections 409A and 424 of the Code. In the event any successor or acquiring Person refuses to assume such Options or to substitute similar stock options for those Options outstanding under the Plan, then with respect to such Options, the vesting of such Options (and, if applicable, the time during which such Options may be exercised) shall be accelerated in full, prior to the completion of such Substitution Event, and the Options shall terminate if not exercised (if applicable) at or prior to the completion of such Substitution Event. The provisions of Sections 2.6(a) and 2.6(b) shall apply to any Substitution Event in addition to any Liquidity Event.

No fractional Shares or other security shall be issued upon the exercise of any Option and accordingly, if as a result of a Substitution Event, a Participant would become entitled to a fractional security, such Participant shall have the right to acquire only the next lowest whole number of Shares or other securities and no payment or other adjustment will be made with respect to the fractional interest so disregarded.

2.8 Agreements

Each Option must be confirmed by an agreement (an "**Option Agreement**") in substantially the form attached hereto as Schedule A.

2.9 Exercise of Option

In order to exercise an Option or portion thereof, the applicable portion of the Option must be vested (including vesting as a result of an acceleration of vesting) and the Participant must file with the Chief Executive Officer of the Company a completed notice of exercise in the form attached hereto as Schedule B (a "**Notice of Exercise**") and must agree to be bound by the

Shareholders Agreement. The Exercise Price of each Option in respect of each Share purchased under such Option and amounts in respect of any applicable withholding taxes must be paid to the Company in full by bank draft, certified cheque or wire transfer of immediately available funds at the time of exercise. Upon receipt of payment in full of the Exercise Price in respect of each Option and subject to the terms of the Plan, the number of Shares in respect of which the subject Option is exercised will be duly issued as fully paid and non-assessable.

2.10 Cashless Exercise

In lieu of exercising an Option (other than an Incentive Stock Option) for cash, the Participant may elect, subject to the sole and entire discretion of the Company to accept such election, to surrender such Option and receive in exchange therefor that number of Shares, disregarding fractions, equal to the value (as determined below) of such Option being exercised, by providing a Notice of Surrender, in which event the Company, if it is willing to accept such election, shall issue to the Participant, upon surrender, that number of Shares calculated using the following formula:

$$X = Y(A-B)/A$$

Where X = the number of Shares to be issued to the Participant upon such cashless exercise

Y = the number of Shares underlying the Options being exercised

A= The fair market value of one Share as determined by the Board as at the date of such cashless exercise if such fair market value is greater than the Exercise Price.

B= Exercise Price.

2.11 Notation on Share Certificates

All certificates representing Shares will have the following statements conspicuously noted thereon:

“UNLESS PERMITTED UNDER SECURITIES LEGISLATION, THE HOLDER OF THIS SECURITY MUST NOT TRADE THE SECURITY BEFORE THE DATE THAT IS 4 MONTHS AND A DAY AFTER THE LATER OF (i) [DATE SECURITY ISSUED] AND (ii) THE DATE THE COMPANY BECAME A REPORTING ISSUER IN ANY PROVINCE OR TERRITORY.

THE SECURITY REPRESENTED HEREBY HAS NOT BEEN REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE “SECURITIES ACT”), OR ANY STATE SECURITIES LAWS. THE HOLDER HEREOF, BY PURCHASING THIS SECURITY, AGREES FOR THE BENEFIT OF REPARE THERAPEUTICS INC. THAT THIS SECURITY MAY BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED ONLY (A) TO REPARE THERAPEUTICS INC., (B) OUTSIDE THE UNITED STATES IN ACCORDANCE WITH REGULATIONS UNDER THE SECURITIES ACT, (C) IN ANOTHER TRANSACTION THAT IS EXEMPT FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT, OR (D) PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT

UNDER THE SECURITIES ACT AND, IN EACH CASE, IN ACCORDANCE WITH ANY APPLICABLE STATE SECURITIES LAWS OR THE APPLICABLE SECURITIES LAWS OF ANY OTHER JURISDICTION, PROVIDED THAT IN THE CASE OF TRANSFERS PURSUANT TO (B) OR (C), IN THIS PARAGRAPH ABOVE, A LEGAL OPINION OR OTHER CERTIFICATION OR EVIDENCE SATISFACTORY TO REPARE THERAPEUTIC INC. MUST FIRST BE PROVIDED TO REPARE THERAPEUTIC INC.

THE SALE, PLEDGE, HYPOTHECATION, OR TRANSFER OF THE SECURITIES REPRESENTED HEREBY IS SUBJECT TO, AND IN CERTAIN CASES PROHIBITED BY, THE TERMS AND CONDITIONS OF A CERTAIN UNANIMOUS SHAREHOLDER AGREEMENT BY AND AMONG THE SHAREHOLDER, THE CORPORATION AND CERTAIN OTHER HOLDERS OF SHARES OF THE CORPORATION, AS AMENDED AND/OR RESTATED FROM TIME TO TIME. COPIES OF SUCH AGREEMENT MAY BE OBTAINED UPON WRITTEN REQUEST TO THE SECRETARY OF THE CORPORATION.”

A new certificate bearing no United States securities legend may be obtained from Repare Therapeutics Inc. or any duly appointed transfer agent for these securities upon delivery of this certificate and a duly executed declaration and, if requested by Repare Therapeutics Inc. or any duly appointed transfer agent for these securities, an opinion of counsel of recognized standing, in a form satisfactory to Repare Therapeutics Inc. and any duly appointed transfer agent for these securities, to the effect that the sale of the securities represented hereby is being made in compliance with Rule 904 of Regulation S under the Securities Act. Delivery of this certificate may not constitute “good delivery” in settlement of transactions on stock exchanges in Canada.

2.12 Participants are not Shareholders

A Participant is not, and is not deemed to be, a shareholder of the Company and has no rights as a shareholder of the Company, until an Option is properly exercised and the Shares issued.

Section 3. General

3.1 Capital Adjustments

In the event of any stock dividend, share split, combination or exchange of shares, merger, consolidation, spin-off or other distribution (other than normal cash dividends) of the Company’s assets to shareholders, or any other change in the Shares of the Company, the Board will make such proportionate adjustments, if any, as the Board in its discretion may deem appropriate to reflect such change (for the purpose of preserving the value of the Options), with respect to (i) the number or kind of shares or other securities reserved for issuance pursuant to the Plan; and (ii) the number or kind of shares or other securities subject to unexercised Options previously granted and the Exercise Price of those Options provided, however, that no substitution or adjustment will obligate the Company to issue or sell fractional shares. The existence of any Options does not affect in any way the right or power of any Participating Company or any of their respective shareholders to make, authorize or determine any adjustment, recapitalization, reorganization or any other change in the capital structure or the business of, or any amalgamation, merger or consolidation involving, to create or issue any bonds, debentures, shares or other securities of, or to determine the rights and conditions attaching thereto, to effect the dissolution or liquidation of or any sale or transfer of all or any part of the assets or the business of, or to effect any

other corporate act or proceeding relating to, whether of a similar character or otherwise, such Participating Company, whether or not any such action would have an adverse effect on the Plan or any Option granted hereunder. Any such adjustments shall, to the extent applicable, be made in accordance with paragraph 7(1.4) of the *Income Tax Act* (Canada) or Sections 409A and 424 of the Code, as applicable.

3.2 Non-Exclusivity

Nothing contained herein will prevent the Board from adopting other or additional compensation arrangements for the benefit of any Participant or any other Person, subject to any required regulatory, shareholder or other approval (including, without limitation, any approval required pursuant to the Shareholders Agreement).

3.3 Unfunded Plan

To the extent any individual holds any rights under the Plan, such rights (unless otherwise determined by the Board) shall be no greater than the rights of a general unsecured creditor of the Company.

3.4 Successors and Assigns

The Plan shall be binding on all successors and assigns of the Company and a Participant, including without limitation, the personal legal representatives of a Participant, or any receiver or trustee in bankruptcy or representative of the Company's or Participant's creditors.

3.5 Amendment and Termination

- (a) The Board may amend, suspend or terminate the Plan or any portion thereof at any time in accordance with applicable legislation, and subject to any required regulatory, shareholder or other approval (including, without limitation, any approval required pursuant to the Shareholders Agreement). No amendment, suspension or termination may materially adversely affect any Options or any rights pursuant thereto granted previously to any Participant without the consent of that Participant.
- (b) If the Plan is terminated, the provisions of the Plan and any administrative guidelines and other rules adopted by the Board that are in force at the time the Plan was terminated, will continue in effect as long as an Option or any rights pursuant thereto remain outstanding. However, notwithstanding the termination of the Plan, the Board may make any amendments to the Plan and the Options it would be entitled to make if the Plan were still in effect.
- (c) With the consent of the Participant affected thereby to the extent that the change is adverse to such Participant, the Board may amend or modify any outstanding Option in any manner to the extent that the Board would have had the authority to initially grant the award as so modified or amended, including without limitation, to change the date or dates as of which, or the price at which, an Option becomes exercisable, subject to the prior approval of the relevant stock exchanges, if any.

3.6 No Special Rights

Nothing contained in the Plan or in any Option or Option Agreement will confer upon any Participant any right to the continuation of the Participant's employment or engagement by (including, as a Consultant), or directorship with, a Participating Company or interfere in any way with the right of any Participating Company at any time to terminate that employment, engagement (including, as a Consultant) or directorship or to increase or decrease the compensation of the Participant.

3.7 Other Employee Benefits

The amount of any compensation deemed to be received by a Participant as a result of the exercise of an Option or the sale of Shares received upon an exercise of an Option will not constitute compensation with respect to which any other employee or similar benefits of that Participant are determined, including, without limitation, benefits under any bonus, pension, profit-sharing, insurance or salary continuation plan, except as otherwise specifically determined by the Board in its sole discretion.

3.8 Compliance with Legislation

The Board may postpone any exercise of any Option or the issue of any Shares upon exercise of an Option granted pursuant to the Plan for as long as the Board in its discretion may deem necessary in order to (i) permit the Company to effect or maintain qualification of the Shares issuable pursuant thereto under the securities laws of any applicable jurisdiction, or to determine that the Shares are exempt from that qualification or (ii) comply with applicable law. The Company is not obligated by any provision of the Plan or grant of Options hereunder to sell or issue Shares in violation of any applicable law. In addition, if the Shares are listed on a stock exchange, the Company will have no obligation to issue any Shares pursuant to the Plan until such Shares have been duly listed and posted for trading on such exchange.

3.9 Tax Consequences

It is the responsibility of the Participant to complete and file any tax returns which may be required under Canadian and other tax laws within the periods specified in those laws as a result of the Participant's participation in the Plan. The Company shall not be held responsible for any tax consequences to the Participant as a result of the Participant's participation in the Plan. If the Company is required under applicable law to withhold and remit to the applicable governmental authority an amount on account of tax in respect of any amount paid hereunder, the Participant shall (i) pay to the Company sufficient cash as is reasonably determined by the Company to be the amount necessary to permit the required tax remittance, or (ii) make other arrangements acceptable to the Company to fund the required tax remittance.

3.10 No Liability

The Company shall not be liable to any Participant for any loss resulting from a decline in the value of any Shares.

3.11 Dispute Resolution

Any dispute arising out of this Agreement (a **"Dispute"**), will be resolved by arbitration in accordance with this Section 3.11.

- (a) A party may commence arbitration of a Dispute by delivering to the other party a written notice of arbitration (the **"Arbitration Notice"**). The Arbitration Notice will contain a concise description of the matters submitted for arbitration, including the facts supporting the party's position, the points at issue and the relief sought.
- (b) The arbitration will be conducted in accordance with this Section 3.11 and the *Arbitration Act, 1991* (Ontario).

- (c) The arbitral tribunal will consist of a single arbitrator. The single arbitrator will be appointed by mutual agreement of the parties or, if they do not agree within 10 business days following the delivery of the Arbitration Notice, by the ADR Institute of Canada Inc., acting solely as an appointing authority.
- (d) The arbitration will be take place in Montreal, Quebec and the language of the arbitration shall be English, provided that witnesses shall be permitted to testify in the language of their choice between French and English and simultaneous translation will be provided if such witnesses testify in French.
- (e) The award will deal with the question of costs of arbitration, which may include the arbitrators' fees and expenses, the provision of a reporter and transcripts, reasonable legal fees and reasonable costs of preparations, as appropriate.
- (f) The arbitration award will be final and binding and will not be subject to appeal, whether on a question of law, of fact or of mixed law and fact.
- (g) The Parties agree that the arbitration will be kept confidential and that the existence of the proceeding and any element of it (including any pleadings, briefs or other documents submitted or exchanged, any testimony or other oral submissions and any awards) will not be disclosed beyond the arbitrator or arbitration tribunal, the Parties, their counsel and any Person necessary to the conduct of the proceeding, except as may lawfully be required in judicial proceedings relating to the arbitration or otherwise or as may be required by Law.

3.12 Shareholder Approval

The Plan must be approved by the shareholders of the Company within twelve (12) months after the adoption of the Plan by the Board.

3.13 Language

The parties to this Agreement have agreed that this Agreement as well as any document or instrument relating to it be drawn up in English. *Les parties aux présentes ont convenu que la présente Convention ainsi que tous autres actes ou documents s'y rattachant soient rédigés en anglais seulement.*

3.14 Effective Date

The Plan is effective as of the 3rd day of September, 2019.

[Signature Page Follows]

REPARE THERAPEUTICS INC.

Per: /s/ Lloyd M. Segal

Lloyd M. Segal

Chief Executive Officer, President and Secretary

[Signature Page – Amended and Restated Option Plan]

SCHEDULE A

**REPARE THERAPEUTICS INC.
AMENDED AND RESTATED OPTION PLAN**

OPTION AGREEMENT

Pursuant to the Repare Therapeutics, Inc. Amended and Restated Option Plan (the “**Plan**”), Repare Therapeutics Inc., (together with any successor, the “**Company**”), has granted to the individual named below, an option (the “**Option**”) to purchase on or prior to the date which is ten years from the date of grant or such earlier date as is specified herein, all or any part of the number of common shares of the Company indicated below (the “**Shares**”), at the Exercise Price per share, subject to the terms and conditions set forth in this Option Grant Notice (the “Grant Notice”), the attached Option Agreement (the “Agreement”) and the Plan. **[This Option is intended to qualify as an “incentive stock option” as defined in Section 422(b) of the Internal Revenue Code of 1986, as amended from time to time (the “Code”). To the extent that any portion of the Option does not so qualify, it shall be deemed a non-qualified stock option.]**

Name of Optionee: _____ (the “Optionee”)

No. of Shares: _____ Common Shares

Grant Date: _____

Expiration Date: _____ (the “Expiration Date”)

Option Exercise Price/Share: \$ _____ (the “Exercise Price”)

Vesting Schedule: 25 percent of the Shares shall vest and become exercisable on the first anniversary of the Grant Date; provided that the Optionee continues to be an Eligible Person who has not been Terminated. Thereafter, the remaining 75 percent of the Shares shall vest and become exercisable in 36 equal monthly installments following the first anniversary of the Grant Date until [_____], on which date, subject to the vesting conditions herein, all remaining Shares shall vest, provided the Optionee continues to be an Eligible Person who has not been Terminated.

Attachments: Amended and Restated Option Plan

The foregoing Agreement is hereby accepted and the terms and conditions thereof hereby agreed to by the undersigned as of the date first above written.

REPARE THERAPEUTICS, INC.

By: _____

Name:

Title:

Address:

The undersigned hereby acknowledges receiving and reviewing a copy of the Plan, and understands that this Option is subject to the terms of the Plan and this Grant Notice which are hereby agreed to, by the undersigned as of the date first above written.

OPTIONEE:

Name:

Address:

SCHEDULE B

**REPARE THERAPEUTICS INC.
AMENDED AND RESTATED OPTION PLAN**

NOTICE OF EXERCISE

TO: REPARE THERAPEUTICS INC.
Attention: [■]

Pursuant to the Repare Therapeutics Inc. Amended and Restated Option Plan (the "**Plan**"), the undersigned elects to exercise a vested Option to purchase _____ common shares in the capital of Repare Therapeutics Inc. ("**Shares**") which are the subject of an Option granted on _____, _____, and encloses a bank draft or a certified cheque payable, or has arranged for a wire transfer of immediately available funds, to Repare Therapeutics Inc. in the aggregate amount of \$ _____, being \$ _____ per Share plus amounts in respect of any applicable withholding taxes.

I agree to be bound by the terms of the Shareholders Agreement as if I was an original signatory thereto as an Employee Shareholder to the same extent as all of the other parties, and acknowledge that the Shares are held subject to the Shareholders Agreement. All capitalized terms not defined in this Notice of Exercise have the meaning set out in the Plan.

DATED _____, _____.

Signature

Name (please print)

SCHEDULE C

REPARE THERAPEUTICS INC. AMENDED AND RESTATED OPTION PLAN

NOTICE OF SURRENDER

Pursuant to the Repare Therapeutics Inc. Amended and Restated Option Plan (the “**Plan**”), the undersigned elects to surrender a vested Option to purchase _____ common shares in the capital of Repare Therapeutics Inc. (“**Shares**”) which are the subject of an Option granted on _____, _____, and requests that such surrender be completed in accordance with Section 2.10 of the Plan on a cashless basis. **[NTD: Not available for ISOs]**

I agree to be bound by the terms of the Shareholders Agreement as if I was an original signatory thereto as an Employee Shareholder to the same extent as all of the other parties, and acknowledge that the Shares are held subject to the Shareholders Agreement. All capitalized terms not defined in this Notice of Exercise have the meaning set out in the Plan.

DATED _____, _____.

Signature

Name (please print)

DATED: MAY 15, 2014

B E T W E E N:

CIG III TECHNOPARC NOMINEE INC.

- and -

PHARMASCIENCE, INC.

LEASE

regarding 7210 Frederick-Banting,
City of Montréal (Borough of Saint-Laurent),
Province of Québec

SUMMARY OF BASIC LEASE PROVISIONS

The following summary of basic lease provisions forms a part of this Lease. The summary however, is intended only to set out key information and summarize various provisions of the lease which may be more fully set out within the Lease. In the event of any conflict between the terms of this summary and the remainder of the Lease, the terms of the remainder of the Lease shall prevail over the terms of this summary.

Tenant:	PHARMASCIENCE INC.
Tenant's Address:	6111 Royalmount Avenue, Suite 100, Montréal (Québec) H4P 2T4
Landlord:	CIG III TECHNOPARC NOMINEE INC.
Leased Premises:	Suite 100
Property:	7210 Frederick Banting, City of Montréal (Borough of Saint-Laurent), Province of Québec.
Rentable Area:	Approximately 9,394 square feet of Rentable Area. The Rentable Area of the Leased Premises shall be calculated by the Landlord's Architect according to the 1996 BOMA standard of measurement for office buildings.
Term of Lease:	Seven (7) years and one (1) month.
Commencement Date:	July 1, 2014
Expiry Date:	July 31, 2021.
Option to Extend:	One (1) option to extend the Term of the Lease for five (5) years.
Basic Rent:	(i) From July 1, 2014 to June 30, 2017 - \$14.50 per square foot of the Rentable Area of the Leased Premises per annum; and (ii) From July 1, 2017 to July 31, 2021 - \$16.50 per square foot of the Rentable Area of the Leased Premises per annum.
Permitted Use:	The Leased Premises will be used exclusively for general offices and for research and development and laboratories purposes and for no other purpose.
Surety:	N/A
Surety's Address:	N/A
Special Provisions:	See Schedule "F" hereof.

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Schedule "F" - Special Provisions
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B E T W E E N :

CIG III TECHNOPARC NOMINEE INC., a company duly incorporated according to law and herein represented by _____ duly authorized;
(hereinafter called the "Landlord")

OF THE FIRST PART

- and -

PHARMASCIENCE INC., a body politic and corporate, duly incorporated according to law and herein represented by Ivan Djynjak, duly authorized;
(hereinafter called the "Tenant")

OF THE SECOND PART

ARTICLE 1 - LEASED PREMISES & TERM

1.01 Leased Premises

WITNESSETH that in consideration of the rents, covenants and agreements hereinafter reserved and contained on the part of the Tenant to be paid, observed and performed, the Landlord does lease unto the Tenant and the Tenant leases from the Landlord, the Leased Premises.

1.02 Use of Common Areas

The use and occupation by the Tenant of the Leased Premises includes the non-exclusive right of the Tenant, its employees, agents and invitees and persons having business with the Tenant, in common with the Landlord and all others entitled thereto, to use the areas designated by the Landlord from time to time as Common Areas, including, without limitation, the driveways, sidewalks and entrances and parking areas.

1.03 Term

To have and to hold the Leased Premises for and during a term of seven (7) years and one (1) month, commencing on July 1, 2014 (the "Commencement Date"), subject to any delay thereof as contemplated in the third paragraph of Section 1.0 of Schedule "F" attached hereto and ending on July 31, 2021 (the "Term").

1.04 Acceptance of Premises and Existing Equipment

Tenant shall give written notice to Landlord, within ninety (90) days of the Occupancy Date, of any defects in or in respect of Landlord's Work and the Improvements (as defined in Section 1.0 of Schedule "F") which would materially diminish Tenant's use or enjoyment of the Leased Premises (except for the HVAC System where a thirty (30) day period shall commence as of the Commencement Date). Except to the extent Tenant notifies Landlord of such defects in such manner and within such delay, the Tenant shall be conclusively deemed to have accepted and agreed that Landlord has delivered the Leased Premises with Landlord's Work and the Improvements and otherwise as required under the Lease and by law, and Landlord shall have no further or other obligation to Tenant regarding defect(s) in or in respect of the Leased Premises or Landlord's Work or the Improvements. In the event that Tenant does notify Landlord of such defects in such manner and within such delay, Landlord shall be responsible, at his expense, to remedy any defect within thirty (30) days (unless such defect would reasonably require more than thirty (30) days to remedy, provided that Landlord has commenced remediation of such defect) to the extent the defect in question is the Landlord's responsibility under the Lease. The Tenant acknowledges that the existing leasehold improvements, if any, are acceptable and that, subject to the Landlord's Work described in Schedule "D", the Tenant is taking possession of the Leased Premises "as is".

During the Term and any extension thereof, the Tenant shall have access to and shall be granted the right to use all existing equipment currently in the Leased Premises as approximately shown in Schedule "I" hereof (the "Equipment"), at no additional cost. The Tenant accepts the Equipment in its "as is" existing condition. The Tenant shall maintain, repair and replace the Equipment at its sole cost during the Term and any extension thereof. The Tenant agrees to return all Equipment to the Landlord at the expiry of the Term or any renewal thereof, in the condition it was in at the time of the Tenant's taking of possession of the Leased Premises, ordinary wear and tear excepted. However, it is agreed that any Equipment that has been entirely replaced by Tenant, at the Tenant's cost, shall become the Tenant's property at the expiry of the Lease.

1.05 Quiet Enjoyment

If the Tenant pays the Rent hereby reserved and observes and performs the covenants on its part contained in this Lease, then the Tenant may peaceably possess and enjoy the Leased Premises for the Term hereby granted without disturbance from the Landlord or any other party lawfully claiming by, from or under the Landlord.

ARTICLE 2 - RENT

2.01 **Intent of Lease**

The Tenant acknowledges that it is intended and agreed that this is a completely carefree net lease for the Landlord except as expressly hereinafter set out and it is the mutual intention of the parties hereto that the Basic Rent herein provided to be paid shall be net to the Landlord clear of all taxes, costs, charges, expenses and outlays arising from or relating to the Property and that the Tenant shall bear its Proportionate Share of all costs relating to the operation, maintenance and repair of the Property (save only as otherwise specifically set out in this Lease) including, and without limiting the generality of the foregoing, the Tenant's Proportionate Share of Taxes and Operating Costs and all taxes, costs, charges, expenses and outlays of any nature or kind whatsoever relating to the Leased Premises, the use and occupancy thereof, the contents thereof and the business carried on therein. Any amount and any obligation which is not expressly declared herein to be that of the Landlord pertaining to the Property or the Leased Premises shall be deemed to be the obligation of the Tenant to be performed by or at the Tenant's expense. Charges of a kind personal to the Landlord such as taxes assessed upon the income of the Landlord and principal and interest payments to be made by the Landlord in satisfaction of hypothecs now or hereafter registered against the Property shall not be the responsibility or obligation of the Tenant.

2.02 **Basic Rent**

The Tenant covenants and agrees to pay to the Landlord, without any prior demand therefor and without any deduction, abatement or set-off whatsoever from and after the Commencement Date, a Basic Rent for the Leased Premises payable, in lawful money of Canada to be paid in advance in equal consecutive monthly instalments on the first day of each and every month during the Term (the first of such payments to be made on the Commencement Date of the Term) as follows, subject to adjustment based on measurement of the Rentable Area of the Leased Premises to be performed by Landlord's Architect:

Period of the Time	Rate per Square Foot Per Annum	Monthly Basic Rent	Annual Basic Rent
July 1, 2014 - June 30, 2017	\$14.50	\$11,351.08	\$136,213.00
July 1, 2017 - July 31, 2021	\$16.50	\$12,916.75	\$155,001.00

If the Term commences on any day other than the first or ends on any day other than the last day of a month, then Basic Rent for the fractions of a month at the commencement and at the end of the Term shall be adjusted pro rata with the Basic Rent payable for such month being that amount equal to the Basic Rent for the full month multiplied by a fraction having as its numerator, the number of days in such month during the Term and as its denominator, the number of days in such month.

2.03 Calculation of Basic Rent

The Basic Rent is calculated on the basis of the Rentable Area of the Leased Premises multiplied by the rate per square foot per annum set out in Section 2.02 above. **The Landlord shall cause the Leased Premises to be measured in accordance with the 1996 BOMA standards of measurement for office buildings. The certificate of the Landlord's Architect regarding such measurement of the rentable area of the Leased Premises shall be conclusive and binding upon the Tenant and Basic Rent, Additional Rent and all other amounts calculated with reference to the Rentable Area of the Leased Premises and the Tenant's Proportionate Share shall be adjusted accordingly, such adjustment to be retroactive to the Commencement Date.**

2.04 Additional Rent

The Tenant shall pay Additional Rent due and owing to the Landlord within ten (10) days of written demand therefor or as otherwise hereinafter expressly set out and all other Additional Rent on the due date thereof.

2.05 Security Deposit

Concurrently with the execution of this Lease, Tenant will execute and deliver to Landlord, Landlord's standard form of Agreement Regarding Letter of Credit and Other Security, attached hereto as Schedule "G" (the "Security Agreement") and will furnish to Landlord a security deposit in the amount of ONE HUNDRED THIRTY-FIVE THOUSAND DOLLARS (\$135,000.00) (the "Security Deposit"), by way of an irrevocable standby letter of credit, issued by a Schedule I Canadian chartered bank, the whole in accordance to the provisions of the Security Agreement. The Security Deposit shall be governed by the provisions of the Security Agreement.

2.06 Payments to Landlord

All payments to be made by the Tenant to the Landlord under this Lease shall be made at the address hereinafter designated or, at such other place or places as the Landlord may designate in writing, or to such agent of the Landlord as the Landlord may from time to time direct.

2.07 Overdue Rent

The Tenant covenants to pay the Basic Rent, Additional Rent and all other charges provided for in this Lease on their respective due dates in full. The Tenant shall pay the Landlord interest on all overdue Rent, all such interest to be calculated from the date upon which the amount is first due hereunder until actual payment thereof and at a rate [Intentionally Deleted] equal to the minimum lending rate charged to prime commercial borrowers by the Landlord's bank from time to time.

2.08 Set-Off

All Rent payable by the Tenant to the Landlord shall be paid without any deduction, set-off or abatement whatsoever except as hereinafter expressly provided.

2.09 Review of Tenant's Financial Statements

If the Tenant is late in the payment of any Rent (or any part thereof) in any **three (3)** consecutive months or more than twice in any twelve (12) month period, then the Tenant shall **[Intentionally Deleted] make available to the Landlord** financial records and books of account of the Tenant as may be required by the Landlord so as to adequately enable it to determine to its satisfaction the financial status of the Tenant. **The Tenant shall promptly provide the Landlord access to all such financial records and books of account at the Tenant's head office (or at such any other office maintained by the Tenant in Québec) during Normal Business Hours upon reasonable prior notice.**

2.10 Pre-Authorized Bank Debit or Post-Dated Cheques

If the Tenant is late in the payment of any Rent (or any part thereof) at any time, then the Tenant shall forthwith provide the Landlord upon demand with such written authorizations as may be required from time to time to debit the Tenant's bank account in favour of the Landlord for outstanding amounts owing by the Tenant to the Landlord under the Lease, or, at the Landlord's option, the Tenant shall provide the Landlord with post-dated cheques for the monthly payments of Basic Rent and estimated Additional Rent for the next twelve (12) months of the Term and shall, prior to the end of each Year, provide the Landlord with post-dated cheques for the monthly payments of Basic Rent and estimated Additional Rent in respect of the next Year, to the end of the Term.

ARTICLE 3 - TAXES

3.01 Taxes Payable by Landlord

The Landlord shall pay the Taxes to the applicable taxing authority, subject to reimbursement by the Tenant as hereinafter set out. The Landlord shall have no obligation to contest or litigate the imposition of any Taxes. The Landlord may defer payment of Taxes to the extent permitted by law if it diligently pursues or causes to be pursued the contest or appeal of the Taxes.

3.02 Taxes Payable by Tenant

- (a) If there is no separate assessment for Taxes with respect to the Leased Premises, or if there is a separate assessment, but such separate assessment, together with all other separate assessments relating to the Property do not aggregate the total assessment for Taxes for the Property (including its share of the Common Lot), then until such time as there is a separate assessment for Taxes with respect to the Leased Premises which, together with all other such separate assessments, aggregate the total assessment for Taxes for the Property (including its share of the Common Lot), the Tenant shall pay as Additional Rent its Proportionate Share of the Taxes for the Property (including its share of the Common Lot). If there is no separate assessment for Taxes as herein provided and the Property (including its share of the Common Lot) is not fully assessed as a commercial or industrial property for determination of Taxes in any Year, then the Landlord shall adjust the Taxes to an amount that would have been determined if the Property (including its share of the Common Lot) were fully assessed as a commercial or industrial property. If the Leased Premises are at any time during the Term assessed for the

support of Separate Schools or if the Taxes are increased by reason of any installations made in or upon or any alterations made in or to the Leased Premises by the Tenant or by the Landlord on behalf of the Tenant, the Tenant shall pay the amount of such increase forthwith to the Landlord upon receipt of notice thereof.

- (b) If there is a separate assessment for Taxes with respect to the Leased Premises, and if such separate assessment together with all other separate assessments for the Property (including its share of the Common Lot), aggregate the total assessment for Taxes for the Property (including its share of the Common Lot), the Tenant shall pay as Additional Rent the amount calculated by multiplying the assessment for the Leased Premises by the applicable tax rate, which amount shall, for the purposes of this paragraph only and notwithstanding anything else herein contained, be the Tenant's "Proportionate Share" of Taxes for the Property (including its share of the Common Lot).

3.03 Tenant's Business and Other Taxes

In addition to the Taxes payable by the Tenant pursuant to Section 3.02, the Tenant shall pay to the lawful taxing authorities or to the Landlord if the Landlord so directs:

- (a) all taxes, rates, duties, assessments and other charges that are levied, rated, charged or assessed against or in respect of all improvements, equipment and facilities of the Tenant on or in the Leased Premises or the Property or any part thereof;
- (b) every tax and license fee which is levied, rated, charged or assessed against or in respect of each and every business carried on in the Leased Premises or in respect of the use or occupancy thereof or any part of the Lands or the Building by the Tenant and every subtenant or licensee of the Tenant or against the Landlord on account of its interest in the Property, and whether in any case, any such taxes, rates, duties, assessments or license fees are rated, charged or assessed by any federal, provincial, municipal, school or other body during the Term; and
- (c) the full amount of any taxes in the nature of a business transfer tax, value added tax, sales tax or any other tax levied, rated, charged or assessed in respect of the Rent payable by the Tenant under this Lease or in respect of the rental of space under this Lease, whether characterized as a goods and services tax, sales tax, value added tax, business transfer tax or otherwise.

3.04 Payment of Taxes

- (a) The Landlord shall be entitled at any time or times in any Year, upon at least **thirty (30) days'** notice to the Tenant to require the Tenant to pay to the Landlord the Tenant's Proportionate Share of the Taxes for such Year in equal monthly instalments. Such monthly amount shall be determined by dividing the Tenant's Proportionate Share of Taxes by the number of months for the period from January 1st in each Year of the Term until the due date of the final instalment of Taxes as established by the applicable taxing authority from time to time in each Year ("Instalment Period") and shall be paid by the Tenant to the Landlord, monthly as

Additional Rent, on the date for payment of monthly rental payments during the Instalment Period. The Landlord shall be entitled subsequently during such Year, upon at least fifteen (15) days' notice to the Tenant, to revise its estimate of the amount of increase of such Taxes and the said monthly instalment Initials Landlord shall be revised accordingly. All amounts received under this provision in any Year on account of the estimated amount of such Taxes shall be applied in reduction of the actual amount of such Taxes for such Year. If the amount received is less than the Tenant's Proportionate Share of the actual Taxes, the Tenant shall pay any deficiency to the Landlord as Additional Rent within **thirty (30)** days following receipt by the Tenant of notice of the amount of such deficiency. If the amount received is greater than the Tenant's Proportionate Share of the actual Taxes, the Landlord shall either refund the excess to the Tenant **[Intentionally Deleted] within thirty (30) days following** the end of the Year in respect of which such payments were made or, at the Landlord's option, shall apply such excess against any amounts owing or becoming due to the Landlord by the Tenant.

- (b) Taxes payable pursuant to paragraphs (a) and (b) of Section 3.03 shall be paid by the Tenant when due if separate tax bills are issued and otherwise shall be paid to the Landlord within ten (10) days' written demand therefor.
- (c) Taxes payable pursuant to paragraph (c) of Section 3.03 shall be paid to the Landlord within ten (10) days' written demand therefor or at such time or times as the Landlord from time to time determines by notice in writing to the Tenant.
- (d) If the Term of this Lease commences or ends on any day other than the first or last day, respectively, of a Year, the Tenant shall be liable only for the portion of the Taxes for such Year as falls within the Term, determined on a per diem basis.

ARTICLE 4 - OPERATING COSTS

4.01 Tenant's Covenant to Pay Operating Costs

The Tenant covenants to pay to the Landlord as Additional Rent, the Tenant's Proportionate Share of the Operating Costs for the Year during each Year of the Term in accordance with the provisions of Section 4.02.

4.02 Payment of Operating Costs

The Landlord shall be entitled at any time or times in any Year, upon at least **thirty (30) days'** notice to the Tenant to require the Tenant to pay to the Landlord monthly, on the date for payment of monthly rental instalments, as Additional Rent, an amount equal to one-twelfth (1/12) of the amount estimated by the Landlord to be the amount of the Tenant's Proportionate Share of the Operating Costs for such Year. The Landlord shall be entitled subsequently during such Year, upon at least fifteen (15) days' notice to the Tenant, to revise its estimate of the amount of the Tenant's Proportionate Share of the Operating Costs and the said monthly instalment shall be revised accordingly. All amounts received under this provision in any Year on account of the estimated amount of the Tenant's Proportionate Share of the Operating Costs shall be applied in reduction of the actual amount of the Tenant's Proportionate Share of the Operating Costs for such

Year. Within a reasonable time after the end of the period for which the estimated payments have been made, the Landlord shall deliver to the Tenant a written statement **certified by an independent firm of chartered accountants** setting out in reasonable detail the amount of the Operating Costs for such period calculated on the basis of a calendar year and the Tenant's Proportionate Share thereof. If the amount received is less than the actual amount of the Tenant's Proportionate Share of the Operating Costs for such Year, the Tenant shall pay any deficiency to the Landlord as Additional Rent within thirty (30) days following receipt by the Tenant of notice of the amount of such deficiency. If the amount received is greater than the actual amount of the Tenant's Proportionate Share of the Operating Costs, the Landlord shall either refund the excess to the Tenant **[Intentionally Deleted]** **within thirty (30) days following** the end of the Year in respect of which such payments were made, or at the Landlord's option, shall apply such excess against any amounts owing or becoming due to the Landlord by the Tenant.

The Tenant shall have sixty (60) days after receipt of any such statement to dispute such statement by way of notice in writing to the Landlord. Failing such notice within such sixty (60) day period, such statement shall be conclusive and binding upon the Tenant. In the event the Tenant disputes any such statement by notice in writing to the Landlord within not more than sixty (60) days after receipt of such statement, then the Landlord shall have its accountant prepare a report in respect of the Operating Costs for the period dealt with in such statement. Any such report shall be conclusive and binding upon the Tenant. **If the report concludes that the Operating Costs for such period has a variation which is within three percent (3%) of the Operating Costs for such period indicated in the Landlord's statement, then the costs of the report shall be borne by the Tenant; however, if such report concludes that the Operating Costs for such period has a variation greater than three percent (3%) of the Operating Costs for the period indicated in the Landlord's statement, then the costs of the report shall be borne by the Landlord.**

The Landlord estimates but does not in any way warrant, Tenant's Proportionate Share of Taxes and Operating Costs to be Fourteen Dollars and Nineteen Cents (\$14.19) per square foot of the Rentable Area of the Leased Premises for the twelve (12) month period ending December 31, 2014. This amount is subject to adjustment in the manner indicated in this Lease when the actual amount of Taxes and Operating Costs is determined. This amount includes the fifteen percent (15%) management fee mentioned in paragraph (q) of Schedule "C".

ARTICLE 5 - UTILITIES

5.01 Utility Charges, Bulbs, etc.

The Tenant shall pay for the cost of all utilities consumed or used for the Leased Premises, same to include, without limitation, the cost of water, gas, electricity, steam, fuel or other energy and Tenant shall pay for the cost of all fittings, machines, apparatus, meters or other things leased in respect thereof and for all work or services performed by any corporation or commission in connection with any such utilities. The Tenant's obligations under this Section 5.01 include, without limitation, the obligation to pay for the cost of all electricity or other utilities consumed or used to heat, ventilate and, if applicable, air condition the Leased Premises. It is an essential condition of this Lease and Tenant's

responsibility that Tenant communicate with all utility suppliers on or before the Commencement Date to ensure that all accounts for utilities separately metered for the Leased Premises and billed by the utility supplier (including without limitation gas and electricity) are transferred in its name as of the Commencement Date. Landlord reserves the right to effect such transfer of account(s) for and on behalf of the Tenant where Tenant has failed to do so, at Tenant's sole cost and expense including Landlord's administration fee on account thereof. The foregoing is without prejudice to the Tenant's obligation to pay for all utilities consumed in the Leased Premises regardless of the date any particular utility account is transferred to its name.

Tenant will retain evidence of payment of any charges referred to in this Section 5.01 which it pays directly to any public authority for inspection by Landlord at Tenant's offices during normal business hours upon reasonable prior notice, the whole for a period of two (2) years following the dates for payment of said charges.

5.02 Water Heaters

In the event that the Tenant shall require a hot water heater or heaters, the Tenant agrees to install same at its costs or to lease same from Hydro-Québec and to pay all charges as same become due for rental or work services required in connection therewith.

5.03 Service Contracts

The Tenant shall take out and maintain in force such service contracts with reputable service providers (for matters such as but not limited to the maintenance and repair of the HVAC System, plumbing and other mechanical systems, services and equipment which are its responsibility pursuant to the provisions of this Lease, garbage, refuse, rubbish, trash and waste removal, security and the like) as Landlord, acting reasonably, may from time to time determine to be necessary or advisable for the good order, appearance, safety and care of the Leased Premises. Copies of all such contracts shall be exhibited to Landlord upon demand.

5.04 Heating and Ventilation

"HVAC System" as used herein means the whole of any system which supplies heating, ventilating and/or cooling exclusively to the Leased Premises, wherever any such system is located, and including all fixtures, appurtenances, equipment and systems associated with or for such system and including the apparatus for the further processing and distribution or exhaust of air such as ducts, diffusers, reheat coils, controls and other apparatus and equipment therefor.

The Tenant shall operate, maintain, repair and replace the HVAC System serving its Leased Premises as would a prudent owner, to the satisfaction of the Landlord with all costs to provide heating, ventilating and air-conditioning services being borne by the Tenant. The Tenant will operate and regulate those parts of the HVAC System for its Leased Premises in conformity with Building standards determined from time to time in order to maintain a temperature in the Leased Premises at all times at the same level of comfort as is maintained in other premises within the Building and in any event at a temperature sufficient to ensure that no direct or indirect appropriation of heating, ventilating and/or air-conditioning from any other HVAC systems serving the Building occurs and that no damage ensues to such system(s), the HVAC System or any part of the Building. The Tenant shall maintain preventive maintenance contracts for such HVAC System in accordance with the provisions of 5.03 above.

Notwithstanding the foregoing, in the event that the Tenant fails to effect any maintenance, repairs and/or replacements required to the HVAC System for the Leased Premises in accordance with the provisions of this Lease, the Tenant agrees that the Landlord may at any time elect to effect the maintenance, repairs and replacements required to the HVAC System for the Leased Premises. The Tenant shall then pay as Additional Rent to the Landlord within ten (10) days after demand therefor, all costs incurred by the Landlord in connection with the maintenance, repair and replacement of the HVAC System, including without limitation any costs incurred to maintain any maintenance contracts entered into by the Landlord in connection therewith (plus an administration fee of ten percent (10%) of the total of such costs.

5.05 Replacement of Bulbs, Ballasts and Starters

The Landlord shall have the exclusive right to attend to any replacement of electric light bulbs, tubes and ballasts in the Leased Premises throughout the Term and any renewal thereof. The Landlord may adopt a system of relamping and reballasting periodically on a group basis in accordance with good practice. The Tenant shall pay to the Landlord as Additional Rent on the first day of each and every month during the Term and any renewal thereof, a monthly charge per bulb, tube and ballast on account of the cost of such replacement. If the cost of such replacement shall increase or decrease during the Term or any renewal thereof, the Landlord shall adjust the Additional Rent payable for such replacement hereunder on an equitable basis and the Tenant agrees to pay such Additional Rent as adjusted, on demand. The decision of the Landlord, acting reasonably, with respect to any such adjustment or adjustments and Additional Rent shall be final and binding upon the parties hereto.

ARTICLE 6 - MAINTENANCE, REPAIR & ALTERATIONS

6.01 Tenant to Maintain and Repair

The Tenant shall at its own cost, repair, replace, maintain and keep the Leased Premises and every part thereof, including without limitation the Leasehold Improvements and the HVAC System, fixtures and furnishings (whether or not installed or furnished by the Tenant), in good and substantial repair and condition (including any improvements, new requirements and/or installations required by any governmental authority having jurisdiction in accordance with Section 8.03) as a prudent owner would do, damage by fire and any other perils against which the Landlord is required under this Lease to insure, only excepted. The Tenant agrees that the Landlord may enter and view the state of repair and condition and that the Tenant shall repair in accordance with notice in writing from the Landlord; provided that if the Tenant neglects to so maintain or to make such repairs or replacements promptly after notice, the Landlord may, at its option, do such maintenance or make such repairs or replacements at the expense of the Tenant, and in any and every such case the Tenant covenants with the Landlord to pay to the Landlord forthwith as Additional Rent all sums which the Landlord may have expended in doing such maintenance and making such repairs and/or replacements; provided further that the doing of such maintenance or the making of any such repairs or replacements by the Landlord shall not relieve the Tenant from its obligation to maintain, repair and replace.

6.02 Repair Where Tenant At Fault

If the Lands or any part of any of the buildings thereon (save only the Leased Premises), including, without limitation, the boilers, engines, pipes and other apparatus (or any of them) used for the purposes of heating, ventilating or air-conditioning any of the buildings or if the water pipes, drainage pipes, electric lighting or other equipment of a building or if the roof or outside walls of a building require repair or become damaged or destroyed through the use of the Leased Premises or the willful act, negligence, carelessness or misuse of the Tenant or those for whom at law it is responsible, the expense of the necessary repairs, replacements or alterations, shall be borne by the Tenant who shall pay the same to the Landlord forthwith upon demand.

6.03 Alterations

The Tenant shall not, without the prior written approval of the Landlord, make any installations, alterations, additions, partitions, repairs or improvements in or to the Leased Premises, including, without limitation, doing anything which might affect the structural portions of the Leased Premises or the electrical, lighting, HVAC System, sprinkler, fire protection or other systems therein. The Tenant's request for approval shall be in writing and accompanied by an adequate description of the contemplated work, and where appropriate, working drawings and specifications therefor; the Landlord's costs of having its architects, engineers or others examine such drawings and specifications shall be payable by the Tenant upon demand as Additional Rent; the Landlord may require that any or all such work be done by the Landlord's contractors or workmen or by contractors or workmen engaged by the Tenant but first approved by the Landlord. All such work shall be subject to inspection by and the reasonable supervision of the Landlord and shall be performed in accordance with all applicable laws and any reasonable conditions (including but not limited to a reasonable supervision fee of the Landlord to be paid by the Tenant) and regulations imposed by the Landlord, and shall be completed in a good and workmanlike manner and with reasonable diligence in accordance with the approvals given by the Landlord. Any connections of apparatus to the base electrical systems and the HVAC System shall be deemed to be an alteration within the meaning of this Section. The Tenant shall, at its own cost and before commencement of any work, obtain all necessary building or other permits and keep same in force.

6.04 Notice of Accidents

The Tenant shall notify the Landlord promptly and in writing of any accident or damages to or defect in the Leased Premises, any of the buildings on the Lands, or any part thereof including, without limitation, the heating, ventilating and air-conditioning apparatus, water and gas pipes, telephone lines, electrical apparatus or other building services of which it is aware or ought to have been aware.

6.05 Legal Hypothec for Construction Works

The Tenant covenants to pay promptly all the persons having taken part in the construction or renovation of the Leased Premises or the Property or the Lands and do any and all things necessary to minimize the possibility of having a legal hypothec or any other charge registered against the Leased Premises or any part of the Property or the Lands and, should any such hypothec or charge be registered or filed, the Tenant shall discharge the same forthwith (after notice thereof is given to the Tenant) at the Tenant's expense. In the event the Tenant shall fail to cause any such hypothec or charge to be discharged as aforesaid, then, in addition to any other right or remedy of the Landlord, the Landlord may, but it shall not be so obligated, discharge same by paying the amount claimed to be due into Court or directly to any such hypothecary claimant and the amount so paid by the Landlord and all costs and expenses including but not limited to solicitor's fees (on a solicitor and client basis), incurred for the discharge of such lien shall be due and payable by the Tenant to the Landlord as Additional Rent on demand.

6.06 Removal of Fixtures and Improvements

Leasehold Improvements shall immediately become the property of the Landlord upon affixation or installation without compensation therefor to the Tenant but the Landlord is under no obligation to repair, maintain or insure Leasehold Improvements. Leasehold Improvements shall not be removed from the Leased Premises either during or at the expiration or earlier termination of the Term, except that the Tenant shall, at the end of the Term, remove such Leasehold Improvements installed or constructed by or on behalf of the Tenant as the Landlord may require to be removed. The Tenant may, during the Term, remove its trade fixtures provided that the Tenant is not in default under this Lease and such trade fixtures are immediately replaced by trade fixtures of equal or better value. The Tenant shall at the expiration or earlier termination of the Term remove its trade fixtures as the Landlord may require. Any removal of Leasehold Improvements and/or the Tenant's trade fixtures shall be done at the Tenant's sole cost and expense and the Tenant shall forthwith repair at its own cost any damage caused to the Leased Premises or the Building or any part thereof by the installation or removal of Leasehold Improvements and/or trade fixtures. If the Tenant does not remove its trade fixtures at the expiration or earlier termination of the Term, then the trade fixtures shall, at the option of the Landlord, become the property of the Landlord and may be removed from the Leased Premises and/or sold or otherwise disposed of by the Landlord in such manner as it deems advisable. For greater certainty, the Tenant's trade fixtures shall not include any heating, ventilating or air-conditioning equipment or other building services or floor covering affixed to the floor of the Leased Premises. The obligations of the Tenant set forth in this Section shall survive the expiry or other termination of the Term.

6.07 Repair on Termination

At the expiration or sooner termination of the Term the Tenant shall, at its own expense:

- (a) deliver up possession of the Leased Premises to the Landlord in the same condition in which the Tenant is required under this Lease to repair and maintain the Leased Premises, **outside of the normal wear and tear**, together with all Leasehold Improvements which the Tenant is required or permitted to leave therein or thereon free and clear of all encumbrances and in a clean and tidy condition and free of all rubbish and to deliver to the Landlord all keys and security devices;

- (b) remove from the Property, at the option of and to the satisfaction of the Landlord, all machine bases, cabling (electrical or otherwise), piping (pneumatic, water or otherwise) and wiring (electrical, computer or otherwise) installed by or on behalf of the Tenant;
- (c) remove any and all materials which may be deemed by any applicable legislation as contaminated or hazardous (and which have been brought onto the Property by or on behalf of the Tenant or which are a result of the Tenant's use or occupation of the Leased Premises), and clean up and/or remediate any and all resulting contamination in compliance with all applicable laws and regulations and comply with all requirements of Section 15.16; and
- (d) remove from the Property at the option of the Landlord, in compliance with all applicable laws and regulations, any and all storage and/or holding tanks (whether above or below ground) installed by or on behalf of the Tenant and all pits and trenches created by or on behalf of the Tenant.

The covenants contained in this Section shall survive the expiry or other termination of the Term.

ARTICLE 7 - ASSIGNING & SUBLETTING

7.01 Assigning or Subletting

- (a) The Tenant shall not assign this Lease or sublet or franchise, license, grant concessions in, or otherwise part with or share possession of the Leased Premises or any part thereof (hereinafter referred to as a "Transfer") without the prior written consent of the Landlord; at the time the Tenant requests such consent the Tenant shall deliver to the Landlord ***[Intentionally Deleted] Required Information (defined below)*** as the Landlord may reasonably require, including, without limitation, a copy of the proposed offer or agreement, if any, to Transfer and the name, address and nature of business and evidence as to the financial strength of the proposed assignee or subtenant or other user (hereinafter referred to as a "Transferee"); upon receipt of such request and all **Required Information**, the Landlord shall have ***[Intentionally Deleted]*** fourteen (14) days ***[Intentionally Deleted]*** **to consider the Tenant's request and provide or withhold its consent. The Landlord shall be deemed to have refused consent if it does not respond to Tenant's request within fourteen (14) days of receiving any Required Information.** Notwithstanding anything else herein contained, in no event shall any Transfer of this Lease release or relieve the Tenant in any regard whatsoever from any of its obligations or liabilities under or in respect of the Lease and the Tenant shall remain solidarily responsible with the Transferee (and, in the circumstances contemplated in Section 7.02 hereof, with the party who acquires control), without benefit of division or discussion, for the performance of all obligations and liabilities of the Tenant under this Lease.

For the purposes herein, "Required Information" means all information and documents which Landlord may reasonably require including without limitation:

- A. the name, address and local telephone number of the proposed Transferee and, if it is a corporation, the names of the directors and majority shareholders (or in the case of a change of control, the names of those who would subsequently acquire effective voting control);
- B. details of the proposed Transferee's prior business experience and the specific terms and conditions of the proposed assignment, sublease or use; and
- C. bank and other credit references, financial statements and such other information as Landlord may reasonably require in order to assess the business and financial responsibility and standing of the proposed Transferee.

PROVIDED however, and it is made a condition to any Transfer that:

- (ii) The proposed Transferee shall agree in writing to assume and perform all of the terms, covenants, conditions and agreements by this Lease imposed upon the Tenant herein in a form to be approved by the solicitor for the Landlord;
- (iii) The Tenant shall pay the Landlord all **reasonable** legal fees and **reasonable** administration fees in connection with the Transfer;
- (iv) The consent of the Landlord is not a waiver of the requirement upon the Tenant for the Landlord's consent for any subsequent Transfer;
- (v) The acceptance by the Landlord of Rent from a Transferee without the Landlord's consent to such Transfer shall not constitute a waiver of the requirement of such consent nor shall it constitute an acceptance of such party as the Tenant;
- (vi) The Landlord may, at its option, cancel (i) any options to renew the Lease or extend the Term and/or (ii) any rights of first refusal or first opportunity regarding additional space;
- (vii) If the Transfer does not take place within sixty (60) days of the giving of consent by the Landlord, then the Landlord's consent to such Transfer shall, unless **otherwise agreed by the parties**, at the Landlord's option, expire and become null and void; and
- (viii) If the Lease is disaffirmed, disclaimed or terminated by any trustee in bankruptcy of a Transferee, then the original Tenant named in this Lease will be deemed on notice from the Landlord given within sixty (60) days from the date of such disaffirmation, disclaimer or termination to have entered into a Lease with the Landlord containing the same terms and conditions as in this Lease.

- (b) If a Transfer occurs without the consent of the Landlord when required, then the Landlord may collect Rent from the party in whose favour the Transfer was made and apply the net amount collected to the Rent herein reserved but no such Transfer will be considered a waiver of this covenant or the acceptance of the party in whose favour the Transfer was made as a tenant hereunder.
- (c) The Landlord shall not be liable for any claims or actions by or for any damages, liabilities, losses or expenses of the Tenant arising out of the Landlord unreasonably withholding its consent to any Transfer and the Tenant's only recourse shall be to bring an application for a declaration that the Landlord shall grant its consent to such Transfer.

7.02 Change of Control

If the Tenant or any assignee or subtenant is a private corporation and any part or all of the corporate shares of the Tenant or such assignee or subtenant shall be transferred by sale, assignment, amalgamation, legacy, inheritance, operation of law or other disposition or dispositions so as to result in a change in the control of the corporation, such change of control shall be considered a Transfer and shall be subject to the provisions of Section 7.01 hereof. The Tenant shall make available to the Landlord upon its request for inspection and copying, all books and records of the Tenant, any assignee or subtenant and their respective shareholders which, alone or with other data, may show the applicability or inapplicability of this Section.

7.03 Sublet of Part of Leased Premises

Notwithstanding anything else to the contrary provided in this Lease and/or any act or rule of law or regulation now or hereafter in force to the contrary, the Landlord may in its sole and unfettered discretion refuse to give its consent to any Transfer by the Tenant of less than the whole of the Leased Premises resulting in separate premises therein.

7.04 Excess Rent

In the event that the Basic Rent or any other amount is payable under any Transfer is in excess of the Basic Rent reserved hereunder or is in excess of the proportionate Basic Rent reserved in the event of a sublease of part of the Leased Premises, whether the excess be in the form of cash, goods or services from the Transferee or anyone acting on its behalf, the Tenant shall pay all of such excess to the Landlord immediately upon receipt thereof; in the event that such excess is represented by goods or services rendered to the Tenant or its nominee, the value of those goods or services shall be determined by the Landlord and Tenant and that value shall be paid in cash to the Landlord immediately upon such determination.

7.05 Hypothec of Leasehold

The Tenant shall not hypothecate or otherwise encumber all or any portion of the Tenant's interest in this Lease or the Leasehold Improvements.

7.06 Advertising Leased Premises

The Tenant shall not advertise or allow the Leased Premises or a portion thereof to be advertised as being available for assignment, sublease or otherwise without the prior written approval of the Landlord as to the form, size, content and location of such advertisement, which approval shall not be unreasonably withheld, provided that (i) no such advertising shall contain any reference to the Rent for the Leased Premises and (ii) any such advertising shall be on a standard ground-mounted real estate sign.

7.07 Disposition by Landlord

If the Landlord sells or leases the Lands, the Building, the Property or any part thereof, or assigns this Lease, and to the extent that the covenants and obligations of the Landlord under this Lease are assumed by the purchaser, lessee or assignee, the Landlord, without further written agreement, will be discharged and relieved of liability under the said covenants and obligations.

ARTICLE 8 - USE

8.01 Use of Leased Premises

- (a) Subject to paragraph (b) of this Section, the Tenant shall not use the Leased Premises nor allow the Leased Premises to be used for any purpose other than the permitted use as set out in the Summary of Basic Lease Provisions at the beginning of this Lease and shall conduct such use only (i) in compliance with the provisions of this Lease, **including without limitation the provision of Section 15.15 hereof**, and (ii) as permitted by all applicable laws, by-laws and other governmental regulations from time to time in force.

The Landlord acknowledges that the permitted use set out in the Summary of Basic Lease Provisions at the beginning of this Lease is permitted by the current zoning by-laws.

- (b) The Tenant covenants not to use or permit the Leased Premises to be used for any retail sales whatsoever.

8.02 Rules and Regulations

The Tenant and its employees and all persons visiting or doing business on the Leased Premises shall be bound by and shall observe and perform all reasonable rules and regulations made by the Landlord from time to time and of which notice in writing shall be given to the Tenant, and all such rules and regulations shall be deemed to be incorporated into and form part of this Lease.

8.03 **Observance of Law**

The Tenant shall comply promptly with and conform to the requirements of all applicable statutes, by-laws, laws, regulations, ordinances and orders from time to time or at any time in force during the Term and affecting the condition, maintenance, repair, use or occupation of the Leased Premises (or equipment therein) and with every applicable regulation, order and requirement of any insurance advisory organization operating within the Province in which the Leased Premises are located or any body having similar functions or of any liability or fire insurance company by which the Landlord and the Tenant or either of them may be insured at any time during the Term, and, in the event of the default of the Tenant under the provisions of this Section, the Landlord may itself comply with any such requirements as aforesaid and the Tenant will forthwith pay all costs and expenses incurred by the Landlord in this regard and the Tenant agrees that all such costs and expenses shall be recoverable by the Landlord as if the same were Additional Rent reserved and in arrears under this Lease.

8.04 **Waste and Nuisance**

The Tenant shall not do or suffer any waste, damage, disfiguration or injury to the Leased Premises or the fixtures and equipment thereof and shall not use or permit to be used any part of the Leased Premises for any dangerous, noxious or offensive trade or business and shall not do anything or permit anything to be done upon or about the Leased Premises nor permit anything to be brought thereon which may reasonably be deemed to be a nuisance, annoyance, grievance, damage or disturbance to the occupiers or owners of the Property or of adjacent lands or premises, nor do or permit anything to be done therein which, in the opinion of the Landlord acting reasonably, is detrimental to the Property or the Building, and the Tenant shall take every reasonable precaution to protect the Leased Premises and the Building from danger of fire, water damage or the elements and shall keep the Leased Premises and the Lands free of hazardous waste and contamination.

8.05 **Interior Walls**

The Tenant shall not deface or mark any part of the Building and will not permit any hole to be drilled or made or nails, screws, hooks or spikes to be driven into the interior walls, doors, floors, stone or brick work of the Building or any appurtenances thereof without the prior written consent of the Landlord, which consent shall not be unreasonably withheld.

8.06 **Signs**

(A) The Tenant covenants and agrees not to paint, affix, display, or cause to be painted, affixed or displayed any picture, advertisement, notice, lettering, decoration or sign on any part of the exterior of the Leased Premises (including, without limitation, the windows) without in each instance the prior written approval of the Landlord. All signs erected by the Tenant with the Landlord's approval, as aforesaid, shall nevertheless be of uniform size, lettering and location as the signs of all other tenants in the Building or Property, as the Landlord shall determine. (Provided, however, that if the Landlord shall, in its sole discretion, desire to establish a uniform sign policy for the tenants of the Building or the Property, then the Tenant acknowledges and agrees that the Landlord, at its option, shall be entitled to erect all such signage material in or on

the Building advertising the respective tenants' business operations therein (including the Tenant's business)). The cost of all such signs and the installation and erection thereof shall be borne by the Tenant and shall be payable forthwith on demand. All signs shall be erected in strict conformance with all applicable municipal regulations, requirements and by-laws in existence from time to time. All signs shall be removed by the Tenant at its own expense at the termination of this Lease and the Tenant shall promptly repair at its own expense to the satisfaction of the Landlord, acting reasonably, any and all damage caused by such removal and this covenant shall survive the expiry or other termination of the Term.

(B) Pylon Signage

Provided the Tenant is PHARMASCIENCE INC. and provided Tenant obtains all required written approvals from all relevant authorities having jurisdiction over the installation, maintenance and use of such signs, and subject to rights granted to other tenants prior to this Lease, the Tenant may, at its sole expense and upon Landlord's prior written approval, install one (1) exterior sign representing the Tenant's logo (the "Sign") on the Building's existing pylon signage in the area designated by the Landlord.

The Tenant shall submit to Landlord plans and specifications with respect to the Sign, including without limitation, the type of sign, the size and the method of fixation, for Landlord's prior written approval, failing which the Landlord will be under no obligation to permit the installation of the said Sign. The Tenant shall be solely responsible for costs of construction, installation, maintenance and operation of the Sign, including electricity, if applicable. The Tenant shall be responsible for and shall indemnify and hold the Landlord harmless from and against any loss, damage, claim or costs arising from the installation, maintenance, repair, replacement or removal work of the Sign and/or by reason of damage or destruction of the sign or the Building as a result of such sign.

The Tenant shall maintain and keep the Sign in good order and condition, including all replacements, alterations, additions and improvements thereto.

Tenant acknowledges and agrees that it shall be responsible for all costs incurred by Landlord to verify the Sign installations effected by Tenant, and Tenant shall comply with requirements of the Landlord in connection with such installations.

At the expiry or earlier termination of the Lease, the Tenant shall at its expense, remove the Sign and repair all damage caused by the installation and/or removal, including without limitation damage to the Building, in default of which Landlord shall proceed to such removal and repair and any and all costs incurred by the Landlord in so doing (including the Landlord's administration fee equal to **ten percent (10%)** of the total costs thereof), shall be borne by the Tenant and furthermore, such removal and repair shall be without compensation to the Tenant and without liability of any nature whatsoever on the part of the Landlord to the Tenant.

8.07 Parking

The Tenant shall have the non-exclusive right during normal business hours, in common with all other tenants and occupants of the Project, to park cars belonging to its employees, servants, agents, contractors and invitees in those areas on the Common Lot designated by the Landlord from time to time as parking areas for the Leased Premises and shall not park nor permit its employees, servants, agents, contractors or invitees to park in any other areas whatsoever. The Tenant shall not park nor permit to be parked any vehicles (cars, trucks, trailers or otherwise) anywhere on the Common Lot at any time other than during normal business hours and in such areas so designated by the Landlord. The Tenant shall not park or permit to be parked any trucks or trailers in any areas of the Lands designed and/or designated for car parking. **Notwithstanding the foregoing, parking of any vehicle at such time the owner or user of a vehicle is working or conducting business at the Leased Premises outside normal business hours shall be permitted, subject to all applicable laws, by-laws, regulations and ordinances from any competent authority.**

The Tenant shall have the right to have parking signage (“Parking Signage”) to indicate four (4) parking spaces for the Tenant’s use to be located in the area adjacent to the Building in a location to be determined by Landlord. The Parking Signage (comprising signs, steel poles and concrete bases) shall be installed by Landlord at the Landlord’s cost. The Tenant shall be responsible for the supervision of these parking spaces, and for any maintenance or replacement costs, if any, of the Parking Signage and for the removal of such signage at the expiry of the Term. The Landlord shall have the right, at any time and from time to time during the Term and any renewal or extension thereof, to relocate the Parking Signage (and the four exterior parking spaces) at its discretion elsewhere in the exterior parking facilities of the Project.

8.08 Refuse and Garbage

The Tenant agrees that it will not allow any waste, refuse, garbage, ashes or other loose or objectionable material to accumulate in or about the Leased Premises and will provide covered metal receptacles for the same and will at all times keep the Leased Premises in a clean and tidy condition.

8.09 Overloading Floors

The Tenant covenants that it will not bring upon the Leased Premises or any part thereof any machinery, equipment, article or thing that, by reason of its weight, size, configuration, operation or otherwise, might damage the Leased Premises and will not at any time overload or damage the floors of the Leased Premises. The Tenant shall remove any such machinery, equipment (including but not limited to mobile equipment such as a forklift), article or thing within five (5) days’ written notice thereof and if any damage is caused to the Leased Premises by any machinery, equipment, article or thing or by overloading, the Tenant shall forthwith repair such damage at its own expense to the satisfaction of the Landlord.

8.10 Outside Storage

The Tenant agrees that it will not store any goods or matter of any kind whatsoever outside the Leased Premises without the express written consent of the Landlord first had and obtained.

8.11 Plumbing Fixtures

The plumbing fixtures shall not be used for any purpose other than that for which they were constructed and no foreign substances of any kind shall be deposited therein, and the expense of any breakage, stoppage, or damage caused by the Tenant or those for whom Tenant is at law responsible, or by the negligent acts or omissions of the Tenant or those for whom Tenant is at law responsible, shall be borne by the Tenant.

8.12 Energy Conservation

The Tenant shall co-operate with the Landlord in conserving energy of all types in the Building, including but not limited to complying at the Tenant's own cost with all reasonable requests and demands of the Landlord made with a view to energy conservation. Any reasonable expenditures made by the Landlord in an effort to promote energy conservation shall be added to Operating Costs in the Year such expenditures are incurred.

8.13 Overloading Systems

The Tenant shall not install or use any electrical or other equipment or electrical arrangement which may overload the electrical or other service facilities unless it does so with the express prior written consent of the Landlord and at its own expense makes whatever changes are necessary to comply with the reasonable and lawful requirements of the Landlord's insurance underwriters and governmental authorities having jurisdiction. The Tenant shall submit all applicable plans and specifications to the Landlord at the time of applying for such consent.

8.14 Name of Building

The Tenant shall not refer to the Building or Project by any name or names other than such name or names as may be designated from time to time by the Landlord, nor to use such name or names for any purpose other than that of the business address of the Tenant.

8.15 Fire and Safety

The Tenant shall co-operate and participate and cause its employees, agents, invitees and licensees to co-operate and participate in any fire drills, evacuation drills and similar exercises as may be arranged or organized by the Landlord from time to time, and shall hold the Landlord harmless from any personal or material loss, damage or injury arising therefrom.

ARTICLE 9 - INSURANCE AND INDEMNITY

9.01 Tenant's Insurance

The Tenant shall, at its expense, maintain in force during the Term, and any other period of occupation, in the name of the Tenant (with the Landlord, the Landlord's property manager, asset manager and hypothecary creditor, if any, named as additional insureds as their respective interests may appear) the following insurance:

- (a) comprehensive general liability insurance against claims for personal injury, death or property damage (including but not limited to tenants' legal liability, personal injury liability, products liability, property damage and contractual liability to cover all indemnities) with respect to the business or operations carried on in and from the Leased Premises, in amounts required by the Landlord and any hypothecary creditor of the Building or any part thereof from time to time but in no event less than Five Million Dollars (\$5,000,000.00) per occurrence;
- (b) "All Risks" insurance including flood, earthquake and sewer backup, with extended coverage endorsement and water damage insurance (including, if applicable, sprinkler leakage) covering all contents of the Leased Premises and all other property for which the Tenant is legally liable for or responsible for pursuant to this Lease and/or which has been installed by or on behalf of the Tenant (including without limitation all movables, equipment, machinery, furniture, inventory, fixtures and all Leasehold Improvements) in an amount equal to the full replacement value thereof;
- (c) broad form boiler and machinery insurance on a blanket repair and replacement basis with limits for each accident in the amount of not less than the replacement cost of all Leasehold Improvements and of all boilers, pressure vessels, air conditioning equipment and miscellaneous electrical apparatus owned or operated by the Tenant or by others (other than the Landlord) on behalf of the Tenant in the Leased Premises;
- (d) business interruption insurance in such amounts as will reimburse the Tenant for direct or indirect loss of earnings including continuing and extra expenses attributable to all perils insured against by the Tenant hereunder;
- (e) glass insurance, for the benefit of the Landlord and the Tenant, covering all exterior and interior glass in the Leased Premises, including plate glass windows and doors; and
- (f) such other forms of insurance as may be reasonably required by the Landlord, its representatives and its hypothecary creditor from time to time.

All policies required to be written on behalf of the Tenant pursuant to this Section shall contain the Landlord's hypothecary creditor standard hypothecary clause as applicable, and shall contain a waiver of any subrogation rights which the Tenant's insurers may have against the Landlord, **its property manager** and against those for whom the Landlord is in law responsible, whether any such damage is caused by the act, omission or negligence of the Landlord or those for whom the Landlord is in law responsible. All policies will have reasonable deductibles and will be primary and not call into contribution or be in excess of any other insurance available to the Landlord or any additional insureds. All policies shall be taken out with insurers acceptable to the Landlord and shall be in a form satisfactory from time to time to the Landlord. The Tenant agrees that certificates of insurance on the Landlord's standard form or if required by the Landlord or the Landlord's hypothecary creditor certified copies of each such insurance policy will be delivered to the Landlord immediately after the placing, removal, amendment or extension of the required insurance. All policies shall contain an undertaking by the insurers to notify the Landlord and the Landlord's hypothecary creditor in writing not less than thirty (30) days prior to any material change, cancellation or termination thereof.

The Tenant agrees that if the Tenant fails to take out or keep in force any such insurance referred to in this Section, or should any such insurance not be approved by either the Landlord or the Landlord's hypothecary creditor and should the Tenant not rectify the situation immediately after written notice by the Landlord to the Tenant, the Landlord has the right without assuming any obligation in connection therewith to effect such insurance at the sole cost of the Tenant and all outlays by the Landlord shall be immediately paid by the Tenant to the Landlord as Additional Rent without prejudice to any other rights and remedies of the Landlord under this Lease.

9.02 Landlord's Insurance

Throughout the Term of this Lease the Landlord shall provide and keep in force property insurance in respect of the buildings and the Lands (including the Leased Premises but not including the property of the Tenant which the Tenant is required to insure for pursuant to paragraph (b) of Section 9.01 hereof) against fire and such other perils as are normally insured against in the circumstances by prudent landlords of similar buildings and loss of rental income insurance, subject to reasonable deductions and exceptions as the Landlord may determine and to amounts which the Landlord shall from time to time determine as being reasonable or sufficient. Notwithstanding any contribution by the Tenant to the cost of any insurance effected by the Landlord, no insurable interest is conferred upon the Tenant under any such policies of insurance and the Tenant has no right to receive any proceeds under any such insurance.

9.03 Not to Affect Landlord's Insurance

Neither the Tenant nor its officers, directors, agents, servants, licencees or concessionaires, assignees or subtenants shall bring onto the Leased Premises, the Property or the Project or do or omit or permit to be done or omitted to be done upon or about the Leased Premises, the Property or the Project anything which shall cause the rate of insurance upon the Leased Premises, the Property or the Project or any part thereof or its contents to be increased, and if the said rate of insurance shall be increased by reason of the use made of the Leased Premises even though such use may be a permitted use hereunder or by reason of anything done or omitted or permitted to be done or omitted to be done on the Property or Project by the Tenant or its officers, directors, agents, servants, licensees, concessionaires, assignees or subtenants or by anyone permitted by the Tenant to be upon the Property or Project, the Tenant shall pay to the Landlord forthwith upon demand the amount of such increase.

9.04 Limit of Landlord's Liability

The Tenant agrees that the Landlord shall not be responsible in any way for any injury to any person (including but not limited to death) or for any loss of or damage to any property belonging to the Tenant or to other occupants of the Leased Premises or to their respective employees, agents, invitees, licensees or other persons from time to time attending at the Leased Premises while such person or property is in or about the Lands, the Leased Premises, the buildings

on the Lands, including the Building, or any areaways, parking areas, lawns, sidewalks, steps, truckways, platforms, corridors, stairways, elevators or escalators in connection therewith, including without limiting the foregoing, any loss of or damage to any property caused by theft or breakage, or by steam, water, rain or snow or for any loss or damage caused by or attributable to the condition or arrangements of any electrical or other wiring or for any damage caused by smoke or anything done or omitted to be done by any other tenant of premises in the Property or Project or for any other loss whatsoever with respect to the Leased Premises, goods placed therein or any business carried on therein.

9.05 Limited Recourse

The Tenant will look solely to the interest of the Landlord in the Property for the collection or satisfaction of any money or judgement which the Tenant may recover against the Landlord, and the Tenant will not look for the collection or satisfaction of any such money or judgement to the personal assets of any person who is at any time a partner, joint venturer or co-tenant in the Property.

9.06 Indemnity

The Tenant shall promptly indemnify and save the Landlord harmless from any and all liabilities, damages, costs, expenses, claims, suits or actions arising out of any breach, violation or non-observance by the Tenant of any of its obligations under the Lease; from any damage to property while such property shall be in or about the Leased Premises including but not limited to the systems, furnishings and amenities thereof, as a result of the willful or negligent act or omission of the Tenant, its employees, agents, invitees or licensees; and from any injury to any employee, agent, invitee or licensee, of the Tenant, including but not limited to death resulting at any time therefrom, occurring on or about the Property or Project or any part thereof. The Tenant shall pay all such costs and expenses to the Landlord ***[Intentionally Deleted]*** within fifteen (15) days of written demand therefor. Notwithstanding anything else herein contained, this indemnity shall survive the expiry or earlier termination of the Term.

The Landlord shall promptly indemnify and save the Tenant harmless from any and all liabilities, damages, costs, expenses, claims, suits or actions arising out of any breach, violation or non-observance by the Landlord of any of its obligations under the Lease; from any damage to property while such property shall be in or about the Property (excluding however the Leased Premises) including but not limited to the systems, furnishings and amenities thereof, as a result of the willful or negligent act or omission of the Landlord, its employees, agents, invitees or licensees; and from any injury to any employee, agent, invitee or licensee, of the Landlord, including but not limited to death resulting at any time therefrom, occurring on or about the Property or Project or any part thereof (excluding however the Leased Premises), the whole save and except where such liabilities, damages, costs, expenses, claims, suits or actions in question are insured against or required to be insured against by the Tenant pursuant to the provisions of Section 9.01 of this Lease, in which case the foregoing indemnification by the Landlord shall not apply and Landlord will be released from any such claims by the Tenant. In the event the foregoing indemnity does apply, where applicable the Landlord shall, at its sole option, either pay all such costs and expenses to the Tenant within fifteen (15) days of written demand therefor or deduct the amount of such costs and expenses against any amounts owing or becoming due to the Landlord by the Tenant. Notwithstanding anything else herein contained, this indemnity shall survive the expiry or earlier termination of the Term.

In the event either the Landlord or the Tenant is entitled to indemnification under the provision of this Section 9.06 (the "Indemnitee"), it shall notify in writing the other party (the "Indemnitor") promptly of any claim threatened or commenced against it for which it is so entitled. The Indemnitor shall assume control and direct the defense, investigation and handling of the claim for and on behalf of the Indemnitee, provided however that the Indemnitor shall not settle or consent to judgment without the Indemnitee's approval, which approval shall not be unreasonably withheld. The Indemnitee shall cooperate with the Indemnitor, and may participate, at the Indemnitee's expense, in the defense of such claim.

ARTICLE 10 - CONTROL OF PROPERTY AND SERVICES

10.01 Control of Property

- (a) The Property shall, at all times, be subject to the exclusive control of the Landlord and, without limiting the generality of the foregoing, the Landlord shall have the right from time to time throughout the Term:
 - (i) to construct in, to or on the Property, to make alterations, additions and subtractions thereto and therefrom to erect new buildings on the Property and to build additional storeys on the existing buildings;
 - (ii) to monitor access to any of the parking areas by means of barriers, control booths or any other method which the Landlord deems proper;
 - (iii) to change the location of driveways and sidewalks and the location, layout or size of the parking area; and
 - (iv) to do or perform such other acts in and to the Property as the Landlord, acting as a prudent owner, deems advisable for the more efficient and proper operation of the Property.
- (b) The Landlord will operate and maintain the Property in such a manner as the Landlord in its sole discretion shall determine from time to time. Without limiting the scope of such discretion, the Landlord shall have the full right and authority to employ all personnel and to make all rules and regulations pertaining to and necessary for the proper operation and maintenance of the Property.
- (c) The Landlord shall not be liable for any diminution or alteration of the Common Areas of the Property resulting from the exercise of the Landlord's rights under this Section and the Tenant shall not be entitled to a reduction or abatement of Rent or to compensation therefor.

- (d) Without prejudice to any rights of the Landlord in the event of default, and notwithstanding anything to the contrary in this Lease, if the Landlord, in its sole and absolute discretion, requires vacant possession of the Leased Premises in order to reconstruct or redevelop all of a substantial part of the Property, or to change the use of or sell all or a substantial part of the Property, or to demolish all or any portion of the Property, the Landlord may terminate this Lease by giving not less than **twelve (12)** months' notice in writing to the Tenant. In the event of such termination, the Tenant shall deliver up vacant possession of the Leased Premises in the condition in which the Tenant is required to maintain and repair the Leased Premises in accordance with the provisions of this Lease and will execute all documents and other assurances as are reasonably required to give effect to the provisions of this Section 10.01(d). Upon the date of termination, any necessary adjustments in Rent shall be made between the Landlord and the Tenant.
- (e) **[Intentionally Deleted]**

10.02 Services

The Landlord covenants with the Tenant as follows:

Heating & Air-Conditioning

- (a) **[Intentionally Deleted]**

Elevator

- (b) to furnish, except when repairs are being made, passenger elevator service during Normal Business Hours and limited elevator service at other times; operator less and automatic elevator service if made available shall be deemed elevator service; and to permit the Tenant and its employees to have free use of such elevator service in common with others.

Access

- (c) to permit the Tenant and its employees and all persons lawfully requiring communication with them in common with others to have the use during Normal Business Hours of the entrances, stairways, corridors and halls in the Building leading to the Leased Premises.

Washrooms

- (d) to permit the Tenant and its employees in common with others entitled thereto to use the washrooms in the Building which may be designated for the Leased Premises.

Janitor Services and Cleaning of Laboratory

to cause, when reasonably necessary from time to time, the floors to be swept and windows to be cleaned and the desks, tables and other furniture of the Tenant to be dusted all in keeping with a first-class office building but with the exception of the obligation to cause such work to be done, the Landlord shall not be responsible for any act of omission or commission on the part of the person or persons employed to perform such work; such work shall be done at the Landlord's direction without interference by the Tenant, his agents or employees. The Tenant acknowledges that the Landlord shall be relieved from the foregoing obligations in respect of any part of the Leased Premises to which access is not granted to the person or persons employed or retained to do such work. **The Tenant acknowledges and agrees that the cleaning of the laboratory portion of the Leased Premises (save for floor sweeping and mopping), shall require special cleaning and maintenance services, including without limitation the cleaning of laboratory equipment and disposal of Noxious Substances. Such special cleaning and maintenance services, if requested by Tenant, shall be provided by the Landlord, at the sole cost and expense of the Tenant, through designated contractors which have recognized expertise in providing such specialized services. Landlord shall be entitled to an administration fee of ten percent (10%) of the cost of providing such services. Any designated contractors for such purposes selected by the Landlord will be at competitive rates.**

Snow and Ice Load on the Roof

- (e) to monitor the "snow and ice load" on the roof as would a prudent landlord of a similar property and the costs thereof shall be included in the Operating Costs.

ARTICLE 11 - DAMAGE & DESTRUCTION

11.01 Abatement of Rent

If the Leased Premises or any portion thereof is damaged or destroyed by fire or by other casualty against which the Landlord is required to insure under this Lease, Rent shall abate in proportion to the area of that portion of the Leased Premises which, in the reasonable opinion of the Landlord, is thereby rendered unfit for the purposes of the Tenant bears to the area of the entire Leased Premises (but only to the extent to which the Landlord actually receives proceeds under its loss of rental income insurance) until the Leased Premises are repaired and rebuilt as certified by the Landlord's Architect and the Landlord agrees that it will, with reasonable diligence, repair and rebuild the Leased Premises, subject to Section 11.02. The Landlord's obligation to rebuild and restore the Leased Premises shall not include the obligation to rebuild, restore, replace or repair any movable, fixture or Leasehold Improvements or any other thing that is the property of the Tenant and/or for which the Tenant is to maintain insurance under paragraph (b) of Section 9.01 (in this Section collectively called "Tenant's Improvements"); the Leased Premises shall be deemed repaired and rebuilt when the Landlord's Architect certifies that it has been substantially repaired and rebuilt to the state where the Tenant could occupy it for the purpose of rebuilding, restoring, replacing or repairing the Tenant's Improvements. The issuance of the certificate of the Landlord's Architect shall not relieve the Landlord of its obligation to complete the repairing and rebuilding as aforesaid, but the Tenant shall forthwith after issuance of such certificate proceed to rebuild, restore, replace and repair the Tenant's Improvements, and the provisions of Section 6.03 shall apply to such work, mutatis mutandis.

11.02 **Termination**

- (a) Notwithstanding the provisions of Section 11.01 hereof, if the Leased Premises or any portion thereof are (i) damaged or destroyed by any cause whatsoever and cannot in the reasonable opinion of the Landlord be rebuilt or made fit for the purposes of the Tenant as aforesaid within one hundred and eighty (180) days of the date of such damage or destruction, (ii) the Leased Premises are damaged or destroyed by an uninsured peril, or (iii) such damage and destruction occurs in the last two years of the Term, the Landlord may, at its option, terminate this Lease by giving to the Tenant, within sixty (60) days after the date of such damage or destruction, notice of termination and thereupon Rent shall be apportioned and paid to the date of such damage or destruction and the Tenant shall immediately deliver up possession of the Leased Premises to the Landlord.
- (b) Irrespective of whether the Leased Premises or any portion thereof are damaged or destroyed as aforesaid, in the event that fifty percent (50%) or more of the Building, or any building on the Property as determined by the Landlord, is damaged or destroyed by any cause whatsoever and if, in the reasonable opinion of the Landlord, such area cannot be rebuilt or made fit for the purposes of the tenants thereof within one hundred and eighty (180) days of the date of such damage or destruction or any of the buildings on the Lands are damaged or destroyed by an uninsured peril, the Landlord may at its option terminate this Lease by giving to the Tenant within sixty (60) days after the date of such damage and destruction, notice of termination requiring vacant possession of the Leased Premises sixty (60) days after delivery of the notice of termination and thereupon Rent shall be apportioned and paid to the date on which vacant possession is given and the Tenant shall deliver up possession of the Leased Premises to the Landlord in accordance with such notice of termination.
- (c) If the Landlord does not elect to terminate the Lease pursuant to paragraphs (a) or (b) of this Section, it shall, with reasonable diligence, repair and restore the Leased Premises and/or the damaged building in accordance with the provisions of Section 11.01.

ARTICLE 12 - DEFAULT

12.01 **Events of Default**

An "Event of Default" shall occur whenever:

- (a) the Tenant fails to pay the Rent hereby reserved or any part thereof on the day appointed for payment thereof, whether lawfully demanded or not;
- (b) the Tenant shall have breached or failed to comply with any of its covenants and agreements contained in this Lease (save for non-payment of Rent) and shall have failed to remedy such breach or non-compliance within fifteen (15) days (or such longer period as the Landlord may reasonably determine, having regard to the nature of the default) after written notice thereof given by the Landlord to the Tenant;

- (c) the Tenant shall make any assignment for the benefit of creditors or become bankrupt or insolvent or take the benefit of any Act now or hereinafter in force for bankrupt or insolvent debtors;
- (d) the Tenant is a corporation and any order shall be made for the winding-up of the Tenant or other termination of the corporate existence of the Tenant;
- (e) the Tenant makes or attempts to make a bulk sale of assets not in the ordinary course of the Tenant's business;
- (f) a trustee, receiver, interim receiver, receiver and manager, custodian or liquidator is appointed for the business, property, affairs or revenue of the Tenant;
- (g) this Lease or any of the Tenant's assets on the Leased Premises are taken or seized under writ of execution, an assignment, pledge, charge, debenture or other security instrument;
- (h) the Tenant abandons or attempts to abandon the Leased Premises;
- (i) the Leased Premises shall be used by any person other than the Tenant or the Tenant's permitted assignees or for any purpose other than as set out in Section 8.01;
- (j) any insurance policy on the Property or any part thereof shall be cancelled or shall be threatened by the insurer to be cancelled or the coverage thereunder reduced in any way by the insurer by reason of the use or occupation of the Leased Premises or any part thereof by the Tenant and the Tenant shall have failed to remedy the condition giving rise to such cancellation, threatened cancellation or reduction of coverage within forty-eight (48) hours written notice given by the Landlord to the Tenant;
- (k) the Tenant sells or disposes of the goods, movables or equipment in the Leased Premises or removes, commences or threatens to remove them from the Leased Premises so that in the opinion of the Landlord there would not, in the event of such sale, disposal or removal, be sufficient goods on the Leased Premises;
- (l) the Tenant shall at any time during the Term use the Leased Premises, whether within the use permitted by Section 8.01 or not, in a manner which imposes upon the Landlord any obligation to modify, extend, alter or replace any part of the Leased Premises or any of the machinery, equipment or other facilities used in connection with the Leased Premises, which obligation is not fulfilled by the Tenant at its own cost in a timely manner;

- (m) the Tenant defaults under any other agreement it has entered into with the Landlord, such as a lease of other premises, storage agreement or parking agreement; or
- (n) the Leased Premises are vacant for any period in excess of fifteen (15) days other than during repairs or renovations.

Notwithstanding the *Bankruptcy and Insolvency Act* (Canada) or otherwise, upon the occurrence of an Event of Default, the then current month's Rent and next ensuing three (3) months' Rent shall immediately become due and be paid by the Tenant to the Landlord as accelerated Rent. **For greater certainty, subject to the provisions of the second paragraph of Article 1.04, all Equipment shall remain the property of the Landlord at all times, including at the expiry or early termination of the Lease.**

12.02 Right of Re-entry

- (a) Upon the occurrence of an Event of Default, the Landlord may at any time thereafter, without notice to the Tenant, re-enter the Leased Premises or any part thereof in the name of the whole and, at the Landlord's option, and without prejudice to the Landlord's right to recover all Rent payable under this Lease for the remainder of the Term, terminate this Lease and all the rights of the Tenant thereunder, provided that no action of the Landlord shall be deemed to be a termination of this Lease except an express termination of this Lease in writing.
- (b) If and whenever the Landlord exercises its option to re-enter the Leased Premises and terminate this Lease pursuant to paragraph (a) of this Section:
 - (i) the Tenant shall immediately vacate the Leased Premises and the Landlord may remove or cause to be removed from the Leased Premises the Tenant and/or any other occupant or occupants thereof and may remove all property therefrom and sell or dispose of such property as the Landlord considers appropriate without liability for loss or damage and without prejudice to the rights of the Landlord to recover arrears of Rent or damages incurred by the Landlord;
 - (ii) the Landlord shall be immediately entitled to the payment of Rent up to the date of termination together with all expenses incurred by the Landlord in respect of such termination and the value of the Rent, calculated at the date of termination, for the unexpired portion of the Term.

12.03 Reletting

At any time when the Landlord is entitled to re-enter the Leased Premises or terminate this Lease, the Landlord may without notice to the Tenant and without terminating the Lease enter upon and take custody of the Leased Premises in the name of and as agent of the Tenant, together with all of the Tenant's improvements, fixtures and furnishings, and sublet the Leased Premises in the name of and as the agent of the Tenant on whatever terms the Landlord may deem appropriate but no such action by the Landlord shall waive any of the obligations of the Tenant or limit the subsequent exercise of any of the Landlord's remedies for default. If the

Landlord shall sublet the Leased Premises as aforesaid, the Landlord shall be entitled to receive all sublease rent and apply the same in its discretion to any indebtedness of the Tenant to the Landlord under this Lease and/or to the payment of any costs and expenses of reletting, and the Landlord shall be liable to account to the Tenant only for the excess, if any, of monies actually received by it. If the sublease rent is less than is necessary to pay and discharge all the then existing and continuing obligations of the Tenant hereunder, the Tenant shall pay such deficiency to the Landlord upon demand from time to time. Notwithstanding any such re-entry and subletting without termination, the Landlord may at any time thereafter terminate this Lease by reason of the previous or any other default under the Lease and the provisions of Section 12.02 shall apply.

12.04 Right of Landlord to Cure Defaults

If the Tenant fails to perform or cause to be performed any of the covenants or obligations of the Tenant herein, the Landlord shall have the right (but shall not be so obligated) to perform or cause to be performed and to do or cause to be done such things as may be necessary or incidental thereto (including without limiting the foregoing, the right to make repairs, installations, erections and expend monies), and all payments, expenses, charges, fees and disbursements incurred or paid by or on behalf of the Landlord in respect thereof shall be deemed to be Additional Rent and shall be paid by the Tenant to the Landlord within ten (10) days' of written demand therefor together with all reasonable legal and administrative costs of the Landlord in respect thereof.

12.05 Remedies Not Exclusive

Mention in this Lease of any particular remedy or remedies in respect of any default or threatened default by the Tenant in the performance of its obligations shall not preclude the Landlord from exercising, or limit the extent of, any other remedy in respect thereof, whether at law, in equity or pursuant to any express provision hereof. No remedy shall be interpreted as exclusive or dependent upon any other remedy, and the Landlord may from time to time exercise any one or more of such remedies independently or in combination.

12.06 Non-Waiver

No condoning, excusing or overlooking by the Landlord or any default, breach or non-observance by the Tenant at any time or times in respect of any covenant, proviso or condition herein contained shall operate as a waiver of the Landlord's rights hereunder in respect of any continuing or subsequent default, breach or non-observance, or so as to defeat or affect in any way the rights of the Landlord herein in respect of any such continuing or subsequent default or breach, and no waiver shall be inferred from or implied by anything done or omitted by the Landlord, save only an express waiver by the Landlord in writing.

12.07 Recovery of Adjustments

The Landlord shall have (in addition to any other right or remedy of the Landlord) the same rights and remedies in the event of default by the Tenant in payment of any amount payable by the Tenant hereunder as the Landlord would have in the case of default in payment of Rent.

ARTICLE 13 - SUBORDINATION & ACKNOWLEDGMENTS

13.01 Hypothecs

At the option of the Landlord, this Lease shall be subject and subordinate to any and all hypothecs, charges and deeds of trust, which may now or at any time hereafter affect the Leased Premises in whole or in part, or the Property whether or not any such hypothec, charge or deed of trust affects only the Leased Premises or the Property or affects other premises as well. On request at any time and from time to time of the Landlord or of the hypothecary creditor, chargee or trustee under any such hypothec, charge or deed of trust, the Tenant shall promptly, at no cost to the Landlord or hypothecary creditor, chargee or trustee:

- (a) attorn to such hypothecary creditor, chargee or trustee and become its tenant of the Leased Premises or the tenant of the Leased Premises of any purchaser from such hypothecary creditor, chargee or trustee in the event of an exercise of any permitted power of sale contained in any such hypothec, charge or deed of trust for the then unexpired residue of the Term on the terms herein contained; and/or
- (b) postpone and subordinate this Lease to such hypothec, charge or deed of trust to the intent that this Lease and all right, title and interest of the Tenant in the Leased Premises shall be subject to the rights of such hypothecary creditor, chargee or trustee as fully as if such hypothec, charge or deed of trust had been executed and registered and the money thereby secured had been advanced before the execution of this Lease (and notwithstanding any authority or consent of such hypothecary creditor, or trustee, express or implied, to the making of this Lease).

Any such attornment or postponement and subordination shall extend to all renewals, modifications, consolidations, replacements and extension of any such hypothec, charge or deed of trust and every instrument supplemental or ancillary thereto or in implementation thereof. The Tenant shall forthwith execute any instruments of attornment or postponement and subordination which may be so requested to give effect to this Section.

Any such hypothecary creditor, chargee or trustee under any hypothec, charge or deed of trust may, at its option, subordinate its interest in such hypothec, charge or deed of trust to the interest of the Tenant in this Lease and the Leased Premises.

13.02 Certificates

The Tenant shall, within not more than ten (10) days' written request therefor, execute and return to the Landlord as required by the Landlord from time to time and without cost to the Landlord, a statement in writing certifying that this Lease is unmodified and in full force and effect (or if modified, stating the modifications and that the Lease is in full force and effect as modified), the amount of the annual Basic Rent then being paid hereunder, the dates to which the same, by instalment or otherwise, and other charges hereunder have been paid, the amount of any prepaid Rent, whether or not there is any existing default on the part of the Landlord of which the Tenant has notice, and any other information reasonably required.

13.03 **Co-Ownership**

The Tenant recognizes that the Leased Premises and the Property are subject to the Co-Ownership Agreement. The Tenant agrees not to take or permit any action from anyone under its charge or responsibility that would contravene with Landlord's obligations under said Co-Ownership Agreement. Without limiting the generality of the foregoing, the Tenant undertakes to respect said Co-Ownership Agreement and any other rules and regulations of the Property as may be implemented from time to time.

Furthermore, the Tenant acknowledges that for the purposes hereof, any covenants, obligations or undertaking pertaining or attributed to the Landlord hereunder shall at all times be subject and subordinated to the provisions of the Co-Ownership Agreement and any related documents.

ARTICLE 14 - ACCESS BY LANDLORD

14.01 **Exhibiting Leased Premises**

The Tenant shall permit the Landlord or its agents, during Normal Business Hours but upon forty-eight (48) hours advance notice, to exhibit the Leased Premises: (a) to prospective tenants during the last six (6) months of the Term; and (b) to prospective purchasers of the Property or any part thereof at any time during the Term.

14.02 **Expansion, Alteration**

The Landlord shall have the right to enter into the Leased Premises and to bring its workmen and materials thereon to inspect the Leased Premises and to make additions, alterations, improvements, installations and repairs to the Property, Leased Premises, the Lands, the Building, and/or the Common Areas and services thereof as such may exist from time to time. The Landlord may cause such reasonable obstructions and interference with the use and enjoyment of the Property, the Building and the Leased Premises as may be necessary for the purposes aforesaid and may interrupt or suspend the supply of electricity, water or other utilities or services when necessary and until the additions, alterations, improvements, installations or repairs have been completed, and there shall be no abatement in Rent nor shall the Landlord be liable by reason thereof, provided all such work is done as expeditiously as reasonably possible. The Landlord shall have the right to use, install, maintain and repair pipes, wires, ducts, shafts or other installations in, under or through the Leased Premises for or in connection with the supply of any services to the Leased Premises or any other premises in the Building.

ARTICLE 15 - MISCELLANEOUS

15.01 **Notice**

- (a) Any notice, request, statement or other writing pursuant to this Lease shall be deemed to have been given if personally delivered, mailed by registered mail, postage prepaid or sent by facsimile as follows:

In the case of the Landlord, to:

CANDEREL MANAGEMENT INC.

2000 Peel Street, Suite 900,
Montréal, Québec H3A 2W5

Attention:

Fax No.:

With a copy to:

CIG III TECHNOPARC NOMINEE INC.

199 Bay Street, Suite 4610
Toronto, Ontario, M5L 1G3

Attention:

Fax No.:

And in the case of the Tenant, to:

the Leased Premises;

With copy to:

PHARMASCIENCE INC.

6111 Royalmount Avenue
Suite 100
Montréal (Québec) H4P 2T4

Attention:

and such notice shall be deemed to have been received by the Landlord or the Tenant (as applicable) on the third business day after the date on which it shall have been so mailed (provided that in the event that there is an interruption of postal service, the aforesaid period shall be extended for a period equivalent to the period of such interruption), or if personally delivered or sent by facsimile, on the date of such personal delivery or facsimile transmission if received before 5:00 p.m. on such day, and if received after 5:00 p.m., on the next business day.

- (b) Notice shall also be sufficiently given if and when the same shall be delivered, in the case of notice to the Landlord, to an executive officer of the Landlord, and in the case of notice to the Tenant, to him personally or to an officer or manager of the Tenant if the Tenant is a corporation. Such notice, if delivered, shall be conclusively deemed to have been given and received at the time of such delivery. If in this Lease two or more persons are named as Tenant, such notice shall also be sufficiently given if and when the same shall be delivered personally to any one of such persons.

Either the Landlord or the Tenant may from time to time, by notice to the other as aforesaid, designate another address in Canada to which notices issued more than ten (10) days thereafter shall be addressed.

15.02 Registration

The Tenant is entitled to publish the rights conferred to it by the present Lease by notice contemplated by Article 2999.1 of the Civil Code of Québec only, and without mention of any of its financial terms. The Tenant undertakes to submit any publication notice to the Landlord for its prior approval. At the end of the Term, the Tenant undertakes to discharge the publication of the present Lease and any renewals, if any, at its cost, failing which the Landlord may do so, at the Tenant's cost (plus a 10% administrative fee), the Landlord hereby being deemed the Tenant's mandatary for such purpose, without any other formality, the whole at Tenant's cost which the Tenant hereby agrees to reimburse to the Landlord upon demand.

15.03 Obligations as Covenants

Each obligation or agreement of the Landlord or the Tenant expressed in this Lease, even though not expressed as a covenant, is considered to be a covenant for all purposes.

15.04 Severability

Any provision of this Lease that is determined to be illegal or unenforceable at law, shall be considered separate and severable from the remaining provisions which shall remain in force and be binding upon the Landlord and the Tenant.

15.05 Unavoidable Delays

Whenever and to the extent the Landlord is unable to fulfil or shall be delayed or restricted in the fulfilment of any obligation hereunder by reason of being unable to obtain the material, goods, equipment, service, utility or labour required to enable it to fulfil such obligation or by reason of any statute, law, regulation, by-law or order or by reason of any other cause beyond its reasonable control, whether of the same nature as the foregoing or not, the Landlord shall be relieved from the fulfilment of such obligation for so long as such cause continues. Notwithstanding anything herein contained, the provisions of this Section shall not operate to excuse the Tenant from the prompt payment of Basic Rent or Additional Rent, nor entitle the Tenant to compensation for any inconvenience, nuisance or discomfort thereby occasioned.

15.06 Evidence of Payments

The Tenant shall produce to the Landlord upon request, satisfactory evidence of due payment by the Tenant of all payments required to be made by the Tenant under this Lease.

15.07 Overholding

If the Tenant shall continue to occupy all or part of the Leased Premises after the expiration of the Term with the consent of the Landlord, and without any further written agreement, the Tenant shall be a monthly tenant at one hundred and fifty percent (150%) of the monthly Basic Rent payable during the last year of this Lease and otherwise on the terms and conditions herein set out except as to length of tenancy.

15.08 Security/Movable Hypothec

The Tenant shall furnish the Leased Premises with and maintain therein a sufficient quantity of furniture, fixtures, equipment and other effects **as would a similar tenant in operation in the Leased Premises.**

[Intentionally Deleted]

15.09 Goods and Services Tax and Québec Sales Tax

Any amount which is, by the terms of the Lease payable by the Tenant to the Landlord and which is subject to Goods and Services Tax ("GST") pursuant to the Excise Tax Act (Canada) and to Québec Sales Tax ("QST") pursuant to the *Québec Sales Tax Act* (R.S.Q. ch. T-01, as amended) shall be deemed to be exclusive of GST and QST with the intent that GST and QST shall be calculated thereon and paid by the Tenant to the Landlord at the time such amount is payable pursuant to the terms of the Lease.

15.10 Time of Essence

Time shall be of the essence of this Lease and every part thereof.

15.11 Governing Law

This Lease shall be governed by and construed in accordance with the laws of the Province ***[Intentionally Deleted]*** of Québec. **Any dispute, disagreement, controversy or claim arising out of or relating to this Lease, shall be exclusively submitted to the courts of the Province of Québec, Canada.**

15.12 Captions/Headings

The captions appearing in the margin of this Lease and in the headings to the Articles of this Lease have been inserted as a matter of convenience of reference only and do not in any way whatsoever define, limit or enlarge the scope or meaning of this Lease or any part thereof.

15.13 Solidarily Liability

If the Tenant shall be comprised of more than one (1) party, the liability of each such party under this Lease shall be solidary.

15.14 Tenant Partnership

If the Tenant shall be a partnership, each person who shall be a member of such partnership or successor thereof shall be and continue to be solidarily liable for the performance and observance of all covenants, obligations and agreements of the Tenant under this Lease even if such person ceases to be a member of such partnership or successor thereof.

15.15 Environmental Covenants

A. *[Intentionally Deleted]* As used herein, the following expressions shall have the following meanings:

(i) “**Environmental Laws**” means all federal, provincial and municipal laws, regulations, by-laws, standards, requirements, ordinances, codes, policies, guidelines, orders, notices, permits and directives pertaining to the protection, conservation, utilization, impairment or degradation of the environment in effect from time to time;

(ii) “**Governmental Authority**” means any federal, provincial or municipal parliament, legislature, or any regulatory agency, ministry, department, commission or board, or any court or any other law, regulation or rule-making entity, having or purporting to have jurisdiction, or any person purporting to act under the authority of any of the foregoing or any other authority charged with the administration or enforcement of Environmental Laws;

(iii) “**Hazardous Substance**” means any contaminant, pollutant, substance or material whose release, use, storage, or handling is regulated or prohibited by any Governmental Authority under any Environmental Laws, including, without limiting the generality of the foregoing, any contaminant, pollutant, Noxious Substances, deleterious substance, inflammable liquid, chemical, explosive material or material which may impair, any petroleum or other hydrocarbon and any derivative or by-product thereof, any dangerous goods or potentially dangerous substance or goods, asbestos, any gaseous, solid or liquid waste, any special waste, toxic or hazardous substance or chemical, any hazardous waste, material or substance, any radioactive material, urea formaldehyde, foam insulation, asbestos, PCBs, and any other hazardous, toxic substances or materials, contaminants or pollutants, whether in fact or as defined in or pursuant to any Environmental Laws;

(iv) “**Noxious Substances**” means any substance or material that is defined prohibited, controlled or regulated pursuant to Environmental ***[Intentionally Deleted]*** Laws including toxic or dangerous or hazardous waste, substance or material, asbestos, polychlorinated biphenals, special nuclear or by-product material, heavy metals, radioactive materials, substances declared to be hazardous or toxic or dangerous under any law or regulation now or hereafter enacted or promulgated by any governmental authority having jurisdiction, pollutant, contaminant or petroleum and any material which, because of its properties, presents a real or potential hazard to the environment or the health of users of the Building or of the Leased Premises.

B. The Tenant shall, at its own cost, comply with all **Environmental Laws, including without limitation**, all laws, regulations and government orders or directions relating to the use, generation, manufacture, production, processing, storage, transportation, handling, release, disposal, removal or cleanup of Hazardous Substances and the protection of the environment [**Intentionally Deleted**] on, under or about the Project, Property, and the Leased Premises. The Tenant shall not use or cause or permit to occur the generation, manufacture, production, processing, storage, handling, release, presence, introduction or disposal (each such action referred to as "handling") of any Hazardous Substance on, under or about the Project, Property, or the Leased Premises or the transportation to or from the Project, Property, or the Leased Premises of any Hazardous Substance except as specifically disclosed to the Landlord and permitted under this Lease. Upon the request of the Landlord during the Term, the Tenant shall provide to the Landlord an independent audit report, in form and substance and from qualified experts approved by the Landlord acting reasonably, regarding Hazardous Substances on, under or about: (i) the Project or Property (if handled by the Tenant, its employees, agents or anyone for whom the Tenant is in law responsible); or (ii) the Leased Premises during the Term.

If the Tenant shall bring or create upon the Project or Property, including the Leased Premises, any Hazardous Substances, then such Hazardous Substances shall be and remain the sole property of the Tenant. Upon demand by any governmental authority or the Landlord that removal or a cleanup be undertaken because of the presence, introduction, deposit, emission, leak, spill, discharge of Hazardous Substances at the Leased Premises during the Term, the Tenant shall promptly at its own expense, take all remedial action necessary to carry out a full and complete removal, cleanup and remediation in accordance with the law and any governmental order, directive or requirement. No action by the Landlord and no attempt by the Landlord to mitigate damages under any law shall constitute a waiver or release of the Tenant's obligations hereunder.

In addition to and without restricting any other obligations or covenants herein, the Tenant covenants that it will (i) comply in all respects with all Environmental Laws relating to the Project, Property, the Leased Premises or the use of the Project, Property, and the Leased Premises; (ii) promptly notify the Landlord in writing of any notice by any governmental authority alleging a possible violation of or with respect to any other matter involving any Environmental Laws relating to operations in the Leased Premises or relating to any person for whom it is in law responsible or any notice from any other party concerning any release or alleged release of any Hazardous Substance; and (iii) permit the Landlord, **its officers, employees, consultants, authorized representatives and agents, each acting reasonably**, to: (A) enter and inspect the Leased Premises and the operations conducted therein; (B) conduct tests and environmental assessments or appraisals; (C) remove samples from the Leased Premises; (D) examine and make copies of any documents or records relating to the Leased Premises and interview the Tenant's employees as necessary. **Notwithstanding the foregoing, the Landlord agrees to use reasonable efforts to minimize any disruption of the Tenant's business operations at the Leased Premises in the exercise of its rights hereunder.** The Tenant shall promptly notify the Landlord of the existence of any Hazardous Substance in, on or under the Leased Premises.

The Tenant shall indemnify and hold the Landlord harmless at all times from and against any and all losses, damages, penalties, fines, costs, fees and expenses (including legal fees on a full indemnity basis and consultants' fees and expenses) resulting from any breach of or non-compliance with the foregoing environmental covenants of the Tenant and any legal or administrative action commenced by, or claim made or notice from, any third party, including, without limitation, any governmental authority, to or against the Landlord and pursuant to or under any Environmental Laws or concerning a release or alleged release of any Hazardous Substance at the Project including the Leased Premises into the environment and related to or as a result of the operations of the Tenant or those acting under its authority or control at the Leased Premises **including, without limitation, any seepage, spillage, discharge and misuse of any cleaner, solvent, chemical, pollutant, contaminant or hazardous product and waste**, and any and all costs associated with air quality issues, if any.

C. Upon the expiration or early termination of the Term or any renewal thereof, the Tenant at its sole expense shall remove and dispose of all Hazardous Substances and all its storage tanks and other containers therefor in accordance with all Environmental Laws and regulations to the extent required by the Landlord, and to the extent that such removal and disposal involves any excavation work at the Leased Premises, the Building, the Lands or the Property, the Tenant shall restore the Leased Premises, the Building, the Lands or the Property, as the case may be, to the same grade level as immediately prior to excavation, using only clean uncontaminated soil or other material satisfactory to the Landlord.

D. The Tenant undertakes to remit to the Landlord, the environmental questionnaire attached hereto as Schedule "H", duly completed, prior to occupying the Leased Premises and thereafter and throughout the Term or any renewal thereof, such environmental questionnaire will be updated as may be requested from time to time by the Landlord.

E. As part of Tenant's insurance, the Tenant shall be required to provide insurance coverage with regard to any potential environmental liabilities of the Tenant.

F. Tenant will not do or permit anything to be done in, upon or about the Leased Premises or the Building which will in any way conflict with Environmental Laws whether by Tenant or those acting under its authority or control and Tenant will obtain any required permits relating to the Leased Premises or their use. Tenant shall permit Landlord, its officers, employees, consultants, authorized representatives and agent to:

- (a) inspect the Leased Premises and Tenant's operations;
 - (b) conduct tests and environmental assessments;
 - (c) remove samples from the Premises;
 - (d) examine and photocopy any documents or records relating to the Leased Premises, and
 - (e) interview Tenant and its employees, agents, contractors and those for whom it is responsible;
- all at such reasonable times and intervals as Landlord may desire and with minimal interference with the business operations of the Tenant at the Leased Premises.

The Tenant's obligations and liabilities hereunder shall survive the expiration of this Lease.

15.16 **Servitudes**

The Tenant acknowledges that the Property is subject to such servitudes and other permitted encumbrances which are currently registered on title and which the Tenant agrees to comply with at all times. The Tenant agrees to also comply with:

- (i) such further servitudes and permitted encumbrances which may be granted by the Landlord from time to time; and
- (ii) servitudes regarding utilities, as may be required from time to time.

15.17 **Entire Agreement**

The Tenant acknowledges that there have been no representations made by the Landlord which are not set out in the Lease. The Tenant further acknowledges that the Lease constitutes the entire agreement between the Landlord and Tenant and may not be modified except as herein explicitly provided or by subsequent agreement in writing duly signed by the Landlord and the Tenant.

15.18 **Effect of Lease**

This Lease and everything herein contained shall extend to and bind and may be taken advantage of by the respective heirs, executors, administrators, successors and assigns, as the case may be, of each of the parties hereto, subject to the granting of consent by the Landlord as provided herein to any Transfer, and where there is more than one tenant or there is a female party or a corporation, the provisions hereof shall be read with all grammatical changes thereby rendered necessary and all covenants shall be deemed joint and several. Any release, indemnity or covenant for the benefit of the Landlord shall apply equally, to the extent the context allows, to all agents, directors, officers, employees, property managers and hypothecary creditors of the Landlord.

15.19 **Brokerage Commission**

As part of the consideration for the granting of this Lease, the Tenant represents and warrants that no broker, agent or other intermediary introduced the parties or negotiated or was instrumental in negotiating or consummating this Lease, **other than the GROUPE IMMOBILIER DE MONTRÉAL INC. represented by Mr. Martin Vallee, whose commission shall be paid by the Landlord in accordance with Landlord's agreement with such broker**, and Tenant shall indemnify and hold Landlord harmless from claims by any other broker or agent.

15.20 **Schedules**

The Schedules attached to this Lease form an integral part of this Lease.

15.21 **English Language**

The parties declare that they have requested the present agreement (constituting this Lease) and all writings relating thereto to be drawn up in the English language. *Les parties déclarent qu'el/es ont demandé que la présente convention et toutes correspondances s'y relatant soient rédigées en anglais.*

IN WITNESS WHEREOF the parties hereto have executed this Lease.

LANDLORD:

CIG III TECHNOPARC NOMINEE INC.

Per: /s/ S. Barbieri
Authorized Signing Officer
Name: S. Barbieri
Title: ASO

Per: _____
Authorized Signing Officer
Name:
Title:

I/We have authority to bind the Corporation

TENANT:

PHARMASCIENCE INC.

Per: /s/ Ivan Djvnjak
Authorized Signing Officer
Name: Ivan Djvnjak
Title: Sr. Director Operations & Investments

Per: /s/ Glenn R. Lucas
Authorized Signing Officer
Name: Glenn R. Lucas
Title: Chief Financial officer

I/We have authority to bind the Corporation

SCHEDULE "A"

FLOOR PLAN OF LEASED PREMISES

SCHEDULE "B"

DESCRIPTION OF LANDS

That certain emplacement located in the City of Montréal (Saint-Laurent borough), Province of Québec, known and designated as lot number **1165 621** of the Cadastre du Québec, Registration Division of Montréal, such emplacement being a private portion of the divided co-ownership established pursuant to the Co-Ownership Agreement

SCHEDULE "C"

DEFINITIONS

For the purpose of this Lease:

- (a) **"Additional Rent"** means all amounts payable by the Tenant under the provisions of this Lease, whether payable to the Landlord or otherwise, other than Basic Rent.
- (b) **"Basic Rent"** means those amounts set out as Basic Rent in Section 2.02 of this Lease.
- (c) **"Building"** means the building bearing civic address 7210 Frederick-Banting in the City of Montréal (Borough of Saint-Laurent), Province of Québec, erected on the Lands in which the Leased Premises are located.
- (d) **"Capital Tax"** means the taxes or excises, imposed by any and all taxing authorities having jurisdiction, upon the Landlord and/or the owners of the Building based upon or computed by reference to the capital employed or invested by the Landlord and/or the owners of the Building in the Lands, the Building and improvements thereto.
- (e) **"Common Areas"** means all areas, facilities, fixtures, improvements and equipment of the Property of any nature whatsoever, servicing or benefiting the Lands and /or Building whether or not located upon or within the Lands or the Building and whether alone or in common with properties other than the Lands and the Building, including without limitation, the Common Lot. Landlord shall have the right to designate, amend and redesignate the Common Areas from time to time.,
- (f) **"Common Lot"** means the common portion created pursuant to the Co-Ownership Agreement currently designated as lot number I 165 610 of the Cadastre du Québec, Registration Division of Montréal.
- (g) **"Co-Ownership Agreement"** means the co-ownership agreement published at the Registry Office for the Registration Division of Montréal under number 4955809 and all modifications and/or amendments following publication of said Co-Ownership Agreement.
- (h) **"HVAC System" has the meaning attributed to it under Section 5.04 of this Lease.**
- (i) **"Landlord's Architect"** means a qualified architect, engineer or land surveyor from time to time chosen by the Landlord.
- (j) **"Lands"** means the parcel of land described in Schedule "B" hereto as it may be added to or subtracted from and the boundaries thereof as varied from time to time.

- (k) **“Lease”** means this Lease and any schedules attached hereto and any amendments from time to time made to this Lease in accordance with the provisions herein set out.
- (l) **“Leased Premises”** means that certain space located in the Building comprising approximately 9,394 square feet of rentable area as shown outlined in red on the plan annexed hereto as Schedule “A”, subject to the area measurement in accordance with the provisions of Section 2.03 of the Lease.
- (m) **“Leasehold Improvements”** means all fixtures (save for trade fixtures) installations, additions, improvements and alterations made, erected or installed in or on the Leased Premises by or on behalf of the Tenant.
- (n) **“Movable Hypothec Amount”**: N/A
- (o) **“Normal Business Hours”** means 8:00 a.m. to 6:00 p.m. Monday through Friday (but excluding Saturdays, Sundays and holidays), as such hours may be varied by the Landlord from time to time.
- (p) **“Occupancy Date”** has the meaning ascribed to it under paragraph 2.0 of Schedule “F” of this Lease.
- (q) **“Operating Costs”** means the aggregate of all costs, expenses or amounts incurred, whether by the Landlord or others on behalf of the Landlord in connection with the complete maintenance, operation, insuring, management, replacement and repair of the Property and all components thereof and all other buildings and improvements of the Landlord thereon or therein including, without limitation, such costs where incurred by the Landlord in order to comply with all statutes, by-laws, laws, regulations, ordinances and orders from time to time or at any time in force during the Term, as well as the any portion of the costs, expenses or amounts incurred for the complete maintenance, operation, insuring, management, replacement and repair of the Common Lot as may be reasonably be allocated by the Landlord. Without limiting the generality of the foregoing and without duplication, Operating Costs will include: repairs and replacements to the structure and roof of the Building, the costs of any heating, ventilating and air-conditioning or other equipment and fuel, energy and other costs of providing heat, ventilating and air-conditioning; all expenditures made by the Landlord in an effort to promote energy conservation as set out in Section 8.08 of this Lease; the cost of operating and maintaining elevators; the cost of providing hot and cold water; depreciation (in accordance with generally accepted accounting principles from time to time) of all capital and maintenance equipment which by its nature requires periodic replacement including, but not limited to all heating, ventilating and air-conditioning equipment together with interest at a rate equal to the average prime rate of interest from time to time charged to the Landlord by the chartered bank of the Landlord on the undepreciated capital cost of all such items being depreciated (provided that, when any such item is replaced or substantially repaired, only the undepreciated amount of the excess cost incurred may be included as part of the

costs hereunder or the Landlord may establish a new depreciation rate over the useful life of such item); the cost of utilities including but not limited to lighting not otherwise charged to tenants; the cost of snow, ice and refuse clearance and removal, landscape maintenance; window cleaning; Capital Tax; the cost of all insurance including but not limited to "all risks" property insurance (including but not limited to flood and earthquake), boiler and machinery, liability and other casualties and loss of rental income insurance, the amount of the deductible portion of any insurance policy in the event of any claim thereunder and the cost of independent adjusters and consultants retained by the Landlord with respect to such insurance; accounting costs incurred in connection with preparation of statements and opinions for tenants; the cost of providing security services; the cost of consultants retained with the intent of saving or reducing costs; the cost of any contest or appeal of realty taxes; the cost of all rental equipment and building supplies used by the Landlord for all such operations and maintenance or any other purpose; the cost of operating the management office on the Property (as applicable); amounts paid on service contracts; the amount of all salaries, wages and benefits paid to or on behalf of persons engaged in cleaning, supervision, maintenance, operation, management and repair; any business taxes which may be imposed on the Landlord by reason of its operation of the Property or parts thereof; and a management fee equal to fifteen percent (15%) of the aggregate of the Operating Costs (such **management fee shall not be deemed to be a duplication and is included in the estimated cost mentioned in Section 4.02, paragraph 3**).

In computing Operating Costs there shall be credited as a deduction the amounts of proceeds of insurance actually recovered by the Landlord in respect of the cost of repairs of such damage included in Operating Costs.

Operating Costs shall not include interest on Landlord's debt or capital retirement of debt or amounts directly chargeable to capital account, save as otherwise herein provided for.

Any report of the Landlord's auditor or other public accountant appointed by the Landlord for the purpose shall be conclusive as to the amount of Operating Costs for any period to which such report relates.

If less than 100% of the Building is occupied by tenants, then those components of Operating Costs which vary according to the degree of occupancy of the Building shall be deemed to be increased to an amount as estimated by the Landlord, acting reasonably, which would have been incurred had 100% of the Building been occupied by tenants throughout the entire period for which Operating Costs are being calculated.

Any operating cost expenditure may be expensed in the year incurred, save and except that only an amortized portion of the cost of major capital repairs and replacements (plus interest at the rate equal to the prime rate of the Landlord's bank plus 2% per annum thereon) shall be included in Operating Costs in any single year, such costs to be in accordance with industry standards as determined by the Landlord and to be amortized over the Landlord's reasonable estimate of the economic life thereof.

- (f) **“Project”** means the immoveable property held in divided co-ownership pursuant to the Co-Ownership Agreement, the whole as may be modified from time to time.
- (s) **“Property”** means (i) the Lands, (ii) all buildings and improvements thereon including the Building, and (iii) the Common Areas (excluding the Common Lot), the whole as may be modified from time to time.
- (t) **“Proportionate Share”** means that fraction having as its numerator the Rentable Area of the Leased Premises and having as its denominator the Rentable Area of the Property, provided that the Landlord shall be entitled, acting reasonably and equitably, to change adjust such fraction in the event the Landlord determines the Tenant is receiving a greater or lesser benefit than any other tenant(s) or occupant(s) of any service or area.
- (u) **“Rent”** means Basic Rent and Additional Rent.
- (v) **“Rentable Area of the Property “** means the area of all premises in the buildings on the Property which premises are intended to be leased by the Landlord from time to time measured in accordance in **accordance with BOMA 1996 standards of measurement for office buildings or with an industry standard system of measurement for similar use buildings at the time of such measurement, as determined by the Landlord, acting reasonably.**
- (w) **“Rentable Area of the Leased Premises”** means the rentable area of the Leased Premises determined in accordance with BOMA 1996 standards of measurement for office buildings.
- (x) **“Rules and Regulations”** means those rules and regulations attached to this Lease and any additional rules and regulations made from time to time in accordance with Section 8.02 of this Lease.
- (y) **“Taxes”** means all taxes, rates, duties, levies and assessments whatsoever (imposed by any and all taxing authorities having jurisdiction) levied, charged or assessed upon the Property and upon any part or parts thereof and all improvements now or hereafter erected or placed thereon, or charged against the Landlord on account thereof, including but not limited to local improvement charges (but excluding profit and excess profit taxes and taxes assessed upon the income of the Landlord). In addition to the foregoing, Taxes shall include any and all taxes, charges, levies or assessments which may in the future be levied, charged or assessed in lieu thereof or in addition thereto. Taxes shall also include all costs and expenses incurred by the Landlord in obtaining or attempting to obtain a reduction or prevent an increase in the amount thereof and the cost of all consultants, solicitors and accountants retained by the Landlord with respect thereto. Taxes shall also include the Property’s share of Taxes on the Common Lot as allocated by the Landlord, acting reasonably.

- (z) “**Term**” means that period of time set out in Section 1.03 of this Lease (and any and all extensions or renewals thereof, as may be applicable).
- (aa) “**Transfer**” has the meaning ascribed thereto in paragraph (a) of Section 7.01 of this Lease.
- (bb) “**Transferee**” has the meaning ascribed thereto in paragraph (a) of Section 7.01 of this Lease.
- (cc) “**Year**” means each calendar year, the whole or part of which is included within the Term.

SCHEDULE "D"

LANDLORD'S WORK

The Tenant agrees to accept the Leased Premises in their current state and on an "as-is" basis, subject only to the Landlord's Work below.

The Landlord shall, at its sole cost and expense, effect the following work in the Leased Premises ("Landlord's Work") in accordance with the Building standards:

- (i) **remove the existing fire doors and seal the door shown approximately outlined in green on the plan attached as Schedule "D-1" hereto in accordance with the National Building Code;**
- (ii) **ensure that all demising wall(s) between the Leased Premises and any Common Areas as well as all demising wall(s) between the Leased Premises and any other space in the Building (vacant or leased) are built up to the ceiling slab and insulated throughout with sound insulating mineral wool;**
- (iii) **ensure that the HVAC Systems are in good working order;**

In addition, the Landlord shall ensure that during the Term and any extension thereof, the Building, including without limitation, the emergency exits and the fire protections equipment, are in conformity with all laws then in force provided that such items are the Landlords responsibility under the Lease.

SCHEDULE "D-1"

[FLOOR PLAN]

SCHEDULE "E"

RULES AND REGULATIONS

These rules and regulations, in addition to any other rules and regulations established by the Landlord from time to time, shall form part of the Lease to which these rules and regulations are attached.

1. All loading and unloading of goods shall be done only at such times, in the areas, and through the entrances, designated for such purposes by the Landlord.
2. The delivery or shipping of merchandise, supplies and fixtures to and from the Leased Premises shall be subject to such controls as in the judgment of the Landlord are necessary for the proper operation of the Leased Premises, the Property and/or the Project.
3. All garbage and refuse shall be kept in the kind of containers specified by the Landlord and shall not be burned in or about the Leased Premises.
4. No radio, television, telegraphic or telephone or similar device and no water pipe, gas pipe or electric wire shall be installed or connected without obtaining in each instance the written consent of the Landlord. All such connections shall be installed in accordance with the Landlord's direction and without such direction no boring or cutting for wires or pipes shall be permitted.
5. The Tenant and its employees, suppliers and other persons not customers having business with the Tenant, shall park their cars only in those portions of the parking area designated for that purpose by the Landlord and shall not under any circumstances, park any vehicle overnight. Should the Tenant, its employees, suppliers and other persons not customers having business with the Tenant park vehicles in areas not allocated for that purpose, the Landlord shall have the right to remove the said trespassing vehicles and the Tenant shall save harmless the Landlord from any and all damages therefrom and the Tenant shall pay the costs of such removal.
6. The plumbing facilities shall not be used for any other purpose than that for which they are intended, and no foreign substance of any kind shall be thrown therein, and the expense of any breakage, stoppage or damage resulting from a violation of this provision shall be borne by the Tenant.
7. The Tenant shall use at the cost of the Tenant such pest extermination contractor as the Landlord may direct and at such intervals as the Landlord may require.
8. The Tenant, its employees or agents, shall not mark, paint, drill or in any way deface any walls, ceilings, partitions, floors, wood, stone or iron without the written consent of the Landlord.
9. Except as permitted in the lease to which these rules and regulations are annexed, the Tenant shall not permit any cooking in the Leased Premises without the written consent of the Landlord.

10. No mall, sidewalk, entry, passageway, elevator or staircase shall be obstructed or used by the Tenant, its officers, agents, servants, employees, contractors, customers, invitees or licensees for any purpose other than ingress to and egress from the Leased Premises.
11. The Tenant, its officers, agents, servants, employees, contractors, customers, invitees or licensees shall not bring in or take out, position, construct, install or move any safe or other heavy equipment or furniture without first obtaining the consent in writing of the Landlord. In giving such consent, the Landlord shall have the right in its sole discretion, to prescribe the weight permitted and the position thereof, and the use and design of planks, skids or platforms to distribute the weight thereof. All damage done to the Property or Common Lot by moving or using any such safe, heavy equipment or furniture shall be repaired at the expense of the Tenant. The moving of all equipment and furniture shall occur only during those hours when consented to by the Landlord and the persons employed to move the same in and out of the Leased Premises shall be acceptable to the Landlord.
12. All persons entering and leaving the building in which the Leased Premises are situated at any time other than during Normal Business Hours shall register in the books kept by the Landlord and the Landlord will have the right to prevent any person from entering or leaving such building unless provided with a key to the premises to which such person seeks entrance or a pass in a form to be approved by the Landlord. Any persons without such key or passes will be subject to the surveillance of the employees and agents of the Landlord. The Landlord shall be under no responsibility for failure to enforce this rule.
13. The Tenant shall not place or cause to be placed any additional locks upon any doors of the Leased Premises without the approval of the Landlord and subject to any conditions imposed by the Landlord.
14. No one shall use the Leased Premises for sleeping apartments or residential purposes, or for the storage of personal effects or articles other than those required for the purposes permitted by the lease to which these rules and regulations are annexed.
15. If the Landlord has agreed to provide such service, the Tenant shall permit window cleaners to clean the windows of the Leased Premises from time to time and at reasonable times.
16. Any hand trucks, carryalls or similar appliances used in any building on the Property or Common Lot shall be equipped with rubber tires, side guards and such other safeguards as the Landlord shall require.
17. **[Intentionally Deleted]**
18. The Tenant shall keep the Leased Premises at a temperature sufficiently high to prevent freezing of water in pipes and fixtures.
19. The Tenant shall not keep or display any merchandise on or otherwise obstruct the Common Areas adjacent to the Leased Premises.
20. The Tenant shall not use or permit any part of the Leased Premises to be used in such a manner as to cause annoying noises or vibrations or offensive odours.

21. **[Intentionally Deleted]**

22. The Tenant undertakes to respect the Co-Ownership Agreement and any other rules regulations implemented thereunder affecting the Property
Initials Landlord

SCHEDULE "F"

SPECIAL PROVISIONS

1.0 ALLOWANCE AND IMPROVEMENTS

In order to assist Tenant in defraying the Tenant's cost of the initial Leasehold Improvements to be effected to the Leased Premises (the "**Improvements**"), the Landlord agrees to contribute a leasehold improvement allowance in the maximum amount of Twenty-Two Dollars (\$22.00) per square foot of Rentable Area of the Leased Premises, plus G.S.T. and Q.S.T. (the "**Allowance**") (namely an amount of \$206,668.00 subject to measurement of Leased Premises in accordance with the provisions of Article 2.03 of the Lease). The Landlord's administration fee, equal to ten percent (10%) of the total cost of the Improvements, shall be deducted from the Allowance.

Provided that the Lease is signed no later than May 31st, 2014, that Tenant has furnished to Landlord the Security Deposit, and that the necessary tender plans and specifications for the Improvements ("**Plans**") have been approved by both Landlord and Tenant no later than May 31st, 2014, the Landlord shall, for and on behalf of the Tenant and at the Tenant's cost, subject only to the payment by the Landlord of the Allowance, effect the Improvements according to the Plans and in accordance with the building standards for the Building.

Subject to (i) Tenant delivering the Plans within the prescribed delays indicated above, (ii) to Tenant not having delayed Landlord in the completion of the Landlord's Work; and (iii) to any delays due to force majeure and other delays beyond Landlord's reasonable control, the Landlord undertakes to have the Improvements substantially completed by the Commencement Date, failing which the Commencement Date shall be postponed by the same number of days as the delay in the substantial completion of Landlord's Work, as full and final compensation of any and all claims in respect of such delay.

In the event the cost of the Improvements exceeds the amount of the Allowance, Tenant shall pay the excess directly to Landlord on demand. If the cost of the Improvements is less than the amount of the Allowance, the unused portion of the Allowance, if any, will be granted to Tenant as a rental credit against the Tenant's Basic Rent until such amount has been fully applied. It is understood and agreed that the Landlord may deduct, from the Allowance, any amount due by Tenant to Landlord pursuant to the terms of the Lease.

2.0 PRE-OCCUPANCY

Notwithstanding any provision to the contrary in this Lease and provided that Tenant is not in default of its obligations under the terms of the Lease and further provided that Landlord's Work and the Improvements are substantially completed, Tenant shall have the right to take possession of and occupy the Leased Premises as of the date the Landlord's Work and the Improvements are substantially completed (the "**Occupancy Date**"). The Tenant shall be bound by all the terms and conditions of the Lease during any occupancy of the Leased Premises prior to the Commencement Date, except that no Basic Rent, nor Tenant's Proportionate Share of Operating Costs or Taxes or any charges for electricity shall be payable during such period. However, as of the Occupancy Date, the Tenant shall be responsible for the payment for all other charges, outlays and expenses payable by the Tenant pursuant to the terms of the Lease, the whole in accordance with the provisions of the Lease.

3.0 RENTAL CREDIT

Provided the Tenant has furnished Landlord with the Security Deposit and provided Tenant is not in default of its obligations under the terms of the Lease at the relevant time, Landlord shall grant to Tenant a rental credit in a maximum amount of Two Hundred Thirty-One Thousand Three Hundred Eighty-Two Dollars and Fifty-Nine Cents (\$231,382.59) plus G.S.T. and P.S.T. (the "**Rental Credit**"), which Rental Credit shall be granted in ten (10) equal instalments of Twenty-Three Thousand One Hundred Thirty-Eight Dollars and Twenty-Six Cents (\$23,138.26), each instalment to be applied against the Tenant's Basic Rent and Tenant's Proportionate Share of Operating Costs and Taxes payable for the months of October 2014, November 2014, December 2014, January 2015, October 2015, November 2015, December 2015, January 2016, February 2016 and October 2016, until such Rental Credit is fully used up. Any amount of monthly rental which is not fully compensated by the Rental Credit remains payable by the Tenant in accordance with the provisions of the Lease.

4.0 RIGHT TO EXPAND

As of the Commencement Date, provided the Tenant physically occupies and actively carries on business in the entire Leased Premises and provided Tenant is not then in default of its obligations under the Lease, the Tenant shall have the right to expand the Leased Premises (the "**Right to Expand**") and lease any vacant and available space in the Building at the time Tenant exercises its Right to Expand (the "**Expansion Space**"), the whole under the same terms and conditions as exist under the Lease, subject to the following terms and conditions:

- (i) the Tenant is required to send a written notice (the "**Expansion Notice**") to Landlord exercising its Right to Expand into the Expansion Space indicating the occupation date and the space in question (the "**Expansion Occupation Date**"), which Expansion Notice shall be sent to Landlord no later than sixty (60) days but not earlier than ninety (90) days prior to Expansion Occupation Date indicated in the Expansion Notice, and which Expansion Occupation Date shall in no event be later than June 1, 2019;
- (ii) the Basic Rent payable for the Expansion Space shall be same as the current Basic Rent then payable by Tenant for the Leased Premises subject to any increases thereof as are contemplated in the Lease; the Tenant shall be entitled to a rental credit and leasehold improvements allowance (as provided in Paragraphs 1.0 and 3.0 of this Schedule "F") which shall however be calculated on a pro rata basis over the remaining Term of the Lease for the Expansion Space, proportional to the rentable area of the Expansion Space;
- (iii) the term for the Expansion Space shall be co-terminous with the Term for the Leased Premises;
- (iv) the Tenant shall have the right to use the existing equipment then in the Expansion Space, if any, on the same terms and conditions applicable to the equipment; and
- (v) the Tenant shall accept the Expansion Space "as is, where is" without any work to be performed by Landlord.

In the event Tenant does not exercise its Right to Expand by prior written notice to the Landlord within the prescribed delay and in the manner indicated above, the Right to Expand shall lapse and be null and void and of no further effect.

The Right to Expand is (i) conditional upon Tenant being in good standing under the Lease at the relevant time; (ii) is subject to any pre-existing rights of third parties to lease the space in question; (iii) does not apply where Landlord renews or extends any existing or future lease of the space in question; (iv) ceases to apply if the Tenant assigns the Lease or sublets the Leased Premises in whole or in part or ceases to occupy the Leased Premises; (v) is not assignable or transferable in any way; and (vi) does not apply where the space in question is subject to a sublease or assignment of lease, or where Landlord is relocating a tenant into such space.

5.0 RIGHT OF FIRST REFUSAL

As of the Commencement Date, provided Tenant physically occupies and actively carries on business from the Leased Premises and provided Tenant is not then in default of its obligations under the Lease, the Tenant will have a right of first refusal (the “**Right of First Refusal**”) to lease the space located on the second (2nd) floor of Building as well as the space located on the ground floor and the second floor of the Adjacent Building (defined below) (the “**RFR Space**”) if such spaces are the object of a *bona fide* third party offer to lease which Landlord wishes to accept. The Tenant will have seven (7) days following receipt of Landlord’s notice outlining the essential terms and conditions of the third-party offer which Landlord is prepared to accept, to advise Landlord in writing whether it wishes to exercise its Right of First Refusal to lease the RFR Space in question. Should the Tenant exercise its Right of First Refusal, Tenant shall lease all of the RFR Space described in the Landlord’s notice on the same terms and conditions as the third-party offer. In the event Tenant does not notify Landlord of its acceptance by written notice prior to the delay indicated above, Tenant shall irrevocably be deemed to have waived its right of first refusal and Landlord shall be free to lease the RFR Space to a third party.

The Right of First Refusal (i) is conditional upon Tenant being in good standing under its Lease at the relevant time; (ii) is subject to any pre-existing rights of third parties to lease the space in question; (iii) does not apply where Landlord renews or extends any existing or future lease of the space in question; (iv) ceases to apply if the Tenant assigns the Lease or sublets the Leased Premises in whole or in part or ceases to occupy the Leased Premises; (v) is not assignable or transferable in any way; and (vi) does not apply where the space in question is subject to a sublease or assignment of lease, or where Landlord is relocating a tenant into such space.

In the event the Landlord is no longer the rightful owner of the adjacent building bearing civic number 7220 Frederick-Banting, City of Montréal, Province of Québec (the “**Adjacent Building**”), the Tenant’s Right of First Refusal for any space located in the Adjacent Building shall cease and no longer apply.

6.0 OPTION TO EXTEND

Provided that the Tenant is not in default pursuant to the terms of the Lease at the relevant time and provided that Tenant has not effected any assignment of this Lease or sublet any part of the Leased Premises, the Tenant shall have the option to extend the Term of the Lease (the “**Option to Extend**”) for an additional term of five (5) years (the “**Extension Term**”), to be exercised by prior written notice to the Landlord given no later than twelve (12) months but no earlier than eighteen (18) months prior to the expiry date of the Lease, whereupon the Lease shall be extended for such additional period on the same terms and conditions, except that:

- (i) there shall be no further option to extend or right to renew the Lease;
- (ii) there shall be no pre-occupancy periods, free rent period, rental credit, allowances or leasehold improvements to be effected by Landlord or other inducements whatsoever;
- (iii) the Tenant shall accept the Leased Premises “as is, where is” without any work to be performed by Landlord; and
- (iv) the annual rate of Basic Rent during the Extension Term shall be at the then current market rental, for similar space as the Leased Premises in similar buildings in the vicinity of the Building but shall not be less than the Basic Rent payable by the Tenant during the last year of the initial Term of the Lease.

In the event Tenant does not exercise its Option to Extend by prior written notice to the Landlord within the prescribed delay indicated above, the Option to Extend will be null and void and of no further effect.

The rights granted under this Option to Extend are personal to PHARMASCIENCE INC. and shall subsist and apply so long as PHARMASCIENCE INC. is occupying and operating the entire Leased Premises and has not assigned the Lease or sublet the Leased Premises. These rights may not be transferred or assigned by the Tenant.

In the event that the parties fail for any reason to agree in writing on the Basic Rent to be applied during the Extension Term at least three (3) months prior to its commencement, Landlord and Tenant will, within fifteen (15) days thereafter, exchange final sealed written offers, each quoting the annual Basic Rent which the party who makes the offer considers to be applicable for the Extension Term. If a party fails to submit its offer within such delay, the offer submitted by the other party will prevail for all intents and purposes in order to determine the Basic Rent to apply during such Extension Term. If the Tenant’s offer exceeds Landlord’s offer, then the offer submitted by Tenant will prevail for all intents and purposes in order to determine the Basic Rent to apply during such Extension Term. If Landlord’s offer does not exceed Tenant’s offer by more than ten percent (10%) then the Basic Rent in question will be the arithmetic average of Landlord’s and Tenant’s offered annual rental rates. If Landlord’s offer exceeds Tenant’s offer by more than ten percent (10%), Tenant will have the right, within ten (10) days after the expiration of such fifteen (15) day delay, to either advise Landlord in writing that it has elected to withdraw its offer and has accepted Landlord’s offer, to proceed with arbitration or to cancel its Option to Extend and vacate the Leased Premises at the expiry date of the Term, without any further right or recourse by one party against the other.

7.0 RIGHT OF FIRST OFFER ON THE BUILDING

Should the Landlord decide to sell the Building during the Term, the Tenant shall have a one (1) time right of first offer to buy the Building (“**Right of First Offer**”). The Landlord shall inform the Tenant of its intention to sell the Building (the “**Notice to Sell**”) and the Tenant shall have the right to submit to Landlord an offer to purchase. If the Tenant elects to submit an offer, the Landlord agrees that for the thirty (30) day period following issuance of the Landlord’s Notice to Sell, Landlord shall exclusively negotiate the sale of the Building with the Tenant, both parties acting in good faith. The Landlord shall have the right, at its sole discretion, to refuse Tenant’s offer if the terms and conditions of such offer are not acceptable to the Landlord. Should no binding agreement be signed by the parties within thirty (30) days of receipt by the Tenant of the Notice to Sell, the Landlord shall be deemed to have refused the Tenant’s offer and this Right of First Offer shall become null and void without further right of the Tenant and Landlord shall be free to enter into negotiations with a third party for the sale of the Building.

Notwithstanding any contrary provision of this Paragraph 7.0 of Schedule “F”, Tenant’s Right of First Offer will not apply to:

- (i) any sale or transfer of the Building to a partnership, corporation, limited liability company, trust or other legal entity in which Landlord has any material interest;
- (ii) any sale or transfer of the Building or any interest therein to any present or future partner of Landlord or any transfer between any parties constituting the Landlord entity, or any sale or transfer to a corporation controlled by any such partner or party, or an affiliate thereof, including, without limitation, the transfer, attribution or other devolution resulting from the dissolution of Landlord;
- (iii) any transfer without consideration;
- (iv) any sale/leaseback transaction; or
- (v) any sale/transfer effected exclusively for tax considerations or resulting from any corporate reorganization of the Landlord
- (vi) a portfolio sale which includes the Building and other real estate assets;
- (vii) any transfer to any mortgagee or hypothecary creditor or other secured lender.

This Right of First Offer to purchase the Building is absolutely conditional upon the fulfillment of the following conditions on an on-going and continuous basis up to the time that the rights to the Right of First Offer are created:

- (a) the Lease will be in full force and effect; and

- (b) Tenant will not have been and will not be at the relevant time, in default in the performance of its obligations under the Lease;
- (c) Tenant is itself bona fide occupying and carrying on business in and from the entire Leased Premises;

failing which the Right of First Offer to purchase will be deemed null and void and never to have existed and Landlord will have no obligation to Tenant under the provisions of this Paragraph 7.0 or of anything done in consequence or furtherance of such rights.

The Right of First Offer to purchase the Building may not be sold, transferred, assigned or otherwise alienated to or enure to the benefit of anyone other than Tenant mentioned on the first page of this Lease, under pain of absolute nullity.

8.0 RIGHT OF FIRST REFUSAL ON THE BUILDING

Should Landlord receive a bona fide offer to purchase the Property from a third party during the Term which offer Landlord wishes to accept, the Landlord shall provide the Tenant with a one (1) time right of first refusal with respect to the purchase of the Building (the "**Building RFR**").

Landlord shall provide the Tenant with a written notice setting out the purchase price and all the relevant terms and conditions regarding the third-party offer (the "**Landlord's RFR Notice**") and Tenant shall have five (5) business days from receipt of Landlord's RFR Notice to notify Landlord in writing whether Tenant wishes to accept the offer made by the third party and purchase the Building in place and stead of the third party.

If Tenant fails to notify Landlord of its acceptance by written notice to Landlord within the delays indicated above, Tenant shall irrevocably be deemed to have waived and refused the Landlord's offer and Landlord shall be free to sell the Building to a third party without any recourse by Tenant and the Tenant shall have no further Building RFR or other right of first refusal on the Building whatsoever.

In the event Tenant notifies Landlord that it wishes to accept the third party offer in the manner and within the delay above provided, Tenant shall purchase the Building under the identical terms and conditions contained in Landlord's RFR Notice.

Notwithstanding any contrary provision of this Paragraph 8.0 of Schedule "F", this Building RFR will not apply to:

- (i) any sale or transfer of the Building to a partnership, corporation, limited liability company, trust or other legal entity in which Landlord has any material interest;
- (ii) any sale or transfer of the Building or any interest therein to any present or future partner of Landlord or any transfer between any parties constituting the Landlord entity, or any sale or transfer to a corporation controlled by any such partner or party, or an affiliate thereof, including, without limitation, the transfer, attribution or other devolution resulting from the dissolution of Landlord;

- (iii) any transfer without consideration;
- (iv) any sale/leaseback transaction; or Initials Landlord
- (v) any sale/transfer effected exclusively for tax considerations or resulting from any corporate reorganization of the Landlord
- (vi) a portfolio sale which includes the Building and other real estate assets owned by CIG III TECHNOPARC NOMINEE INC.;
- (vii) any transfer to any mortgagee or hypothecary creditor or other secured lender.

The rights to the Building RFR are absolutely conditional upon the fulfillment of the following conditions on an on-going and continuous basis up to the time that the rights to the Building RFR are created:

- (a) the Lease will be in full force and effect; and
- (b) Tenant will not have been and will not be at the relevant time, in default in the performance of its obligations under the Lease;
- (c) Tenant is itself bona fide occupying and carrying on business in and from the entire Leased Premises;

failing which the Building RFR will be deemed null and void and never to have existed and Landlord will have no obligation to Tenant under the provisions of this Paragraph 8.0 or of anything done in consequence or furtherance of such rights.

This Building RFR may not be sold, transferred, assigned or otherwise alienated to or enure to the benefit of anyone other than Tenant mentioned on the first page of this Lease, under pain of absolute nullity.

SCHEDULE "G"

AGREEMENT REGARDING LETTER OF CREDIT AND OTHER SECURITY

Reference is made to the lease dated May 15, 2014 ("Lease") between PHARMASCIENCE INC. ("Tenant") and CIG III TECHNOPARC NOMINEE INC. ("Landlord") for the Tenant's premises ("Leased Premises") located in the property located at 7210 Frederick Banting, City of Montréal (Borough of Saint-Laurent), Province of Québec.

THE TENANT AND THE LANDLORD, IN RELIANCE UPON THE REPRESENTATIONS AND WARRANTIES AND COVENANTS AND AGREEMENTS OF THE TENANT CONTAINED IN THIS AGREEMENT, COVENANT AND AGREE AS FOLLOWS:

1. The Tenant covenants to provide to the Landlord, on an uninterrupted and continuing basis for the period commencing on the date of this agreement **and expiring thirty (30) days following the fifth (5th) anniversary of the Commencement Date of the Lease**, with an irrevocable letter of credit issued by a Schedule I Canadian chartered bank, expiring at the end of the period mentioned above, and in the form and of the substance set forth in Schedule G-1 hereto and initialed by the parties to this agreement for the purpose of identification, all of the terms and conditions of which Schedule "G-1" are incorporated in this agreement by reference as if recited out at length herein. The letter of credit will serve (a) to guarantee the due and prompt payment and performance of each and every obligation, liability, condition and agreement to which the Tenant is or may be bound by the terms of the Lease and each and every obligation, liability, condition and agreement to which the Tenant is or may be bound by this agreement (including all extensions, renewals and other prolongations thereof), or as a result thereof, as the Lease or this agreement may be amended from time to time, (including, without limitation, the prompt payment of all rentals and additional rentals which may become due pursuant to the Lease) and (b) to indemnify the Landlord, up to the same amount, for any and all damages, costs and losses (including, without limitation, loss of rentals and additional rentals) which may be suffered by the Landlord as a consequence of the termination, rescission, disavowal, repudiation or disclaimer of the Lease or this agreement, or both, by whomsoever.

The letter of credit shall be in the amount of One Hundred and Thirty-Five Thousand Dollars (\$135,000.00),

2. In the event that the Tenant does not replace any letter of credit furnished to the Landlord as contemplated in this agreement at the latest thirty (30) days prior to its expiration date, the Landlord will be entitled to draw on such letter of credit, for the full amounts thereof, whether or not the Tenant is otherwise in default in the performance of its obligations under or in virtue of the Lease or this agreement, and to retain all amounts received by the Landlord from the issuing banks as a result of

such draws ("Proceeds") for the same purposes, with the necessary adaptations, as the letter of credit drawn upon, until such time as the letter of credit has been replaced with a new letter of credit affording the Landlord the full security to which it is entitled under this agreement. Upon such replacement, and provided that the Tenant is not otherwise in default in the performance of such obligations, any portion of the Proceeds still held by the Landlord will be returned to the Tenant.

3. Neither the furnishing of such letter of credit nor the holding of any Proceeds as contemplated in this agreement will relieve the Tenant from the payment of rent, additional rent or any other charges for which the Tenant is liable under or in virtue of the Lease or in any way relieve the Tenant from the faithful and punctual performance of all covenants and conditions contained in or entered into in virtue of the Lease or in any way relieve the Tenant from the faithful and punctual performance of all covenants and conditions contained in or entered into in virtue of this agreement. If the Tenant is in default as aforesaid, it will be entirely in the Landlord's discretion as to whether the Landlord draws under such letter of credit or letters of credit or compensates and sets off all or any part of the Claims as contemplated by paragraph 5 of this agreement, or whether the Landlord exercises whatever other rights, remedies and recourses the Landlord may have. In the event that the Landlord draws under any such letter of credit or compensates and sets off all or any part of the Claims, the Tenant will remit to the Landlord a replacement letter of credit or supplementary letter of credit sufficient to restore to the Landlord the full security to be afforded to the Landlord as contemplated in this agreement within five (5) business days of the Landlord's written demand therefor, the whole without prejudice to such other rights, remedies and recourses as may avail to the Landlord in the circumstances.
4. Thirty (30) days following the 5th anniversary of the Commencement Date of the Lease, the letter of credit and any Proceeds held by the Landlord will be returned to the Tenant ***[Intentionally Deleted]*** provided the Tenant will then have complied in all respects with all terms, covenants and conditions to which it has bound itself under the Lease and this Agreement.
5. To further secure the Landlord to the full extent of the full security to which it is entitled under this agreement, the Tenant hereby grants to the Landlord a security interest in and hypothecates in favour of the Landlord whatever claims the Tenant now has or will ever have against the Landlord for or to the Proceeds, under or in virtue of paragraph 3 of this agreement or otherwise (collectively "Claims"). If the Tenant is in default in the performance of any of its covenants and conditions contained in or entered into in virtue of the Lease, or if the Tenant is in default in the performance of any covenants or conditions contained in this agreement, or if any of the Tenant's obligations under this agreement have become enforceable, the Landlord will have the right, as hypothecary creditor, to compensate and set-off the Claims against any and all amounts then owing by the Tenant to the Landlord, the whole without the necessity of demand or notice (other than as may be required by law) to the Tenant or to any other party. In such event, the Claims will be deemed to have been paid, cancelled and discharged to the extent of the amounts so compensated and set-off, and the Tenant will cease to have any interest whatsoever in the Claims to such extent.

6. Any Proceeds held by the Landlord as contemplated in this agreement will not be governed by the provisions of Articles 2280 and following of the *Civil Code of Québec* and will not be construed as being the property of the Tenant but as belonging to the Landlord.
7. The Landlord will have the right to transfer the benefit of any letter and any Proceeds contemplated in this agreement to any purchaser of the property in which the Leased Premises contemplated in the Lease are situated and, for such purpose, to have the Landlord replaced as beneficiary under such letter of credit by appropriate amendments thereof acceptable to the Landlord and such purchaser, upon demand to such effect. In the event of such transfer the Landlord will be and hereby is entirely released and relieved of all the Landlord's covenants and obligations in respect of such letter, such Proceeds and the Claims and as well as those contained in this agreement, provided that such purchaser stipulates in favour of the Tenant to assume and carry out such covenants and obligations.
8. Without limiting the generality of any other provision of this agreement or of any letter of credit issued pursuant hereto, the security contemplated in this agreement will not be affected or impaired by the Tenant's bankruptcy, insolvency or winding-up, nor by any termination, rescission, disavowal, repudiation or disclaimer of the Lease or this agreement, or both, by whomsoever, or by any other action taken by any trustee, liquidator, referee or other officer appointed by any court or other body of competent jurisdiction under any bankruptcy, insolvency or winding-up legislation in force from time to time, nor by the Landlord's failure to delay or proceed to litigation or to seek a remedy for any default of the Tenant, any guarantor or any other person, nor by any liberation or discharge from bankruptcy or otherwise of any such trustee, liquidator, referee or other officer, nor by any release or other forgiveness in favour of whomsoever, nor by any extinction of any of the obligations, liabilities, agreements or conditions secured by any such letter of credit or deposit, nor by any other act, omission or event whatsoever which might lessen, affect or discharge a surety or person obliged to indemnify another.
9. Any security to be provided to the Landlord as contemplated in this agreement is and will at all times be in addition to and not in replacement of any other security heretofore furnished to the Landlord and any further and additional security furnished to the Landlord from time to time.
10. The parties have requested that this agreement be prepared in English. *Les parties ont demandé que la présente convention soit rédigée en anglais.*

Kindly confirm your covenants and agreements above set forth by signing and returning to us the enclosed copy of this letter.

Montréal, this 16th day of June 2014.

CIG III TECHNOPARC NOMINEE INC.
(Landlord)

Per: /s/ S. Barbieri
ASO

ACCEPTED AND AGREED on the 14 day of May 2014

PHARMASCIENCE INC.
(Tenant)

Per: /s/ Ivan Djvnjak
Ivan Djvnjak
Sr. Director Operations & Investments

SCHEDULE "G-1"

DATE OF ISSUANCE:

• REFERENCE NO.:

EXPIRY DATE:

AMOUNT:\$ •

BENEFICIARY:

CUSTOMER:

•

•

Dear Sirs:

Pursuant to the request of our customer, • , (the "Customer"), we, the undersigned, • , ("this Branch") hereby establish an irrevocable Letter of Credit in your favour in the total amount of • dollars (\$ •).

We authorize you to draw on this Branch under this Letter of Credit in the form of a written demand for payment, which demand we shall honour without enquiring whether you have the right as between you and the Customer to make such demand and without acknowledging any claim or instructions of the Customer, provided, however, that you are to deliver to us at the above address at such time as a written demand for payment is made by you upon us:

1. the original copy of this Letter of Credit; and
2. a certificate confirming one or the other or both of the following: (i) that the Customer is in default under the provisions of a lease between you and the Customer and that the monies drawn by you are due and payable to you in accordance with such lease and (ii) that the Customer is in default under the provisions of an agreement between you and the Customer and that the monies drawn by you are due and payable to you in accordance with such agreement.

Partial and multiple drawings are permitted.

This Letter of Credit is issued subject to Uniform Customs and Practice for Documentary Credits, 1993 Revision, I.C.C. Publication No. 500.

A written demand for payment and certificate as described above must be presented at this Branch before the end of banking business on the • day of • , at which time this Letter of Credit will expire.

SCHEDULE "H"

ENVIRONMENTAL QUESTIONNAIRE

SCHEDULE "I"

EQUIPMENT

**AMENDMENT TO LEASE ENTERED INTO AT THE CITY OF MONTREAL, PROVINCE OF QUÉBEC, ON THE 24 DAY OF
NOVEMBER 2016**

BETWEEN: **CIG III TECHNOPARC NOMINEE INC. / FIDUCIAIRE CIG III TECHNOPARC INC.**, a legal person hereinacting and represented Sam Barbieri, its representative, duly authorized as he so declares;

(hereinafter referred as the "Landlord")

AND: **PHARMASCIENCE INC.**, a body politic and corporate, duly incorporated according to law, herein acting and represented by Muriel Lortie, its representative, duly authorized as the so declares;

(hereinafter referred to as the "Tenant")

WHEREAS pursuant to a lease dated May 15, 2014 (the "Lease") between Landlord and Tenant, the Tenant leases certain premises having a Rentable Area of nine thousand forty-five (9,045) square feet (the "Leased Premises") located on the ground floor of the building bearing civic address 7210 Frederick Banting, City of Montreal (Borough of Saint-Laurent), Province of Québec (the "Building") for a term expiring July 31, 2021 (the "Term"), subject to one (1) option to extend the Lease for a period of five (5) years, the whole in accordance with and subject to the conditions set forth in the Lease;

WHEREAS the Tenant wishes to have the right to use some of the Landlord's equipment and the Landlord agrees to such use, the whole in accordance with and subject to the terms and conditions set forth in this amendment (hereinafter the "Amendment").

NOW, THEREFORE, THE PARTIES HAVE AGREED AS FOLLOWS:

ARTICLE 1 PREAMBLE

1.1 The preamble hereto is true and correct and shall form an integral part of this Amendment.

1.2 All terms and expressions in this Amendment with the first letter in upper case have the meaning attributed thereto in the Lease unless the contrary is herein provided or the context dictates otherwise.

ARTICLE 2 DEIONIZED WATER APPARATUS

2.1 The Landlord agrees to allow Tenant to connect to and use, without payment of any fee to the Landlord, the Landlord's deionized water apparatus (the "Deionized Water Apparatus") located on the 2nd floor of the adjacent building known as 7220 Frederick Banting, City of Montreal (Borough of Saint-Laurent), Province of Québec (the "Adjacent Building") which forms part of the Project (as defined in the Lease), subject to and in accordance with the terms and conditions set forth hereinafter.

2.2 The parties confirm that as of the date of this Amendment, Tenant has connected its equipment to the Deionized Water Apparatus.

2.3 Subject to the provisions of Section 2.7 below, from and after the date hereof, the Tenant shall maintain, repair and replace the Deionized Water Apparatus and all related plumbing and wiring, at its sole cost and expense as would a prudent owner, to the satisfaction of the Landlord with all costs of utilities related thereto being assumed by the Tenant, subject to the provisions of Section 2.5 below. The Tenant shall take out and maintain in force throughout the Term a maintenance and service contract for the Deionized Water Apparatus and shall provide a copy thereof to Landlord. The cost of

the electricity payable by the Tenant with respect to the Deionized Water Apparatus will be established on the basis of Landlord's reasonable estimates supported by an engineer's report (to be made available to Tenant upon Tenant's request) and at Tenant's cost, and will be payable monthly, subject to a year-end adjustment on the basis of the utility rates in force at the relevant time. The parties confirm that notwithstanding any contribution by the Tenant to the replacement cost of all or any part of the Deionized Water Apparatus, the Deionized Water Apparatus shall remain the Landlord's property at the expiry of the Term, without any compensation being due therefor to the Tenant.

2.4 The Landlord shall upon prior reasonable notice provide Tenant access to the Adjacent Building for the purpose of assessing and maintaining, repairing and replacing the Deionized Water Apparatus, it being understood that any person who accesses the Adjacent Building for such purpose shall comply with the Landlord's rules and regulations and may be required by the Landlord to be accompanied by a representative of the Landlord designated for that purpose.

2.5 Notwithstanding any provision to the contrary, in the event the Deionized Water Apparatus must be replaced in its entirety, Landlord shall effect such replacement and Tenant agrees that fifty percent (50%) of such replacement costs incurred by Landlord, shall be assumed by Tenant, subject to contribution by any other user of the Deionized Water Apparatus at such time if any, and payable to Landlord as Additional Rent.

2.6 The Tenant's comprehensive general liability insurance which Tenant is obliged to maintain with respect to the business carried on in the Leased Premises shall extend to any acts and omissions in connection with the Tenant's connection to and use of the Deionized Water Apparatus. In addition, Tenant's property damage insurance in respect of the Tenant's furniture, fixtures and installations in the Leased Premises shall also extend and apply on the same basis to the Deionized Water Apparatus for the full replacement cost without depreciation, and Landlord shall be a named insured on such policy in respect of the Deionized Water Apparatus, as its interest may appear.

2.7 Notwithstanding any provision of law or of the Lease to the contrary, Landlord shall not be liable to the Tenant for any loss or damage, direct or indirect, or any injury, arising in or upon the Leased Premises, the Building or the Adjacent Building, whether to Tenant or to any property or person, which may result at any time from any reason or cause in connection with the Deionized Water Apparatus, including without limitation resulting from any malfunction, break down or non-operation of the Deionized Water Apparatus, whether due to a failure of the Deionized Water Apparatus or due to any other reason whatsoever and even if due to Landlord's fault or negligence in connection with the Deionized Water Apparatus, unless such damage or loss is caused by the gross fault or gross negligence of the Landlord. Any such malfunction, break down or non-operation of the Deionized Water Apparatus shall not be deemed to be an eviction or disturbance of the Tenant's enjoyment of the Leased Premises and shall not entitle Tenant to claim any diminution of Basic Rent or Additional Rent.

2.8 The Tenant acknowledges that if the Landlord leases space to a third party in the Building or in the Adjacent Building who requires the use of the Deionized Water Apparatus, the Landlord shall permit such third party to connect to and use such equipment and in such situation, the maintenance, all repairs and replacements required to the Deionized Water Apparatus shall then be performed by the Landlord and Tenant shall pay as Additional Rent to the Landlord on a monthly basis a share calculated equally amongst the user(s) of the Deionized Water Apparatus at such time, of all costs incurred by the Landlord in connection with the maintenance, repair and replacement of the Deionized Water Apparatus, including without limitation the cost of all utilities related thereto and the cost of any maintenance contracts entered into by the Landlord in connection therewith, subject to Section 2.5 above.

2.9 Where the second (2nd) floor of the Adjacent Building is leased to a third party who will not require the use of the Deionized Water Apparatus, the parties agree that the Landlord shall seal the current access door to the Deionized Water Apparatus in the Adjacent Building and create a new access to the Deionized Water Apparatus in the Building for Tenant. In such situation, the Tenant shall pay for all costs incurred by Landlord for such work. In the event that no other tenant in the Building or the Adjacent Building requires the use of the Deionized Water Apparatus and Tenant becomes the sole and exclusive user of the Deionized Water Apparatus, the Tenant agrees that it shall be responsible for the maintenance and all repairs and replacements required to the Deionized Water Apparatus as well as pay for all rentals with respect to the exclusive access and use of the Deionized Water Apparatus area, and Section 2.5 of this Amendment shall no longer apply.

2.10 Notwithstanding any provision to the contrary herein or in the Lease, at the expiry or earlier termination of the Lease, all costs for the disconnection of the Tenant's equipment from the Deionized Water Apparatus and removal of all connections shall be the Tenant's responsibility.

2.11 Notwithstanding any assignment of the Lease or any sub-sublease of all or any part of the Leased Premises, the Tenant's rights under this Article 2 are personal to the Tenant named on the first page of this Amendment for the duration of the Term, as herein extended. The rights herein provided are personal to the Tenant named in this Amendment are not transferable or assignable in any way.

ARTICLE 3 GLYCOL CHILLER AND NEUTRALIZATION TANK

3.1 Throughout the Term, the Tenant shall have the non-exclusive right to use in common with the other tenants of the Building and the Adjacent Building, the Building's glycol chiller and neutralization tank (the "**Glycol Chiller and Neutralization Tank**"). The Tenant agrees to respect all the Landlord's rules and regulations established from time to time for such equipment.

3.2 The Tenant acknowledges that it is currently the only user of the Glycol Chiller and Neutralization Tank and agrees to pay all costs relating to the use thereof, all such costs payable by Tenant to Landlord on demand.

3.3 The Tenant acknowledges that if the Landlord leases space to a third party in the Building or in the Adjacent Building who requires the use of the Glycol Chiller and Neutralization Tank, the Landlord shall permit such third party to connect to and use such equipment and in such situation, the maintenance, all repairs and replacements required to the Glycol Chiller and Neutralization Tank shall then be performed by the Landlord and Tenant shall pay to the Landlord a share calculated equally amongst the user(s) of the Glycol Chiller and Neutralization Tank at such time, of all costs incurred by the Landlord in connection with the maintenance, repair and replacement of the Glycol Chiller and Neutralization Tank, including without limitation the cost of all utilities related thereto and the cost of any maintenance contracts entered into by the Landlord in connection therewith.

ARTICLE 4 THE LEASE

4.1 Except as specifically provided herein, nothing in the foregoing modifies in any way the parties' obligations under the Lease as they relate to the Leased Premises, all of which shall continue to apply without modification.

4.2 The parties confirm that the Tenant has replaced the existing cage washer and autoclaves delivered with the Leased Premises at the commencement of the Lease and forming part of the "Equipment" (as defined in Section 1.04 of the Lease) with new ones as shown in Schedule "A" attached hereto, the whole as contemplated in Section 1.04 of the Lease.

ARTICLE 5 OTHER PROVISIONS

5.1 In the event the Tenant no longer requires the use of distilled water and the use of the Deionized Water Apparatus and the Glycol Chiller and Neutralization Tank, the Tenant shall, at its expense, disconnect all of its equipment from the Deionized Water Apparatus and the Glycol Chiller and Neutralization Tank and repair all damage caused by the disconnection, including without limitation damage to the Building, the whole in accordance with the provisions of the Lease and this Amendment. Subject to Tenant's compliance with the foregoing and provided Tenant is not then in default of its obligations under the Lease, the Tenant shall be released and discharged from all of its obligations under the Lease with respect to the Deionized Water Apparatus and the Glycol Chiller and Neutralization Tank as of the date Landlord confirms satisfaction of such disconnection of the foregoing equipment, Landlord acting reasonably.

5.2 The parties represent and warrant that no broker, agent or other intermediary was engaged for the negotiation or conclusion of this Amendment. The Tenant shall pay for and indemnify and hold harmless the Landlord from any and all other fees, costs or commissions of any party claiming to represent the Tenant in connection with this Amendment.

5.3 The parties have requested that this Amendment be prepared in the English language. *Les parties ont demande que la prOsente convention soit redigee en anglais.*

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, THE PARTIES HAVE SIGNED THESE PRESENTS

**CIG III TECHNOPARC NOMINEE INC. / FIDUCIAIRE CIG III
TECHNOPARC INC.**

(Landlord)

/s/ Greg Spafford

Greg Spafford

Authorized Signing Officer

Per: */s/ Sam Barbieri*

Name: Sam Barbieri

Title: Authorized Signing Officer

PHARMASCIENCE INC.

(Tenant)

Per: */s/ Murielle Lortie*

Name: Murielle Lortie

Title: CFO

SCHEDULE "A"
CAGE WASHERS AND AUTOCLAVES

SECOND AMENDMENT TO LEASE AGREEMENT

THIS SECOND AMENDMENT TO LEASE AGREEMENT made this 25th day of NOVEMBER, 2019.

BETWEEN:

THE MANUFACTURERS LIFE INSURANCE COMPANY
(hereinafter called the "**Landlord**")

OF THE FIRST PART,

and

REPARE THERAPEUTICS INC.
(hereinafter called the "**Tenant**")

OF THE SECOND PART,

WHEREAS pursuant to a Lease dated the 15th day of May, 2014 (the "**Original Lease**") between CIG III Technoparc Nominee Inc. (the "**Prior Landlord**") and Pharmascience Inc. (the "**Prior Tenant**"), as amended by a First Amendment to Lease Agreement dated the 24th day of November, 2016 (the "**First Amendment**"), the Prior Tenant leased certain premises located respectively on the ground floor of the building bearing civic address **7210 Frederick-Banting, in the City of Montreal (borough of Saint-Laurent), Province of Quebec** (the "**Building**") comprising a Rentable Area of **Nine Thousand Forty-Five (9,045) square feet** and more particularly described in the Original Lease (the "**Leased Premises**"), for a term expiring on the 31st day of July, 2021 (the "**Term**"), unless otherwise terminated, the whole subject to and in accordance with the terms and conditions of the Lease;

WHEREAS as of the 7th day of June 2017, the Prior Tenant assigned all of its rights, titles and interests pertaining to the Building, the Leased Premises and to the Initial Lease and First Amendment to Repare Therapeutics Inc. (the "**Tenant**"), the whole in accordance with the terms and conditions set forth in the Assignment of Lease (the "**Assignment**");

WHEREAS the Prior Landlord assigned all its rights and interests pertaining to the Building and to the Lease to The Manufacturers Life Insurance Company (the "**Landlord**"), where upon the latter became the new owner of the Building, and ratified the Lease;

WHEREAS in virtue of the Presents, the Tenant wishes to amend the Lease and to further lease temporary space in accordance with the terms and conditions hereinafter set forth in this Second Amendment to Lease Agreement (the "**Second Amendment**").

WHEREAS the Original Lease, the First Amendment, the Assignment, and the present Second Amendment are hereinafter collectively called the "**Lease**";

THE PARTIES HAVE AGREED AS FOLLOWS:

The Lease is amended as of the 25th day of NOVEMBER 2019 (the "**Effective Date**") as follows:

1. LOCATION OF THE TEMPORARY PREMISES

1.1 The Landlord leases to the Tenant certain premises located respectively on the ground floor of the building bearing civic address 7150 Frederick-Banting, in the City of Montreal (borough of Saint-Laurent), Province of Quebec (the "**Temporary Building**") being **Suite 100** and comprising a Rentable Area of One Thousand Seven Hundred Thirty-Three (**1,733**) **square feet** (the "**Temporary Premises**") as shown on the plan attached hereto in Schedule "A" - Plan.

2. TERM OF THE TEMPORARY PREMISES

2.1 The term of the Second Amendment for the Temporary Premises shall commence on the first (1st) **day of December 2019** (the “**Commencement Date**”) and shall expire on the thirty-first (31st) day of **July 2020** (the “**Temporary Term**”).

2.2 The Tenant shall have the option to renew the Second Amendment on a **month-to month basis** at the expiry of the Temporary Term and thereafter. Such monthly renewal shall operate automatically on the 1st day of each month without further notice, unless Tenant provides Landlord with a written notice at least **thirty (30) days** prior to the renewal period, indicating that he does not wish to exercise its renewal option further. **For further clarity, Tenant shall have the right to terminate month-to-month renewals solely after the expiry of the Expansion Term.**

2.3 **The Landlord can terminate the Lease for the Temporary Premises at any time upon providing the Tenant with a sixty (60) day written notice of its intention to do so.**

3. BASIC RENT

3.1 As and from the Commencement Date until the end the Temporary Term, the Tenant shall pay to the Landlord with respect to the Temporary Premises an annual basic rent (the “**Basic Rent**”) as follows:

(i) As of the Commencement Date and until the end of the Temporary Term, the annual Basic Rent shall be the sum of **Twenty-Five Thousand Nine Hundred Ninety-Two Dollars (\$25,992.00)** per annum, payable in equal consecutive monthly instalments of **Two Thousand One Hundred Sixty-Six Dollars (\$2,166.00)** such annual Basic Rent being calculated at the rate of **Fifteen Dollars (\$15.00)** per rentable square foot of the deemed area of the Leased Premises, plus applicable taxes, payable on the 1st day of each calendar month in accordance with the provisions of the Lease, the first payment becoming due on the **1st day of December 2019.**

4. ADDITIONAL RENT

4.1 The Tenant covenants to pay to the Landlord, during the Temporary Term of the Temporary Premises, an Additional Rent estimated at **Eighteen Dollars and Sixty-Nine Cents (\$18.69)** per rentable square foot of the rentable area of the Temporary Premises.

5. CONDITIONS OF THE TEMPORARY PREMISES

5.1 The Tenant acknowledges and agrees that it had examined the Temporary Premises and is entirely satisfied thereto. The Temporary Premises are being delivered on an “as is” basis and the Landlord shall not be obliged to perform any work to and/or around the Temporary Premises.

6. BROKERAGE

6.1 The Landlord and the Tenant mutually warrant and represent to each other that there is no broker or leasing agent involved in the completion of the transaction leading to the execution of this Second Amendment.

7. This Second Amendment shall be read together with the Lease and the parties confirm that, except as modified herein, all covenants and conditions in the Lease remain unchanged, unmodified and in full force and effect.

8. Any capitalized word or term not otherwise defined herein shall have the meaning given thereto in the Lease.

9. This Second Amendment and everything herein contained shall enure to the benefit of and be binding upon the respective heirs, executors, administrators, successors, assigns and other legal representatives, as the case may be, of each of the parties hereto, and every reference herein to any party hereto shall include the heirs, executors, administrators, successors, permitted assigns and other legal representatives of such party, and where there is more than one tenant or there is a male or female party, the provisions hereof shall be read with all grammatical changes thereby rendered necessary and all covenants shall be deemed joint and several.

10. The parties agree, from time to time, to do or cause to be done all such things, and shall execute and deliver all such documents, agreements and instruments reasonably requested by another party, as may be necessary or desirable to complete the transaction contemplated by this Second Amendment and to carry out its provisions and intention.

11. It is the express wish of the parties hereto that this Second Amendment to Lease shall be drafted in English. *Les parties ont exigé que le présent Deuxième Amendement du bail soit rédigé en langue anglaise.*

IN WITNESS HEREOF the parties hereto have executed this Second Amendment to Lease Agreement.

**THE MANUFACTURING LIFE INSURANCE
COMPANY**
(Landlord)

Per /s/ Stephen Nicoletti

Name: Stephen Nicoletti

Title: Managing Director, Eastern Canada

I/We have authority to bind the Corporation

REPARE THERAPEUTICS INC.
(Tenant)

Per /s/ Lloyd Segal

Name: Lloyd Segal

Title: President & CEO

I/We have authority to bind the Corporation

/s/ [illegible]

Witness

/s/ [illegible]

Witness

SCHEDULE "A"

Plan of the Temporary Premises

ASSIGNMENT OF LEASE AGREEMENT ENTERED INTO IN MONTREAL, THIS 7th DAY OF June 2017

BETWEEN :

PHARMASCIENCE INC., a body politic and corporate, duly incorporated according to law, herein acting and represented by Murielle Lortie, its VP & CFO, duly authorized as he so declares;

(the "Assignor")

AND:

REPARE THERAPEUTICS INC., a body politic and corporate, duly incorporated according to law, herein acting and represented by Lloyd M. Segal, its CEO, duly authorized as he so declares;

(the "Assignee")

WHEREAS pursuant to a lease dated May 15, 2014 (the "**Original Lease**") between CIG III TECHNOPARC NOMINEE INC. as landlord (the "**Prior Landlord**") and Assignor as tenant, as amended by an amendment to lease entered into November 24, 2016 (the "**Amendment**") (the Original Lease and the Amendment are collectively referred to as the "**Lease**"), (i) the Tenant leases certain premises having a Rentable Area of nine thousand forty-five (9,045) square feet (the "**Leased Premises**") located on the ground floor of the building bearing civic address 7210 Frederick Banting, City of Montreal (Borough of Saint-Laurent), Province of Quebec (the "**Building**") for a term expiring July 31, 2021 (the "**Term**"), and (ii) Tenant has the right to use certain equipment in the Building and in the adjacent building known as 7220 Frederick Banting, City of Montreal (Borough of Saint-Laurent), Province of Quebec (the "**Adjacent Building**"), the whole in accordance with and subject to the conditions set forth in the Lease;

WHEREAS the Landlord is the assignee of all of the rights, title and interest of the Prior Landlord and any successors thereof in and to the Lease, the Leased Premises, the Building and the Adjacent Building; and

WHEREAS the Assignor has agreed to assign to the Assignee all of its right, title and interest in and to the Lease together with the Assignor's right, title and interest in and to the Leased Premises as specified in the Lease and the right to use the Deionized Water Apparatus and the Glycol Chiller and Neutralization Tank (as such terms are defined in the Amendment), the whole as and from June 7, 2017 (the "**Assignment Date**"), the whole in accordance with the terms and conditions set forth in this agreement (hereinafter referred to as the "**Agreement**").

NOW THEREFORE IT IS AGREED AS FOLLOWS:

1.0 PREAMBLE

1.1 The preamble is true and correct and forms a part hereof as if herein recited at length.

1.2 All terms and expressions with the first letter in upper case in this Agreement have the meaning attributed thereto in the Lease unless the contrary is herein indicated or the context dictates otherwise.

1.3 Notwithstanding any provision to the contrary in the Amendment, the parties confirm that all references to the "**Landlord**" in the Amendment means CIG III TECHNOPARC NOMINEE II INC.

2.0 ASSIGNMENT

2.1 The Assignor hereby assigns to the Assignee as and from the Assignment Date all of the Assignor's rights in and to the Lease together with the Assignor's rights, title and interest in and to the Leased Premises as specified in the Lease, the whole in accordance with and subject to the terms and conditions of the Lease.

2.2 The Assignee acknowledges that it has received a copy of the Lease, that it unconditionally accepts all of the terms and conditions stipulated therein and that it unconditionally agrees to be bound by all of the obligations imposed upon the "**Tenant**" pursuant to the Lease.

2.3 The Assignee acknowledges being familiar with the Leased Premises and accepts them "as is" "where is" without any responsibility for Landlord.

2.4 As and from the Assignment Date and throughout the Term and any extension or renewal thereof, the Assignee shall have access to and shall be granted the right to use all existing equipment currently in the Leased Premises as approximately shown in Schedule "A" hereof (the "**Equipment**"), at no additional cost. The Assignee accepts the Equipment in its "as is" existing condition. The Assignee shall maintain, repair and

replace the Equipment at its sole cost during the Term and any extension thereof. The Assignee agrees to return all Equipment to the Landlord at the expiry of the Term or any renewal thereof, in the condition it was in at the time of the Assignee's taking of possession of the Leased Premises, ordinary wear and tear excepted. However, it is agreed that if any Equipment is replaced in its entirety by the Assignee, at its cost, then such equipment shall become the Assignee's property at the expiry of the Lease. The parties acknowledge agree that Schedule "I" of the Original Lease is replaced by Schedule "A" of this Agreement.

2.5 The Assignee undertakes towards Assignor and Landlord that as and from the Assignment Date the Assignee assumes all of the "**Tenant's**" obligations under the Lease and will perform each and every one of the Assignor's obligations pursuant to the Lease.

2.6 Assignor and Assignee acknowledge and agree that the present assignment shall be subject to all of the provisions of the Lease and Assignee and Assignor confirm and agree that they shall remain solidarily liable towards the Landlord for the performance of all of the "**Tenant's**" obligations under the Lease, the whole without benefit of division, discussion or subrogation, until the expiry of the Lease, including any extensions or renewals thereof if any. Landlord's consent to this assignment does not release Assignor of Assignor's obligations under the Lease, au of which shall continue until July 31, 2021.

2.7 The Assignee has returned to the Landlord the completed environmental questionnaire attached as Schedule "C" hereof. The Assignee acknowledges and agrees that throughout the Term, the Assignee undertakes to provide Landlord an updated environmental questionnaire as may be required if any of the information therein becomes inaccurate or as may be requested from time to time by the Landlord, in accordance with the provisions of the Lease. All environmental covenants in the Lease shall apply mutatis mutandis to the Assignee, including without limitation, Assignee's obligation to provide insurance coverage with regard to any potential environmental liabilities of the Assignee.

2.8 Under no circumstances shall the present assignment be construed so as to effect novation or create any additional option or rights of any nature in favor of the Assignor or the Assignee.

2.9 The Assignee acknowledges that Landlord's consent to the present assignment is not to be construed as consent for further assignment of the Lease or sublet of the Leased Premises nor does Landlord's consent hereto constitute in any way consent or approval of any terms, conditions or covenants or other agreements of any nature between Assignor and Assignee, other than what is expressly contained herein.

2.10 For clarification, Assignee acknowledges that any rights stipulated in the Lease to be personal to the “**Tenant**” named in the lease have not been assigned to and do not devolve to the Assignee and Assignee shall not have any such rights under the Lease.

For clarification and greater certainty, (i) Sections 1.0 (Allowance and Improvements, 2.0 (Pre-Occupancy) and 3.0 (Rental Credit) no longer apply being of no further effect; and (ii) Sections 4.0 (Right to Expand), 5.0 (Right of First Refusal), 6.0 (Right to Extend), 7.0 (Right of First Offer on the Building) and 8.0 (Right of First Refusal on the Building) of Schedule “F” of the Lease, will not be assigned to the Assignee and shall be deleted and of no further effect as of the Assignment Date.

2.11 Assignor and Assignee shall be solidarily liable for any brokerage fees and commissions in connection with the present Assignment and hereby agree to indemnify and hold Landlord harmless from and against any and all liabilities and claims for any brokerage fees or commissions in connection with the present Assignment.

2.12 As of the Assignment Date, a copy of all notices, written demands and written requests under the Lease from the Landlord shall be sent to:

(a) the Assignee: at the Leased Premises, with copy to [ADDRESS], Attention: Lloyd Segal; and

(b) the Assignor at [ADDRESS], Attention: _____.

2.13 The Assignor and the Assignee shall concurrently with their execution of this Agreement, pay to Landlord an amount of One Thousand Dollars (\$1,000) plus applicable taxes, as Landlord’s legal and administration fees in connection with this assignment.

2.14 (A) Pursuant to the provisions of the Lease and more particularly (i) Section 2.05 of the Original Lease and (ii) the Agreement Regarding Letter of Credit and Other Security dated May 15, 2014 attached to the Original Lease as Schedule “G” (the “**Existing LC Agreement**”), the Assignor has provided the Landlord a security deposit in the amount of One Hundred Thirty-Five Thousand Dollars (\$135,000) by way of an irrevocable standby letter of credit (the “**Existing Letter of Credit**”).

(B) Concurrently with the execution of this Agreement, the Assignee shall execute and deliver to Landlord the Landlord’s standard form of Agreement Regarding Letter of Credit and Other Security attached hereto as Schedule “B” (the “**Replacement LC Agreement**”). No later than sixty (60) days following the execution of this Agreement, the Assignee shall furnish to Landlord a security deposit in the amount of One Hundred Thirty-Five Thousand Dollars (\$135,000) by way of an irrevocable standby letter of credit issued by a Schedule I Canadian chartered bank (the “**Replacement Letter of Credit**”), the

whole in accordance to the provisions of the Replacement LC Agreement. The Replacement Letter of Credit shall remain in effect throughout the Term and any extension thereof and shall be held by Landlord as security for the obligations of the Assignee as “**Tenant**” under the Lease and this Agreement, all in accordance with and subject to the provisions of the Replacement LC Agreement.

(C) The Assignor and the Assignee acknowledge and agree that (i) the Existing Letter of Credit shall continue to serve as guarantee for the rentals payable under the Lease and for the faithful performance by the Assignee as “**Tenant**” of each and every one of the covenants, conditions and agreements under the Lease and (ii) the Existing LC Agreement shall remain in effect, until such time that the Replacement Letter of Credit is delivered to Landlord. Upon receipt by Landlord of the Replacement Letter of Credit and the Replacement LC Agreement executed by Assignee, the Existing Letter of Credit will be returned to the Assignor.

2.15 The Landlord represents and warrants to the Assignor and the Assignee that as of the Assignment Date, there are no machine bases, cabling, piping or wiring installed by or on behalf of the Assignor that would be required to be removed in accordance with section 6.07 (b) of the Lease.

3.0 LANGUAGE

3.1 The parties acknowledge that they have required that this Agreement and all related documents be prepared in English. *Les parties reconnaissent avoir exigé que la présente convention et tous /es documents connexes soient rédigés en anglais.*

AND THE PARTIES HAVE SIGNED

PHARMASCIENCE INC.

(Assignor)

Per: /s/ Murielle Lortie

Murielle Lortie

VP & Chief Financial Officer

VP & Chef des opérations financières

REPARE THERAPEUTICS INC.

(Assignee)

Per: /s/ Lloyd Segal

LANDLORD'S CONSENT

CIG III TECHNOPARC NOMINEE II INC. hereby consents to the foregoing assignment, in accordance with the terms hereinabove provided including without limitation the obligation of the Assignor and the Assignee to remain solidarily liable for all of the obligations under the Lease and this Agreement until the expiry of the Lease, the whole without benefit of division, discussion or subrogation. Nothing in the foregoing Landlord's consent shall be construed or deemed to modify any of the terms and conditions of the Lease except to the extent modified by the foregoing Agreement.

CIG III TECHNOPARC NOMINEE II INC.

(Landlord)

Per: /s/ F. Nelson

F. Nelson

ASO

Per: /s/ Chris Lawrence
Chris Lawrence
Authorized Signing Officer

SCHEDULE "A"

EQUIPMENT

"A" - 1

SCHEDULE "B"

AGREEMENT REGARDING LETTER OF CREDIT AND OTHER SECURITY

Reference is made to the lease dated _____ ("Lease") between _____ ("Tenant") and _____ ("Landlord") for the Tenant's premises ("Premises") situated in the property located at _____.

THE TENANT AND THE LANDLORD, IN RELIANCE UPON THE REPRESENTATIONS AND WARRANTIES AND COVENANTS AND AGREEMENTS OF THE TENANT CONTAINED IN THIS AGREEMENT, COVENANT AND AGREE AS FOLLOWS:

1. The Tenant covenants to provide to the Landlord, on an uninterrupted and continuing basis for the period commencing on the date of this agreement and expiring thirty (30) days following the last day of the term of the Lease as such term is renewed, extended or prolonged from time to time, with an irrevocable letter of credit issued by a Schedule I Canadian chartered bank, expiring at the end of the period mentioned above, and in the form and of the substance set forth in Schedule "B-1" hereto and initialed by the parties to this agreement for the purpose of identification, all of the terms and conditions of which Schedule 1 are incorporated in this agreement by reference as if recited out at length herein. The letter of credit will serve (a) to guarantee the due and prompt payment and performance of each and every obligation, liability, condition and agreement to which the Tenant is or may be bound by the terms of the Lease and each and every obligation, liability, condition and agreement to which the Tenant is or may be bound by this agreement (including all extensions, renewals and other prolongations thereof), or as a result thereof, as the Lease or this agreement may be amended from time to time, (including, without limitation, the prompt payment of all rentals and additional rentals which may become due pursuant to the Lease) and (b) to indemnify the Landlord, up to the same amount, for any and all damages, costs and losses (including, without limitation, loss of rentals and additional rentals) which may be suffered by the Landlord as a consequence of the termination, resiliation, disavowal, repudiation or disclaimer of the Lease or this agreement, or both, by whomsoever.

The letter of credit shall be in the amount of _____ (\$_____).

2. In the event that the Tenant does not replace any letter of credit furnished to the Landlord as contemplated in this agreement at the latest thirty (30) days prior to its expiration date, the Landlord will be entitled to draw on such letter of credit held by the Landlord, for the full amount thereof, whether or not the Tenant is otherwise in default in the performance of its obligations under or in virtue of the Lease or this agreement, and to retain all amounts received by the Landlord from the issuing

bank as a result of such draw ("Proceeds") for the same purposes, with the necessary adaptations, as the letter of credit drawn upon, until such time as the letter of credit has been replaced with a new letter of credit affording the Landlord the full security to which it is entitled under this agreement. Upon such replacement, and provided that the Tenant is not otherwise in default in the performance of such obligations, any portion of the Proceeds still held by the Landlord will be returned to the Tenant.

3. Neither the furnishing of such letter of credit nor the holding of any Proceeds as contemplated in this agreement will relieve the Tenant from the payment of rent, additional rent or any other charges for which the Tenant is liable under or in virtue of the Lease or in any way relieve the Tenant from the faithful and punctual performance of all covenants and conditions contained in or entered into in virtue of the Lease or in any way relieve the Tenant from the faithful and punctual performance of all covenants and conditions contained in or entered into in virtue of this agreement. If the Tenant is in default as aforesaid, it will be entirely in the Landlord's discretion as to whether the Landlord draws under such letter of credit or compensates and sets off all or any part of the Claims as contemplated by paragraph 5 of this agreement, or whether the Landlord exercises whatever other rights, remedies and recourses the Landlord may have. In the event that the Landlord draws under any such letter of credit or compensates and sets off all or any part of the Claims, the Tenant will remit to the Landlord a replacement letter of credit or supplementary letter of credit sufficient to restore to the Landlord the full security to be afforded to the Landlord as contemplated in this agreement within five (5) business days of the Landlord's written demand therefor, the whole without prejudice to such other rights, remedies and recourses as may avail to the Landlord in the circumstances.
4. Thirty (30) days following the termination of the Lease or any renewal thereof, the letter of credit and any Proceeds held by the Landlord will be returned to the Tenant provided the Premises have been vacated in good order and condition in a timely manner and otherwise in the manner contemplated by the terms of the Lease, and provided the Tenant will then have complied in all respects with all terms, covenants and conditions to which it has bound itself under the Lease and this Agreement.
5. To further secure the Landlord to the full extent of the full security to which it is entitled under this agreement, the Tenant hereby grants to the Landlord a security interest in and hypothecates in favour of the Landlord whatever claims the Tenant now has or will ever have against the Landlord for or to the Proceeds, under or in virtue of paragraph 3 of this agreement or otherwise (collectively "Claims"). If the Tenant is in default in the performance of any of its covenants and conditions contained in or entered into in virtue of the Lease, or if the Tenant is in default in the performance of any covenants or conditions contained in this agreement, or if

any of the Tenant's obligations under this agreement have become enforceable, the Landlord will have the right, as hypothecary creditor, to compensate and set-off the Claims against any and all amounts then owing by the Tenant to the Landlord, the whole without the necessity of demand or notice (other than as may be required by law) to the Tenant or to any other party. In such event, the Claims will be deemed to have been paid, cancelled and discharged to the extent of the amounts so compensated and set-off, and the Tenant will cease to have any interest whatsoever in the Claims to such extent.

6. Any Proceeds held by the Landlord as contemplated in this agreement will not be governed by the provisions of Articles 2280 and following of the Civil Code of Quebec and will not be construed as being the property of the Tenant but as belonging to the Landlord.
7. The Landlord will have the right to transfer the benefit of any letter of credit and any Proceeds contemplated in this agreement to any purchaser of the property in which the Premises contemplated in the Lease are situated and, for such purpose, to have the Landlord replaced as beneficiary under such letter of credit by appropriate amendments thereof acceptable to the Landlord and such purchaser, upon demand to such effect. In the event of such transfer the Landlord will be and hereby is entirely released and relieved of all the Landlord's covenants and obligations in respect of such letter of credit, such Proceeds and the Claims and as well as those contained in this agreement, provided that such purchaser stipulates in favour of the Tenant to assume and carry out such covenants and obligations.
8. Without limiting the generality of any other provision of this agreement or of any letter of credit issued pursuant hereto, the security contemplated in this agreement will not be affected or impaired by the Tenant's bankruptcy, insolvency or winding-up, nor by any termination, rescission, disavowal, repudiation or disclaimer of the Lease or this agreement, or both, by whomsoever, or by any other action taken by any trustee, liquidator, referee or other officer appointed by any court or other body of competent jurisdiction under any bankruptcy, insolvency or winding-up legislation in force from time to time, nor by the Landlord's failure to delay or proceed to litigation or to seek a remedy for any default of the Tenant, any guarantor or any other person, nor by any liberation or discharge from bankruptcy or otherwise of any such trustee, liquidator, referee or other officer, nor by any release or other forgiveness in favour of whomsoever, nor by any extinction of any of the obligations, liabilities, agreements or conditions secured by any such letter of credit or deposit, nor by any other act, omission or event whatsoever which might lessen, affect or discharge a surety or person obliged to indemnify another.

9. Any security to be provided to the Landlord as contemplated in this agreement is and will at all times be in addition to and not in replacement of any other security heretofore furnished to the Landlord and any further and additional security furnished to the Landlord from time to time.
10. The parties have requested that this agreement be prepared in English. Les parties ont demandé que la présente convention soit rédigée en anglais.

Kindly confirm your covenants and agreements above set forth by signing and returning to us the enclosed copy of this letter.

Montreal, this day of 20 ●

●

Per: /s/ F. Nelson
F. Nelson
ASO

Per: /s/ Chris Lawrence
Chris Lawrence
Authorized Signing Officer

LANDLORD

ACCEPTED AND AGREED on the 7th day of June 20 ●

●

Per: /s/ Lloyd Segal
TENANT

A written demand for payment and certificate as described above must be presented at this Branch before the end of banking business on the _____ day of _____, at which time this Letter of Credit will expire.

“B” - 2

SCHEDULE "C"

ENVIRONMENTAL QUESTIONNAIRE

"C" - 1

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE REPARE THERAPEUTICS INC. HAS DETERMINED THE INFORMATION (I) IS NOT MATERIAL AND (II) WOULD LIKELY CAUSE COMPETITIVE HARM TO REPARE THERAPEUTICS INC. IF PUBLICLY DISCLOSED.

RESEARCH SERVICES, LICENSE AND COLLABORATION AGREEMENT

by and between

REPAIRE THERAPEUTICS, INC.

and

ONO PHARMACEUTICAL CO., LTD.

January 31, 2019

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SCHEDULES

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RESEARCH SERVICES, LICENSE AND COLLABORATION AGREEMENT

THIS RESEARCH SERVICES, LICENSE AND COLLABORATION AGREEMENT (this “**Agreement**”), is made and entered into as of January 31, 2019 (the “**Effective Date**”) by and between Repare Therapeutics, Inc., a corporation organized and existing under the laws of Canada and having its principal place of business at 7210 Frederick-Banting, St-Laurent, Quebec, H4S 2A1, Canada (“**Repare**”), and Ono Pharmaceutical Co., Ltd., a corporation organized and existing under the laws of Japan and having an address of 8-2, Kyutaromachi 1-chome, Chuo-ku, Osaka 541-8564, Japan (“**Ono**”).

RECITALS

WHEREAS, Repare owns or otherwise controls certain technology and information relating to Repare’s lead inhibitor program targeting DNA Polymerase α , (“Pol α ”);

WHEREAS, Ono is a pharmaceutical company that conducts research, development, manufacturing and commercialization of pharmaceutical products; and

WHEREAS, Ono and Repare desire to collaborate together to research, develop and commercialize products targeting Pol α , in the Territory, in accordance with the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the foregoing premises and the mutual promises, covenants and conditions contained in this Agreement, the Parties hereby agree as follows:

1. DEFINITIONS

Unless specifically set forth to the contrary herein, the following terms, whether used in the singular or plural, shall have the respective meanings set forth below:

1.1. “505(b)(2) NDA” means a new drug application submitted to the FDA under 21 U.S.C. § 355(b)(2) (or any replacement thereof).

1.2. “Acceptance” means, with respect to an IND, the earlier of (i) the day following the last day on which the applicable Regulatory Authority may object to an IND submission or (ii) the day on which the applicable Regulatory Authority affirmatively accepts an IND submission and notifies the applicable Party it may proceed with Clinical Studies pursuant to such IND. For example, in the United States, in the event that the FDA does not make any objection within thirty (30) calendar days from the IND submission, then Acceptance of such IND would occur thirty-one (31) calendar days from the date of the IND submission. For the avoidance of doubt, if the FDA objects to an IND submission within such thirty (30) day period, then Acceptance of such IND shall occur only after such objection is overcome.

1.3. “Acquirer” means, collectively, the Third Party referenced in the definition of “Change of Control” and such Third Party’s Affiliates, other than the applicable Party in the definition of Change of Control and such Party’s Affiliates, in each case with respect to all such entities as determined as of immediately prior to the closing of such Change of Control.

1.4. “Acquiring Party” has the meaning set forth in Section 16.15.2.1.

1.5. “Affiliate” means, with respect to a Person, any other Person which controls, is controlled by, or is under common control with the applicable Person. For purposes of this definition, “control” shall mean: (a) in the case of corporate entities, direct or indirect ownership of more than fifty percent (50%) of the stock or shares entitled to vote for the election of directors, or otherwise having the power to control or direct the affairs of such Person; and (b) in the case of non-corporate entities, direct or indirect ownership of more than fifty percent (50%) of the equity interest or the power to direct the management and policies of such non-corporate entities.

1.6. “Agreement” has the meaning set forth in the Preamble.

1.7. “ANDA” means an Abbreviated New Drug Application pursuant to 21 U.S.C. § 355(j) and 21 C.F.R. § 314.3.

1.8. “Bankrupt Party” has the meaning set forth in Section 10.5 (Bankruptcy and Bankruptcy Code).

1.9. “Bankruptcy Code” means Section 365(n) of Title 11 of the United States Code (the “**U.S. Bankruptcy Code**”) in case of USA, “The Companies’ Creditors Arrangement Act (“**CCAA**”) and the Bankruptcy and Insolvency Act (the “**BIA**”)” in case of Canada and “Bankruptcy Act and its relevant acts” in case of Japan or the equivalent of any of the foregoing in any foreign counterpart thereto, as applicable.

1.10. “Business Day(s)” means any day other than a day which is a Saturday, a Sunday, any day banks are authorized or required to be closed in Canada or Japan or any day within Repare’s corporate holidays (for Repare’s obligations) or Ono’s corporate holidays (for Ono’s obligations). The list of the Parties’ respective corporate holidays is yearly exchanged.

1.11. “Calendar Quarter” means the respective periods of three (3) consecutive calendar months ending on March 31, June 30, September 30 and December 31 of each calendar year, provided that (a) the first Calendar Quarter of the Term shall begin on the Effective Date and end on the first to occur of March 31, June 30, September 30 or December 31 thereafter and the last Calendar Quarter of the Term shall end on the last day of the Term and (b) the first Calendar Quarter of a Royalty Term for a Licensed Product in a country shall begin on the First Commercial Sale of a Licensed Product in such country and end on the first to occur of March 31, June 30, September 30 or December 31 thereafter and the last Calendar Quarter of a Royalty Term shall end on the last day of such Royalty Term.

1.12. “Calendar Year” means each successive period of twelve (12) months commencing on January 1 and ending on December 31, provided that (a) the first Calendar Year of the Term shall begin on the Effective Date and end on the first December 31 thereafter and the last Calendar Year of the Term shall end on the last day of the Term and (b) the first Calendar Year of a Royalty Term for a Licensed Product in a country shall begin on the First Commercial Sale of a Licensed Product in such country and end on the first December 31 thereafter and the last Calendar Year of the Term shall end on the last day of such Royalty Term.

1.13. “CDISC” means Clinical Data Interchange Standards Consortium which is an interdisciplinary nonprofit organization that establishes international standards for data collection, interchange, application, and storage for the purpose of promoting interoperability of clinical research data.

1.14. “cGMP” or **“current Good Manufacturing Practices”** means all Laws and guidelines applicable to Manufacture of the Licensed Drug Candidate or Licensed Product, including (a) the FD&C Act (21 U.S.C. 321 et seq.); (b) relevant United States regulations in Title 21 of the United States Code of Federal Regulations (including Parts 11, 210, and 211); (c) European Community Directives 2001/83/EC and 2003/94/EC; (d) the EU Guidelines to Good Manufacturing Practice Medicinal Products for Human and Veterinary Use, as set out in Volume 4 of the European Commission’s Rules governing medicinal products in the EU; (e) those standards required by the MHLW; (f) ICH, Q7 Good Manufacturing Practice Guidance for Active Pharmaceutical Ingredients; (g) similar standards and Laws to those in (a) through (f), as are in effect at the time of Manufacture of the Licensed Drug Candidate or Licensed Product; and (h) all additional Regulatory Authority documents or regulations that replace, amend, modify, supplant or complement any of the foregoing.

1.15. “Challenge Action” means any action or proceeding (including a declaratory judgment action, opposition, *inter partes* review, or nullification action) brought by a Third Party that challenges the patentability, validity or enforceability of any Ono Technology, Repare Technology or Joint Technology or that seeks a determination that any product does not infringe or misappropriate any Repare Technology, Ono Technology or Joint Technology.

1.16. “Change of Control” means, with respect to a Party (a) the acquisition of beneficial ownership, directly or indirectly, by any Third Party of securities or other voting interest of such Party representing a majority or more of the combined voting power of such Party’s then outstanding securities or other voting interests, (b) any merger, reorganization, consolidation or business combination involving such Party with a Third Party that results in the holders of beneficial ownership (other than by virtue of obtaining irrevocable proxies) of the voting securities or other voting interests of such Party (or, if applicable, the ultimate parent of such Party) immediately prior to such merger, reorganization, consolidation or business combination ceasing to hold beneficial ownership of more than (50%) of the combined voting power of the surviving entity immediately after such merger, reorganization, consolidation or business combination, or (c) any sale, lease, exchange, contribution or other transfer (in one transaction or a series of related transactions) of all or substantially all of the assets of such Party to which this Agreement relates to a Third Party, other than a sale or disposition of such assets to an Affiliate of such Party.

1.17. “Clinical Study” or **“Clinical Studies”** means any clinical trial in humans, including a Phase 1 Clinical Study, Phase 2 Clinical Study, Registration Study, an Ono post-Regulatory Approval study, a Repare post-Regulatory Approval study or a Global Clinical Study.

1.18. “CMC” means, with respect to Drug Candidates, Licensed Drug Candidates or Licensed Products, the Development activities related to the composition, manufacture and specification of the drug substance and the drug product intended to assure the proper identification, quality, purity and strength of the drug, including test method development, stability testing, process development, drug substance development, process validation, process scale-up, manufacturing scale-up, formulation development, delivery system development, quality assurance and quality control development.

1.19. "Collaboration" means the collaboration of the Parties under this Agreement, including the research, Development, and Commercialization activity for the Polq Program, Drug Candidates, Licensed Drug Candidates and Licensed Products to be conducted by the Parties pursuant to this Agreement.

1.20. "Combination Product" has the meaning set forth in Section 1.87 (Net Sales).

1.21. "Commercialization" or "Commercialize" means any and all activities directed to marketing, promoting, distributing, importing, exporting, using, offering to sell, selling or having sold a Licensed Product, including by way of example: (a) detailing and other promotional activities; (b) advertising and public relations in support of a product, including market research, development and distribution of selling, advertising and promotional materials, field literature, direct-to-consumer advertising campaigns, media/journal advertising, and exhibiting at seminars and conventions; (c) conducting medical education activities and journal advertising; (d) importing or exporting Licensed Drug Candidate or Licensed Product or raw materials for the Manufacturing of commercial supply of Licensed Drug Candidate and Licensed Product.

1.22. "Commercially Reasonable Efforts" means, with respect to a Party's obligations that relate to the achievement of an objective related to a Drug Candidate, Licensed Drug Candidate or Licensed Product, at any given time as the case may be, efforts reasonably used by a Party, which are in line with [***], for a product (including [***]) of a similar modality with similar commercial potential at a similar stage in their lifecycle (assuming continuing development of such product), taking into consideration all Relevant Factors.

1.23. "Competing Infringement" has the meaning set forth in Section 14.3.1 (Notice of Infringement).

1.24. "Common Brand Name" has the meaning set forth in Section 14.9.1 (Trademarks).

1.25. "Competing Program" has the meaning set forth in Section 16.15.2.1.

1.26. "Compound" means any chemical compound, matter, structure or composition.

1.27. "Confidential Information" means any and all confidential or proprietary information and data, including Repare Technology, Ono Technology, and Joint Technology, and all other scientific, pre-clinical, clinical, regulatory, manufacturing, marketing, financial and commercial information or data, whether communicated in writing or orally or by any other method, which is provided by one Party to the other Party in connection with this Agreement. Repare Technology is the Confidential Information of Repare. Ono Technology is the Confidential Information of Ono. Joint Technology and the terms of this Agreement are the Confidential Information of both Parties.

1.28. “Control”, “Controls” or “Controlled by” means, with respect to any intellectual property right (including any Patent Right or Know-How), the possession of (whether by ownership or license, other than pursuant to this Agreement) the ability of a Party or its Affiliates to assign, transfer, or grant access to, or to grant a license or sublicense of, such right as provided for herein without violating the terms of any agreement or other arrangement with any Third Party existing at the time such Party or its Affiliate would be required hereunder to assign, transfer or grant another Person such access or license or sublicense. Each Party further agrees that, notwithstanding any provisions of this Agreement to the contrary, no Patent Rights, Know-How or other intellectual property or other proprietary rights not Controlled by a Party prior to a Change of Control with respect to such Party or by any of its Affiliates who were its Affiliates prior to such Change of Control (such Party’s **“Pre-Existing Affiliates”**), or which first becomes Controlled by such Party or such Party’s Pre-Existing Affiliates following such Party’s Change of Control, will be deemed Controlled by such Party or its Affiliates for purposes of this Agreement after such Change of Control, other than any Patent Right that claims priority, directly or indirectly, to any other Patent Right first Controlled by such Party or its Pre-Existing Affiliates before such Change of Control and that is licensed to the other Party hereunder as of such Change of Control, which will be deemed Controlled by such Party or its Pre-Existing Affiliates thereafter no matter when such Patent Right is filed or issued.

1.29. “Cost of Goods” means, with respect to the supply of Licensed Drug Candidate or Licensed Product: (a) where Repare or its Affiliates Manufacture such Licensed Drug Candidate or Licensed Product, the reasonable internal and external costs incurred by Repare and its Affiliates in Manufacturing such Licensed Drug Candidate or Licensed Product, including the fully allocated cost of Manufacture of such Licensed Drug Candidate or Licensed Product, consisting of direct material and direct labor costs (including direct material and labor costs incurred for facility start-up), plus overhead directly attributable to the Manufacture of such Licensed Drug Candidate or Licensed Product (including all directly incurred Manufacturing variances, inventory write-offs and a reasonable allocation of related Manufacturing administrative, freight, distribution, facilities operations and facilities depreciation costs for such Licensed Drug Candidate or Licensed Product, but in all cases excluding corporate administrative overhead or [***]), all calculated strictly in accordance with GAAP, and (b) where such Licensed Drug Candidate or Licensed Product is Manufactured by a Third Party manufacturer, the actual fees paid by Repare to the Third Party for the Manufacture and supply of such Licensed Drug Candidate or Licensed Product and vendor management costs.

1.30. “DC Criteria” means the pharmacological, toxicological and biological criteria for DC Selection as set forth in the Research Plan under the heading “Target Compound Profile (DC Selection)”.

1.31. “DC Selection” means the selection and determination of one (1) or more Drug Candidates which meet the DC Criteria that both Parties agree to further Develop and Commercialize after the DC Selection Meeting as a Licensed Drug Candidate.

1.32. “DC Selection Date” means the date of written notice from Ono to Repare that Ono selects a Licensed Drug Candidate in accordance with Section 3.4.

1.33. “DC Selection Meeting” has the meaning set forth in Section 3.3.

1.34. “DC Selection Notice” has the meaning set forth in Section 3.4.

1.35. “Development,” “Developing” or “Develop” means under this Agreement, with respect to Drug Candidates, Licensed Drug Candidates and Licensed Products, the research and development activities related to the generation, characterization, optimization, construction, use and production of Drug Candidates, Licensed Drug Candidates and Licensed Products, any other non-clinical, pre-clinical or clinical research and development activities related to the testing and qualification of Drug Candidates, Licensed Drug Candidates and Licensed Products, as applicable, including toxicology studies, pharmacology studies, statistical analysis and report writing, pre-clinical testing, Clinical Studies, regulatory affairs and registration activities, and all other activities necessary to prepare and file applications for Regulatory Approval and to seek, obtain and maintain Regulatory Approval. For the sake of clarity, Development includes activities conducted as or post-Regulatory Approval study.

1.36. “Drug Candidate” means any Compound that inhibits or modulates Polq, and any derivatives, analogs, metabolites, salts, esters, free acid forms, free base forms, pro- drug forms, racemates, solvates or optically active forms of such Compound that is generated, developed, discovered, identified or modified in the course of performance of the Research Plan.

1.37. “Drug Candidate Selection Period” has the meaning set forth in Section 3.4.

1.38. “Effective Date” has the meaning set forth in the Preamble.

1.39. “EMA” means the European Medicines Agency, or any successor entity thereto performing similar functions.

1.40. “FD&C Act” means the United States Federal Food, Drug and Cosmetic Act, as amended.

1.41. “FDA” means the United States Food and Drug Administration and any successor Governmental Authority having substantially the same function.

1.42. “Field” means any and all uses.

1.43. “First Commercial Sale” means, with respect to a country, the first sale for end use or consumption of a Licensed Product in such country, [***], after all Regulatory Approvals legally required for such sale have been granted by the Regulatory Authority of such country.

1.44. “FTE” has the meaning set forth in Section 6.1.4.

1.45. “GAAP” means generally accepted accounting principles as practiced in the United States or International Financial Reporting Standards (“IFRS”), in each case, consistently applied.

1.46. “GCP” or “Good Clinical Practices” means, with respect to any applicable jurisdiction, the then-current standards, practices and procedures for clinical trials for pharmaceuticals promulgated or endorsed by the applicable Regulatory Authority in such jurisdiction (including, with respect to the United States, the FDA) as set forth in the applicable Laws of such jurisdiction, including, with respect to the United States, the guidelines titled “Guidance for Industry E6 Good Clinical Practice: Consolidated Guidance” and related regulatory requirements imposed by the FDA, and with respect to jurisdictions outside the United States, comparable regulatory standards, practices and procedures promulgated by the EMA or other Regulatory Authority, as applicable, including any applicable quality guidelines promulgated under the International Conference on Harmonization (“ICH”), in each case as they may be updated from time to time.

1.47. “Generic Product” means, with respect to a particular Licensed Product in a country, a pharmaceutical product that: (a) contains the same active ingredient(s) as the Licensed Product; and (b) is approved for use in such country by a Regulatory Authority, whether for use as monotherapy or for use in combination with any other vaccine, biologic or Compound through a regulatory pathway referencing or relying on clinical data, or any findings of safety or efficacy therein, first submitted by a Party or its Related Parties for obtaining Regulatory Approval for such Licensed Product, in each case other than any Licensed Product that has been Developed under this Agreement by a Party or its Related Parties or Commercialized by Ono or any of its Related Parties in such country.

1.48. “Global Branding Strategy” has the meaning set forth in [Section 6.1.5.1](#) (Global Branding).

1.49. “Global Clinical Study” means, with respect to any Licensed Drug Candidate or Licensed Product, a Clinical Study included in the Global Development Activities for such Licensed Drug Candidate or Licensed Product.

1.50. “Global Clinical Study Proposal” has the meaning set forth in [Section 4.1.3.1](#) (Global Clinical Study Proposals).

1.51. “Global Commercialization Strategy” has the meaning set forth in [Section 6.1.2](#) (Global Commercialization Strategy).

1.52. “Global Common Activity” has the meaning set forth in [Section 4.1.4](#) (Global Development Costs).

1.53. “Global Common Costs” has the meaning set forth in [Section 4.1.4](#) (Global Development Costs).

1.54. “Global Development Activity” has the meaning set forth in [Section 4.1.2](#) (Global Development Plans).

1.55. “Global Development Plan” has the definition set forth in [Section 4.1.2](#) (Global Development Plans).

1.56. “GLP” or “Good Laboratory Practices” means, with respect to a particular Development activity or non-clinical study conducted by a Party, that such Development activity or non-clinical study (i) was conducted in accordance with “good laboratory practices” as set forth in 21 C.F.R. Part 58, the United States Animal Welfare Act, the ICH Guideline on Nonclinical Safety Studies for the Conduct of Human Clinical Trials for Pharmaceuticals or the ICH Guideline on Safety Pharmacology Studies for Human Pharmaceuticals or (ii) involved experimental research techniques that were performed for informational purposes only (whether or not included in a regulatory filing) or could not be performed by a GLP-compliant testing facility (with appropriate notice being given to the FDA in regulatory filings), and such Party employed the procedures and controls generally used by qualified experts in animal or preclinical studies of products comparable to those being developed by such Party.

1.57. “Governmental Authority” means any applicable government authority, court, tribunal, arbitrator, agency, department, legislative body, commission, taxing authority or other instrumentality of (a) any government of any country or territory, (b) any nation, state, province, county, city or other political subdivision thereof or (c) any supranational body.

1.58. “Granting Party” has the meaning set forth in Section 10.3 (Compliance with In-Licenses).

1.59. “IFRS” has the meaning set forth in Section 1.45 (GAAP).

1.60. “In-License” means (a) with respect to Repare, a Repare In-License and (b) with respect to Ono, an Ono In-License.

1.61. “IND” means an investigational new drug application, as defined in the FD&C Act, together with any rules and regulations promulgated thereunder, or similar application or submission that is required to be filed with any Regulatory Authority anywhere in the world before beginning clinical testing of an investigational drug or biological product in human subjects.

1.62. “Indemnitee” has the meaning set forth in Section 13.4 (Indemnification Procedure).

1.63. “Infringement Action” has the meaning set forth in Section 14.3.2.1 (Infringement Actions).

1.64. “Insolvency Officer” has the meaning set forth in Section 10.5 (Bankruptcy and Bankruptcy Code).

1.65. “Invented” means the act of invention by inventors, as determined in accordance with the patent laws of the United States.

1.66. “Investigator Sponsored Clinical Study” means a Clinical Study of a Licensed Drug Candidate or Licensed Product in the Field that is sponsored and conducted by a physician, physician group or other Third Party not acting on behalf of a Party or its Related Party and who does not have a license from a Party or its Related Party to Commercialize such Licensed Drug Candidate or Licensed Product, pursuant to an IND owned by such Third Party, and with respect to which a Party or its Related Party provides clinical supplies of the Licensed Drug Candidate and Licensed Product, funding or other support for such Clinical Study.

1.67. “JNDA” means an NDA submitted to Regulatory Authority in Japan.

1.68. “Joint Know-How” means any Know-How (other than Repare Know-How or Ono Know-How) that is discovered, made or developed jointly by one or more employees of Repare or its Affiliates (or a Third Party acting on any of their behalf) and one or more employees of Ono or its Affiliates (or a Third Party acting on any of their behalf).

1.69. “Joint Patent Rights” means any Patent Right that is Invented jointly by one or more employees of Repare or its Affiliates (or a Third Party acting on any of their behalf) together with one or more employees of Ono or its Affiliates (or a Third Party acting on any of their behalf).

1.70. “**Joint Technology**” means Joint Know-How and Joint Patent Rights.

1.71. “**Joint Steering Committee**” or “**JSC**” means the Joint Steering Committee as more fully described in Section 8.1 (Joint Steering Committee).

1.72. “**Joint Research Committee**” or “**JRC**” has the meaning set forth in Section 8.2 (Joint Research Committee).

1.73. “**Know-How**” means all chemical or biological materials and other tangible materials, inventions, improvements, practices, discoveries, developments, data, information, technology, methods, protocols, formulas, knowledge, know-how, trade secrets, processes, assays, skills, experience, techniques and results of experimentation and testing, including pharmacological, toxicological and pre-clinical and clinical data and analytical and quality control data, IND, NDA, Regulatory Approval, promotional material and educational material, in all cases, whether or not confidential, proprietary or patentable, in written, electronic or any other form now known or hereafter developed, including any physical embodiments of any of the foregoing; but excluding in any event any Patent Right and Trademarks.

1.74. “**Laws**” means all applicable laws, statutes, rules, regulations, orders, judgments, injunctions, ordinances or other pronouncements having the binding effect of law of any Governmental Authority, including if either Party is or becomes subject to a legal obligation to a Regulatory Authority or other Governmental Authority (such as a corporate integrity agreement or settlement agreement with a Governmental Authority).

1.75. “**Liaison**” has the meaning set forth in Section 8.1.4.1 (Liaison).

1.76. “**Licensed Drug Candidate**” means any Drug Candidate selected by Ono for further Development or Commercialization in accordance with Section 3.4 (Licensed Drug Candidate).

1.77. “**Licensed Product**” means any pharmaceutical product containing a Licensed Drug Candidate (or any back-up or follow-on Drug Candidate) in any dosage form or formulation (i) for sale by prescription, over-the-counter, or any other method; or (ii) for administration to human patients in a Clinical Study, for any and all uses, including any Combination Product. In calculation of the Royalty Term pursuant to Section 11.4.2 (Royalty Term), to the extent that a Licensed Drug Candidate is contained as a sole active ingredient, [***]. Further, it is understood by the Parties that a Combination Product containing a Licensed Drug Candidate as one of the active ingredients shall [***].

1.78. “**Local Law**” has the meaning set forth in Section 14.1.1 (Inventorship).

1.79. “**Losses**” has the meaning set forth in Section 13.1 (General Indemnification by Ono).

1.80. “**Major Market Countries**” means [***].

1.81. “Manufacturing” or “Manufacture” means, as applicable, all activities associated with the production, manufacture, process of formulating, processing, purifying, filling, finishing, packaging, labeling, shipping, importing and storage of Drug Candidates, Licensed Drug Candidates or Licensed Products, and other products (and related devices) including process development, process validation, stability testing, manufacturing scale-up, pre-clinical, clinical and commercial manufacture and analytical development, product characterization, quality assurance and quality control development, testing and release; provided, however, that Manufacturing shall not include Development and Commercialization. When used as a verb, “to Manufacture” and “Manufacturing” mean to engage in Manufacture, and “Manufactured” has a corresponding meaning.

1.82. “Manufacturing Subcontract” has the meaning set forth in Section 7.1.2 (Subcontracting).

1.83. “Manufacturing Technology Transfer Plan” has the meaning set forth in Section 7.3 (Ono’s Right to Manufacture).

1.84. “Material Communications” means written, telephonic or in-person communications from or with any Regulatory Authority concerning any of the following: key product quality attributes (e.g., purity), safety findings affecting the platform (e.g., Serious Adverse Events, emerging safety signals), clinical or non-clinical findings affecting patient safety, lack of efficacy, receipt or denial of Regulatory Approval, the design of Clinical Studies or the need for additional non-clinical studies (e.g., additional toxicology or carcinogenicity studies).

1.85. “MHLW” means the Japanese Ministry of Health, Labour and Welfare and any successor Governmental Authority having substantially the same function.

1.86. “NDA” means a New Drug Application, as defined in the FD&C Act and applicable regulations promulgated thereunder by the FDA, or any analogous application or submission with any Regulatory Authority outside of the United States.

1.87. “Net Sales” means [***].

1.88. “New Competing Program” has the meaning set forth in Section 16.15.2.1(b).

1.89. “Non-Bankrupt Party” has the meaning set forth in Section 10.5 (Bankruptcy and Bankruptcy Code).

1.90. “Non-Granting Party” has the meaning set forth in Section 10.3 (Compliance with In-Licenses).

1.91. “Noticed Party” has the meaning set forth in Section 5.1.3.1 (Material Communications).

1.92. “Noticing Party” has the meaning set forth in Section 5.1.3.1 (Material Communications).

1.93. “NYU Agreement” means that certain Amended and Restated License Agreement by and between New York University and Repare Therapeutics, Inc. dated July 9, 2018 as such agreement may be amended or restated from time to time.

1.94. “Ono” has the meaning set forth in the Preamble.

1.95. “Ono Fiscal Year” means each successive period of twelve (12) calendar months commencing on April 1 of a particular Calendar Year and ending on March 31 of the immediately following Calendar Year.

1.96. “Ono Indemnitees” has the meaning set forth in Section 13.2 (General Indemnification by Repare).

1.97. “Ono In-License” means, with respect to any Licensed Drug Candidate or Licensed Product, any agreement between Ono and a Third Party pursuant to which Ono Controls Know-How or Patent Rights that are reasonably necessary or useful to Develop, Manufacture, have Manufactured or Commercialize such Licensed Drug Candidate or Licensed Product in the Field.

1.98. “Ono Know-How” means Know-How which, during the Term: (a) is Controlled by Ono or its Affiliates; (b) is not generally known; (c) relates to Drug Candidates, Licensed Drug Candidates or Licensed Product; and (d) are necessary to Repare in connection with the research, Development, Manufacture, having Manufactured, Commercialize, import, marketing, use, sale or offer for sale of Drug Candidates, Licensed Drug Candidates or Licensed Product in the Repare Territory; provided, however, that, except otherwise set forth in Section 10.4, for avoidance of doubt the Parties acknowledge that Ono shall be under no obligation to provide Know-How of Ono that does not relate to Drug Candidates, Licensed Drug Candidates or Licensed Products.

1.99. “Ono Licensed Back Improvements” has the meaning set forth in Section 10.1.3(b).

1.100. “Ono Patent Right” means any and all Patent Rights which during the Term (a) are Controlled by Ono or its Affiliates and (b) claim or cover, or would be practiced by the research, Development, Manufacture, having Manufactured, Commercialize, use, sale, marketing, offer for sale or importation of Drug Candidates, Licensed Drug Candidates or Licensed Product in the Repare Territory; provided, however, that, except otherwise set forth in Section 10.4, for avoidance of doubt the Parties acknowledge that Ono shall be under no obligation to provide Patent Right of Ono that does not relate to Drug Candidates, Licensed Drug Candidates or Licensed Products.

1.101. “Ono Technology” means Ono Know-How and Ono Patent Rights.

1.102. “Ono Territory” means Japan, South Korea, Taiwan, Hong Kong, Macau, Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

1.103. “Ono Territory Educational Materials” has the meaning set forth in Section 6.1.5.3 (Ono A&P).

1.104. “Ono Territory Promotional Materials” has the meaning set forth in Section 6.1.5.3 (Ono A&P).

1.105. “**Ono Territory Commercialization Plan**” has the meaning set forth in Section 6.1.3 (Ono Territory Commercialization Plan).

1.106. “**Ono Territory Development Plan**” has the meaning set forth in Section 4.1.8 (Ono Territory Development Plan).

1.107. “**Out-of-Pocket Costs**” means, with respect to certain activities hereunder, direct expenses paid or payable by either Party or its Affiliates to Third Parties and specifically identifiable and incurred (and invoiced) to conduct such activities for a Licensed Drug Candidate or Licensed Product, as applicable, including payments to contract personnel; provided, however, that amounts paid to contract sales and marketing personnel will not be considered Out-of-Pocket Costs.

1.108. “**Party**” means Ono or Repare.

1.109. “**Patent Challenge**” has the meaning set forth in Section 15.2.4 (Termination for Patent Challenge).

1.110. “**Patent Rights**” means (a) all issued patents (including any extensions, restorations by any existing or future extension or registration mechanism (including patent term adjustments, patent term extensions, supplemental protection certificates or the equivalent thereof), substitutions, confirmations, re-registrations, re-examinations, reissues, patents and patent claims maintained after post grant examination (including *inter partes* review, post grant review or opposition proceeding) and patents of addition); (b) patent applications (including all provisional applications, substitutions, requests for continuation, continuations, continuations-in-part, divisionals and renewals); (c) inventor’s certificates; and (d) all equivalents of the foregoing in any country of the world.

1.111. “**Person**” means any natural person, corporation, unincorporated organization, partnership, association, sole proprietorship, joint stock company, joint venture, limited liability company, trust or government, or Governmental Authority, or any other similar entity.

1.112. “**Phase 1 Clinical Study**” means a study in humans which provides for the introduction into humans of a pharmaceutical product, conducted in healthy volunteers or patients, to obtain initial information on product safety, tolerability, pharmacological activity or pharmacokinetics, as more fully defined in 21 C.F.R. § 312.21(a) (or the equivalent thereof outside the United States).

1.113. “**Phase 2 Clinical Study**” means a study in humans of the safety, dose ranging or efficacy of a pharmaceutical product, as further defined in 21 C.F.R. § 312.21(b) (or the equivalent thereof outside the United States).

1.114. “**PMDA**” means the Pharmaceuticals and Medical Devices Agency in Japan and any successor Governmental Authority having substantially the same function.

1.115. “**Polq**” has the meaning set forth in the Recitals.

1.116. “**Polq Non-Specific IP**” has the meaning set forth in Section 10.4.1 (Polq Non-Specific IP).

1.117. “**Polq, Program**” has the meaning set forth in [Section 2.1](#) (Collaboration Overview).

1.118. “**Pre-Existing Affiliates**” has the meaning set forth in [Section 1.28](#) (“Control”, “Controls” or “Controlled by”).

1.119. “**Registration Study**” means a Clinical Study in humans that is intended to obtain the data sufficient to support the filing of an NDA for a product with any applicable Regulatory Authority. Registration Studies include any Clinical Studies designed as a pivotal study to confirm with statistical significance the efficacy and safety of a product with respect to a given indication (whether structured as a superiority, equivalence or non-inferiority study), which study is performed for purposes of filing an NDA to obtain Regulatory Approval for such product or such indication from the applicable Regulatory Authority (regardless of whether such Clinical Study is identified as a Phase 3 Clinical Study on [ClinicalTrials.gov](#)), including a Clinical Study as described under 21 C.F.R. §312.21(c) with respect to the United States (or, with respect to a jurisdiction other than the United States, a similar Clinical Study).

1.120. “**Regulatory Approval**” means any and all approvals, licenses, registrations or authorizations of any Regulatory Authority that are necessary for the marketing and sale of a product in a country or group of countries, including NDAs and orphan drug designations.

1.121. “**Regulatory Authority**” means any Governmental Authority involved in granting approvals for the Development, Manufacturing, Commercialization, reimbursement or pricing of Licensed Drug Candidates and Licensed Products, including but not limited to the FDA, the MHLW and the PMDA.

1.122. “**Regulatory Materials**” means materials developed or compiled in preparation for or in connection with (a) Regulatory Authority meetings, (b) regulatory applications, submissions, dossiers, notifications, registrations, IND, NDA, Regulatory Approvals or other approvals granted by, a Regulatory Authority with respect to the Licensed Drug Candidate or the Licensed Product in a particular regulatory jurisdiction, and (c) other filings made to or with a Regulatory Authority with respect to the Licensed Drug Candidate or the Licensed Product in a particular regulatory jurisdiction.

1.123. “**Reimbursement Approval**” means, with respect to a Licensed Product, the receipt by a Party or its Related Party of authorization for reimbursement of or funding of such Licensed Product in the national health service or insurance from the national-level Governmental Authority responsible for authorizing reimbursement for or determining pricing for, pharmaceutical products in such country or national regulatory jurisdiction.

1.124. “**Related Party**” means a Party’s Affiliates and permitted Sublicensees.

1.125. “**Relevant Factors**” means all relevant factors that may affect the Development or Commercialization of a Licensed Drug Candidate or Licensed Product, including (as applicable), safety, tolerability, stability and efficacy; the product profile; the stage of development or life cycle status; the likelihood and timing of obtaining Regulatory Approvals and Reimbursement Approvals; the current guidance and requirements for Regulatory Approval for the Licensed Drug Candidate or Licensed Product and similar products and the current and projected regulatory status; any issues regarding the ability to Manufacture or have Manufactured the Licensed Drug Candidate or Licensed Product;

existing or projected pricing, sales, reimbursement and profitability; the then-current competitive environment and the likely competitive environment at the time of projected entry into the market; past performance of the Licensed Drug Candidate or Licensed Product or similar products; present and future market potential; pricing or reimbursement changes in relevant countries; proprietary position, strength and duration of patent protection and anticipated market exclusivity, actual and projected Development, Manufacturing, having Manufactured and Commercialization costs; promotable claims and health economic claims, and any other relevant scientific, technical, operational and commercial factors.

1.126. “Repare” has the meaning set forth in the Preamble.

1.127. “Repare Indemnitees” has the meaning set forth in [Section 13.1](#) (General Indemnification by Ono).

1.128. “Repare In-License” means any agreement between Repare and a Third Party pursuant to which Repare Controls Know-How or Patent Rights reasonably necessary or useful to Develop the Polq, Program and to Develop, Manufacture, have Manufactured or Commercialize Licensed Drug Candidates or Licensed Products, including the NYU Agreement.

1.129. “Repare Know-How” means Know-How which, as of the Effective Date or during the Term: (a) is Controlled by Repare or its Affiliates; (b) is not generally known; (c) relates to Drug Candidates, Licensed Drug Candidates or Licensed Product; and (d) is necessary to enable Ono to exploit its rights under this Agreement in or for the Ono Territory, including, without limitation, in connection with the Manufacture, have Manufactured, Commercialize, import, use, research, sale, offer for sale and Development of Drug Candidates, Licensed Drug Candidates or Licensed Product, Commercialization, use or sale of Licensed Product; provided, however, that, except otherwise set forth in [Section 10.4](#), for avoidance of doubt the Parties acknowledge that Repare shall be under no obligation to provide Know-How of Repare that does not relate to Drug Candidates, Licensed Drug Candidates or Licensed Products.

1.130. “Repare Licensed Back Improvements” has the meaning set forth in [Section 10.2.3\(b\)](#).

1.131. “Repare Patent Rights” means any and all Patent Rights which, as of the Effective Date or during the Term, (a) are Controlled by Repare or its Affiliates and (b) claim or cover, or would be practiced by the research, Development, Manufacture, having Manufactured, Commercialize, use, sale, offer for sale or importation of Drug Candidates, Licensed Drug Candidates or Licensed Product; provided, however, that, except otherwise set forth in [Section 10.4](#), for avoidance of doubt the Parties acknowledge that Repare shall be under no obligation to provide any Patent Right of Repare that does not relate to Drug Candidates, Licensed Drug Candidates or Licensed Products.

1.132. “Repare Technology” means Repare Know-How and Repare Patent Rights.

1.133. “Repare Territory” means worldwide, excluding the Ono Territory.

1.134. “Repare Territory Development Plan” has the meaning set forth in [Section 4.1.5](#) (Repare Territory Development Plan).

- 1.135. “**Repare Territory Educational Materials**” has the meaning set forth in [Section 6.1.5.2](#) (Repare A&P).
- 1.136. “**Repare Territory Promotional Materials**” has the meaning set forth in [Section 6.1.5.2](#) (Repare A&P).
- 1.137. “**Research Activities**” has the meaning set forth in [Section 2.4.2](#) (Contents of Research Plan).
- 1.138. “**Research Plan**” has the meaning set forth in [Section 2.4.1](#) (Overview).
- 1.139. “**Research Services**” means the services to be performed by Repare as detailed in the Research Plan.
- 1.140. “**Research Services Payments**” has the meaning set forth in [Section 2.5](#) (Research Services Payments).
- 1.141. “**Research Services Payment Trigger**” has the meaning set forth in [Section 2.5.1](#) (Research Services Payment Triggers).
- 1.142. “**Research Term**” means the period commencing on the Effective Date and ending upon the earlier of (a) the third (3rd) anniversary of the Effective Date or (b) the date of submission of the first IND in the United States or in Japan. Any extensions of the Research Term will require the mutual written agreement of both Parties.
- 1.143. “**Responsible Party**” has the meaning set forth in [Section 14.3.4](#) (Control; Cooperation).
- 1.144. “**Royalty Report**” has the meaning set forth in [Section 11.5](#) (Reports; Payment of Royalty).
- 1.145. “**Royalty Term**” has the meaning set forth in [Section 11.4.2](#) (Royalty Term).
- 1.146. “**SDEA**” has the meaning set forth in [Section 5.2](#) (Pharmacovigilance).
- 1.147. “**Sen-yo Jisshiken Tohroku**” has the meaning set forth in [Section 10.1.4](#) (Sen-yo Jisshiken Tohroku).
- 1.148. “**Serious Adverse Event**” means an adverse drug experience or circumstance that results in any of the following outcomes (a) death, (b) life-threatening event, (c) inpatient hospitalization or prolongation of existing hospitalization, (d) persistent or significant disability or incapacity or substantial disruption of the ability to conduct normal life functions, (e) a congenital anomaly/birth defect, (f) significant intervention required to prevent permanent impairment or damage or (g) a medical event that may not result in death, be life-threatening or require hospitalization but, based on appropriate medical judgment, that may jeopardize the patient or subject and may require medical or surgical intervention to prevent one of the outcomes described in clauses (a) through (e).

1.149. “Sublicensee” means a Third Party to whom a Party grants a direct or indirect license or sublicense under any Repare Technology, Ono Technology or Joint Technology, as the case may be, to Develop, Manufacture, have Manufactured or Commercialize a Drug Candidate, Licensed Drug Candidate or Licensed Product in the Field pursuant to Section 10.1.3 (Ono Sublicense Rights) or Section 10.2.3 (Repare Sublicense Rights). For avoidance of doubt, Third Parties that are acting on behalf of, or for the benefit of, a Party in connection with such Parties’ efforts to Develop, Manufacture, have Manufactured or Commercialize a Drug Candidate, Licensed Drug Candidate or Licensed Product in accordance with the terms of this Agreement, including for example, academic institutions, clinical trial sites, investigators, CROs, Third Party Manufacturers or any similar independent contractors, are not “Sublicensees” for purposes of the obligations set forth in Sections 10.1.3(a) and 10.2.3(a); provided that this exclusion does not apply to Third Parties that are granted the right to Commercialize a Drug Candidate, Licensed Drug Candidate or Licensed Product subject to a royalty, or similar payment obligation, to a Party.

1.150. “Sued Party” has the meaning set forth in Section 14.5 (Third Party Claims).

1.151. “Supply Agreements” has the meaning set forth in Section 7.2 (Supply Agreements).

1.152. “Taxation Documents” means the tax documents necessary from time to time in order for Ono (a) not to withhold tax or (b) to withhold tax at a reduced rate under an applicable bilateral income tax treaty.

1.153. “Term” has the meaning set forth in Section 15.1 (Term).

1.154. “Territory” means (a) with respect to Repare, the Repare Territory and (b) with respect to Ono, the Ono Territory.

1.155. “Third-Country Currency” has the meaning set forth in Section 11.7.3 (Conversion of Net Sales).

1.156. “Third Party” means a Person other than a Party and its Affiliates.

1.157. “Third Party License Payment” means royalties, upfront fees, milestones or other amounts payable under an Ono In-License or Repare In-License in consideration for the rights granted under such Ono In-License or Repare In-License with respect to any Patent Right or Know-How.

1.158. “Trademark” means any trademark, trade name, service mark, service name, brand, domain name, trade dress, logo, slogan or other indicia of origin or ownership, including the goodwill and activities associated with each of the foregoing.

1.159. “United States” means the United States of America and its territories, possessions and commonwealths.

1.160. “Valid Claim” means a claim of an issued or granted and unexpired patent included within the Repare Technology that claims the active pharmaceutical ingredient of a Licensed Product as a composition of matter, which has not been revoked or held unenforceable or invalid by a decision of a court or other Governmental Authority of competent jurisdiction (which decision is not appealable or has not been appealed within the time allowed for appeal), and which claim has not been disclaimed, denied or admitted to be invalid or unenforceable through reissue, re-examination or disclaimer or otherwise.

1.161. “Working Group” has the meaning set forth in Section 8.3 (Working Group).

1.162. "1974 Convention" has the meaning set forth in Section 16.2 (Governing Law).

2. RESEARCH PROGRAM

2.1. Collaboration Overview. During the Research Term, the Parties shall collaborate in the research of Drug Candidates and Licensed Drug Candidates targeting Polq (the "**Polq Program**") pursuant to this Section 2.1 and the Research Plan for the Polq Program. Repare shall have primary responsibility for carrying out the Research Plan for the Polq Program until the submission of the first IND for the Polq Program in the United States or Japan. The JRC shall have primary oversight responsibilities for the conduct of the Polq Program in accordance with Section 8.2 (Joint Research Committee). During the Research Term, Ono will provide advice on the research of Drug Candidates and Licensed Drug Candidates through the JRC, which such advice shall not be unreasonably rejected by Repare.

2.2. Polq Program Discontinuation. The Polq Program may only be discontinued by mutual agreement of the Parties during the period commencing on the Effective Date and ending [***] after the Effective Date. During the period after the expiration of the foregoing [***] period and prior to the end of the Research Term, if Repare believes that the Polq Program should be discontinued, Repare shall notify Ono and, if Ono disagrees, the Parties will work together to promptly develop a focused and efficient plan, that can be executed through the application of Commercially Reasonable Efforts within [***] but in any event prior to the end of the Research Term, to address or avoid the issues raised by Repare with respect to the Polq Program. If the Parties devise such a plan, the Parties will use Commercially Reasonable Efforts to execute such plan. For avoidance of doubt, after expiration of the Research Term, Repare shall be permitted to discontinue the Polq Program to the extent such discontinuation would not constitute a breach of Repare's obligation to use Commercially Reasonable Efforts to perform the Research Activities in accordance with the Research Plan and to Develop each Licensed Drug Candidate and Licensed Product as set forth herein.

2.3. Diligence. During the Research Term, each Party shall use Commercially Reasonable Efforts to perform the Research Activities in accordance with the Research Plan.

2.4. Research Plan.

2.4.1. Overview. The research activities to be undertaken by the Parties with respect to the Polq Program, Drug Candidates, and Licensed Drug Candidates will be performed in accordance with the terms of a written research plan (the "**Research Plan**"), the initial Research Plan is attached as Schedule 2.4.1. In the event of any inconsistency between the Research Plan and this Agreement, the terms of this Agreement will prevail.

2.4.2. Contents of Research Plan. The Research Plan shall include (a) a description of the Research Services to be conducted by Repare and the timetable for conducting such Research Services; (b) a description of the research activities to be undertaken by the Parties that are reasonably necessary to obtain Acceptance of the IND for the Drug Candidates or Licensed Drug Candidates to be Developed under the Polq Program ((a) and (b) collectively, the "**Research Activities**") and a timetable for conducting such Research Activities other than Research Services; (c) the estimated costs and expenses for the Research Activities (including overhead attributable to

such Research Activities); (d) an allocation of responsibilities for performing the Research Activities (other than the Research Services) between the Parties; and (e) the identification of one or more indications for Licensed Drug Candidates or Licensed Products to be Developed and Commercialized. The terms of the Research Plan, and the Research Activities set forth therein, shall at all times be designed to be in compliance with all applicable Laws and in accordance with professional and ethical standards customary in the pharmaceutical industry.

2.4.3. Updates and Amendments to Research Plan. The JRC shall review the Research Plan annually and shall develop detailed and specific Research Plan updates, which updates shall be finalized and included in the Research Plan no later than November 15 of each Calendar Year for the next Calendar Year. Either Party or the JRC may also develop and propose from time to time other proposed substantive amendments to the Research Plan. The JRC shall review and discuss such proposed amendments and the inclusion of such proposed amendments into the Research Plan; provided however that any amendment to the Research Plan must be mutually agreed upon by the Parties and neither the JRC nor the JSC will have decision-making authority over any such amendment.

2.5. Research Services Payments. In consideration of Repare performing the Research Services as described in the Research Plan, Ono shall pay to Repare the fees and payments described in this Section 2.5 (the “**Research Services Payments**”). For clarity, all payments made by Ono to Repare under this Section 2.5 are payments for the provision of services performed by Repare, and such payments are not made in consideration for the use or right to use Repare Technology or any other intangible assets owned by Repare. Repare shall use all Research Services Payments in connection with Repare’s Research Services performed under the Research Plan or otherwise to advance the research of Drug Candidates and Licensed Products.

2.5.1. Research Services Payment Triggers. Ono shall make the following payments to Repare in accordance with the payment schedule below:

<u>Research Services Payment Trigger</u>	<u>Research Service Payment</u>
1. Upon execution of this Agreement.	¥ 790,000,000
2. Upon [***].	¥ [***]
3. Upon [***].	¥ [***]
4. Upon [***].	¥ [***]

The total amount of the Research Services Payments to be paid by Ono to Repare under this Section 2.5.1 shall not exceed One Billion and Five Hundred Forty Million Japanese Yen (JPY 1,540,000,000).

2.5.1.1. Invoicing. Within [***] of the receipt of an invoice for Research Services Payment Trigger 1, Ono shall pay Repare the associated Research Services Payment as a prepayment for Research Services to be performed by Repare during the Research Term. Repare shall provide Ono with written notice of the achievement of each subsequent Research Services Payment Trigger [***] (other than Research Services Payment Trigger [***]) with the respective data package (including raw data) to prove such achievement promptly after such event has occurred. Ono will be deemed to accept such achievement unless Ono notifies Repare of its objection within [***] of Ono's receipt of such notice from Repare. With respect to payment from Ono to Repare achieving Research Services Payment Trigger [***], Repare shall invoice Ono promptly after receiving Ono's DC Selection Notice, and Ono shall pay the corresponding Research Services Payment within [***] of the receipt of such invoice. Repare shall invoice Ono promptly (a) after Ono's acceptance of the Research Services Payment Trigger [***] or (b) in the event of any dispute under Section 2.5.1.2, after such dispute is resolved, and Ono shall pay the associated Research Services Payment within [***] of the receipt of such invoice.

2.5.1.2. Disputes. If Ono reasonably requests other data or documentation to evidence the achievement of a Research Services Payment Trigger 2 and 3, Repare shall promptly provide any such data or documentation in Repare's possession and control. In the event that Ono disputes whether a Research Services Payment Trigger has been achieved, Ono shall notify Repare of such dispute, and Ono and Repare shall attempt in good faith to resolve such dispute. If Ono and Repare are unable to resolve such dispute, either Party may request an independent, qualified third party expert, reasonably acceptable to both Parties, to determine whether the Research Services Payment Trigger has been achieved, and the determination of such expert shall be binding and conclusive on Ono and Repare. Each Party shall cooperate with such expert and respond promptly to the expert's reasonable requests for data or documentation. If the expert determines that the Research Payment Services Trigger has been met, Ono will pay the corresponding Research Service Payment and the fees charged by the expert and if the expert determines that the Research Payment Services Trigger has not been met, Repare will pay the fees charged by the expert.

2.5.2. Post-DC Selection Research and Development Cost Share. Ono shall pay [***] of research and Development costs and expenses (including a reasonable allocation of overhead costs) related to all PoIQ Program IND-enabling studies (including GLP toxicity studies) following DC Selection; provided, however that Ono's obligation to reimburse a reasonable allocation of overhead costs shall be capped at total [***]. Repare shall invoice Ono for such percentage of research and Development costs and expenses within [***] following the end of each Calendar Quarter during which such costs and expenses were incurred, and, if requested, shall provide reasonable supporting documentation to Ono. Ono shall pay to Repare the invoiced amounts within [***] of the receipt of such invoice.

2.5.3. Other Research Costs. Except as stated otherwise in Section 2.5, Repare will be responsible for one hundred percent (100%) of all costs and expenses incurred by or on behalf of Repare in connection with its Research Activities under the Research Plan (including overhead costs attributable to such Research Activities), and Ono will be responsible for one hundred percent (100%) of all costs and expenses incurred by or on behalf of Ono in connection with its Research Activities under the Research Plan (including overhead costs attributable to such Research Activities).

2.6. Records; Reports; Information Sharing.

2.6.1. Research Activities Reports. During the Research Term, Repare shall provide to the JRC, at each regularly scheduled meeting and ad hoc meeting thereof, a summary report regarding significant Research Activities conducted by or on behalf of Repare or planned to be undertaken with respect to the Polq Program. If so requested by Ono or the JRC, Repare shall provide additional reports as required regarding material results achieved in the performance of the Research Activities. Ono shall have the right to reasonably request clarifications and answers to questions with respect to such reports and Repare shall provide such clarifications and answers to Ono in a timely manner.

2.6.2. Scientific Records. Repare shall maintain and shall cause its Related Parties to maintain scientific records, in sufficient detail and in sound scientific manner appropriate for patent and regulatory purposes, which shall fully and properly reflect all work done and results achieved in the performance of the Research Activities with respect to the Polq Program and any Licensed Drug Candidates and Licensed Product generated thereby.

2.6.3. Personnel. Ono may request, through the JRC, that Repare reasonably make available for consultation regarding the research of any Drug Candidates or Licensed Drug Candidates its employees or contractors engaged in Research Activities with respect to such Drug Candidates or Licensed Drug Candidates by means of teleconference, videoconference or similar communications equipment. The JRC shall reasonably coordinate, upon reasonable notice during normal business hours and at their respective places of employment, consultation between Ono and Repare on the progress of the research for such Drug Candidates or Licensed Drug Candidates.

2.6.4. Confidentiality. All information exchanged by the Parties under Section 2.6 shall be deemed to be Confidential Information of both Parties and maintained in accordance with Section 9 (Confidentiality and Publication). For the sake of clarity, information disclosed under this Section 2.6.4 may be shared with a Party's Related Parties in accordance with Section 9.1.2.

2.7. Third Parties. Each Party may utilize the services of Third Parties to perform such Party's Research Activities under the Polq Program, provided that (a) each Party shall require that such Third Party operates in a manner consistent with this Agreement, (b) each Party shall remain at all times fully liable for its respective responsibilities and for the acts and omissions of such Third Parties under this Agreement, and (c) with respect to any research related to any Drug Candidates or Licensed Drug Candidates, Repare and Ono shall make reasonable efforts to share, through the JRC, information regarding any prior experience with specific contract research organizations that are anticipated to be engaged to

perform work under a Research Plan. Each Party shall require that any Third Party agreements entered into pursuant to this Section 2.7 (Third Parties) include confidentiality and non-use provisions that are, in the aggregate, not materially less stringent than those set forth in Section 9 (Confidentiality and Publication) of this Agreement; provided that with respect to any academic institution, clinical trial sites, investigators or CROs, the duration for the obligation of confidentiality and non-use provided in an agreement with such academic institution, clinical trial sites, investigators or CROs may be less than the duration for the obligation of confidentiality and non-use in this Agreement so long as such agreement specifies a duration for the obligation of confidentiality and non-use of at least [***] from the expiration or termination date of such agreement. Each Party shall use Commercially Reasonable Efforts to obtain ownership of, but, if unable to obtain ownership, the relevant Party shall at least obtain a perpetual, irrevocable, fully-paid, worldwide, fully sublicensable (through multiple tiers) license under and to, any Know-How and Patent Rights that are developed by such Third Party in the performance of such agreement and are reasonably necessary or useful to research, Develop, Manufacture, have Manufactured or Commercialize Licensed Drug Candidates or Licensed Products (which license shall be exclusive (even as to such Third Party) with respect to any Licensed Drug Candidate or Licensed Product but not with respect to such Third Party's background technology and improvements thereof). For the sake of clarity, (a) in the event a Related Party of a Party is performing Research Activities hereunder, such Related Party will not be considered a Third Party for purposes of this Section 2.7 and (b) academic institutions, clinical trial sites, investigators, CROs, Third Party manufacturers or any other contractors engaged by a Party or disclosed in this Section 2.7 (Third Parties) are hereby deemed not to be Related Parties of such Party for purposes of this Section 2.7.

3. DRUG CANDIDATE SELECTION.

3.1. Overview. Repare shall be solely responsible for any and all drug discovery activities towards selection of Licensed Drug Candidates satisfying DC Criteria in accordance with the Research Plan until the DC Selection Date. Ono and Repare shall select a Licensed Drug Candidate in accordance with Section 3.

3.2. Data Package Submission. Repare shall submit to Ono a data package for the Polq Program, including but not limited to a list of proposed Drug Candidates and non- proposed Drug Candidates, periodically at scheduled meetings of the JRC or at any time upon Ono's reasonable request until the earlier of (i) Repare identifies the number of proposed Drug Candidates agreed upon by the Parties or (ii) the termination of the Polq Program (whether upon expiration of the Research Term or otherwise).

3.3. DC Selection Meeting. The Parties shall hold a meeting at the date and time agreed upon by the Parties, but no later than within [***] after receipt by Ono of such data package with the relevant evidence that such parameters have been met, in order to discuss the selection of one potential Licensed Drug Candidate among the Drug Candidates to move toward further Development and Commercialization by the Parties (the "**DC Selection Meeting**").

3.4. Licensed Drug Candidate. Within [***] after the DC Selection Meeting (the "**Drug Candidate Selection Period**"), Ono may notify Repare whether it selects such proposed Drug Candidates (such selection shall also include any back-ups thereto identified by Repare) as a Licensed Drug Candidate (such notice by Ono, the "**DC Selection Notice**").

4. DEVELOPMENT

4.1. Licensed Drug Candidates; Licensed Products.

4.1.1. Overview. The Parties acknowledge and agree that the Development of the Licensed Drug Candidates and/or Licensed Products on a global basis is desirable for maximizing such Licensed Products' value, and therefore that exchange of each Party's and/or its Related Party's Development strategy will be made in a transparent manner as provided in this Agreement. The Parties shall collaborate on the Development of each Licensed Drug Candidate and each Licensed Product pursuant to the Global Development Plan. Subject to the terms of this Agreement and the oversight of the JSC, and consistent with the Global Development Plan, Ono will lead and be responsible for, at its cost, Development of the Licensed Drug Candidates or Licensed Products in the Ono Territory, and Repare will lead and be responsible for, at its cost, Development of the same Licensed Drug Candidate or Licensed Product in the Repare Territory and the Global Common Activities. Repare acknowledges and agrees that Ono may participate in one or more Global Clinical Studies in order for Ono to obtain Regulatory Approval of the Licensed Drug Candidate or Licensed Product in the Field in the Ono Territory, subject to the terms and conditions of this Agreement. In case Ono participates in a Global Clinical Study, Ono shall have the sole right to decide the number of subjects enrolled in such Global Clinical Study at sites within the Ono Territory as required to obtain Regulatory Approval for the Licensed Drug Candidate or Licensed Product in a country in the Ono Territory, and Ono shall be responsible for the cost and expense incurred for Global Clinical Study sites within Ono Territory.

4.1.2. Global Development Plans.

4.1.2.1. Overview. For each Licensed Drug Candidate and each Licensed Product, the Development activities that are necessary or useful to conduct and complete one or more Registration Studies for such Licensed Drug Candidate and Licensed Product as required to achieve initial Regulatory Approval in the Major Market Countries (each, a "**Global Development Activity**") shall be set forth in reasonable detail in a written work plan and time table that is approved by the JSC (each, an "**Global Development Plan**"). The initial Global Development Plan for each Licensed Drug Candidate and Licensed Product shall be prepared and promptly submitted by Repare to the JSC for review, discussion and approval by JSC within [***] after the applicable DC Selection Date. After the expiration of the Research Term, the Parties will agree on each subsequent update or change to the Global Development Plan, which shall be approved by the JSC. Each Global Development Plan shall allocate responsibility for the performance of each Global Development Activity to one of the Parties. The terms of, and Global Development Activities set forth in, each Global Development Plan shall at all times be designed to be in compliance with all applicable Laws and in accordance with professional and ethical standards customary in the pharmaceutical industry. The Parties shall discuss in good faith the applicable Global Development Plan through the JSC or the Working Group designated by the JSC. In the event that after such good faith discussion between the Parties, the Parties have different opinions or comments on such Global Development Plan, Repare shall consider in good faith Ono's opinions or comments to such Global Development Plan before finalizing such Global Development Plan. Repare shall provide such Global Development Plan to the JSC for review and approval.

4.1.2.2. Updates and Amendments to the Global Development Plans. Either Party or the JSC may also develop and propose from time to time other substantive amendments to the Global Development Plans. The JSC shall review proposed amendments presented by either Party and may approve such proposed amendments or any other proposed amendments that the JSC may consider from time to time in its discretion and, upon such approval by the JSC, the applicable Global Development Plan shall be amended accordingly. Amendments and updates to the Global Development Plan shall not be effective without the approval of the JSC.

4.1.3. Global Clinical Studies.

4.1.3.1. Global Clinical Study Proposals. From time to time during the Term after the DC Selection Date, either Repare (or its Related Party) or Ono (or its Related Party) may submit to the JSC a proposal for a Global Clinical Study that would support the filing of an NDA for the Licensed Drug Candidate and Licensed Product with Regulatory Authorities in the Major Market Countries of both the Repare Territory and the Ono Territory (a “**Global Clinical Study Proposal**”). Each such Global Clinical Study Proposal shall include a draft synopsis and proposed timelines for the conduct of the applicable Global Clinical Study. The JSC shall review and approve each such Global Clinical Study Proposal. If the JSC approves a Global Clinical Study Proposal, then within [***] after the date of such approval, Repare shall prepare a Global Development Plan based on such Global Clinical Study Proposal.

4.1.3.2. Independent Clinical Studies. If the JSC does not approve a Global Clinical Study Proposal (or a substantially similar proposal) within a reasonable period of time after such Global Clinical Study Proposal has been submitted to the JSC, then each Party shall be permitted to carry out at its own expense the relevant Clinical Study(ies) described in such Global Clinical Study Proposal independently within its own Territory (an “**Independent Clinical Study**”); provided however that Ono shall not be permitted to carry out any Independent Clinical Study or associated Development activities that are directed to an indication that is not included within the applicable Global Development Plan except solely as set forth in this Section 4.1.3.2 (Independent Clinical Studies). If Ono wishes to conduct an Independent Clinical Study in an indication that is not included within the applicable Global Development Plan based on a Global Clinical Study Proposal following the rejection by the JSC of such Global Clinical Study Proposal, Repare shall be permitted to block the conduct of such Independent Clinical Study if either (i) Ono cannot provide reasonable, credible evidence that the conduct of such Independent Clinical Study in such indication would not adversely impact the Global Development Activities or the value of a Licensed Product in Repare’s Territory from a scientific, epidemiologic or business perspective or (ii) if Repare can provide reasonable, credible evidence that conduct of such Independent Clinical Study in such indication would create a reasonable possibility of an adverse impact on the Global Development Activities, or the value of a Licensed Product in Repare’s Territory.

4.1.3.3. Global Clinical Studies for Combination Use. Repare shall use Commercially Reasonable Efforts to [***] with respect to any Global Clinical Study of the use of the Licensed Drug Candidates or Licensed Products [***] in any Global Clinical Study.

4.1.4. Global Development Costs. Repare shall be responsible for one hundred percent (100%) of all costs and expenses relating to Global Development Activities that are conducted by or on behalf of Repare, including Global Clinical Studies in the Repare Territory. In addition, Repare shall be responsible for all of its own costs and expenses relating to the preparation of initial Global Development Plan and all Global Common Costs. “**Global Common Activity**” means any Development activity with regard to any Global Clinical Study that is not specific to Development activities in the Ono Territory or the Repare Territory, which includes, but is not limited to, the project management, data management, statistical support and statistical analysis on a global basis (i.e. both of Repare Territory and Ono Territory). “**Global Common Costs**” means the direct development costs that are incurred by a Party in connection with the Global Common Activity. Ono shall be responsible for one hundred percent (100%) of all costs and expenses relating to Global Development Activities that are conducted by or on behalf of Ono, including Global Clinical Studies and any bridging studies conducted by Ono in the Ono Territory.

4.1.5. Repare Territory Development Plan. Other than Global Development Activities, all Development activities to be undertaken with respect to each Licensed Drug Candidate and Licensed Product by or on behalf of Repare with respect to the Repare Territory shall be set forth in a written work plan and time table (the “**Repare Territory Development Plan**”). The initial Repare Territory Development Plan shall be prepared by Repare and, following review and discussion by the JSC, shall then be attached to the JSC meeting minutes and deemed to be attached hereto as the applicable Schedule. Repare shall present the Repare Territory Development Plan and any proposed amendments thereto to the JSC at least [***] in advance of implementation of the Repare Territory Development Plan, and following review and discussion by the JSC, it shall then be attached to the JSC meeting minutes and deemed to be attached hereto as the applicable Schedule. If Ono notifies Repare in writing that Ono reasonably believes that a Clinical Study of a Licensed Product in the Field which Repare and/or its Related Party intends or attempts to conduct in accordance with Repare Territory Development Plan should be expanded to be a Global Clinical Study, Repare shall expand such Clinical Study into a Global Clinical Study to include it in a Global Development Plan that Repare shall provide to Ono through the JSC and Working Group designated by the JSC for the JSC’s review and approval within [***] on or after the receipt of Ono’s written notification by Repare.

4.1.6. Repare Territory Development Costs. Repare shall be responsible for one hundred percent (100%) of all costs and expenses incurred with respect to Development activities that are conducted by Repare pursuant to any Repare Territory Development Plan.

4.1.7. Ono Global Development Activity. Ono shall be responsible for the Global Development Activities in the Field in the Ono Territory, including the conduct of any Clinical Studies in the Ono Territory, in accordance with the terms of this Agreement; provided, however that in case any new indication to be included in the initial Global Development Plan or any amendment of Global Development Plan is finally decided as the result of Repare's exercise of its deciding vote pursuant to Section 8.1.7.3(b), Ono may change the status of its part therein from "Global Clinical Study" to "Development in the Ono Territory", which will be subject to Ono's final deciding vote pursuant to Section 8.1.7.3(a); provided that, notwithstanding anything to the contrary in this Agreement, if an Independent Clinical Study conducted by Repare in the Repare Territory is a Registration Study, wherein Ono is not required by a Regulatory Authority in the Ono Territory to conduct any bridging or other clinical study as a condition to the award of Regulatory Approval, then Ono agrees to reimburse Repare for [***] of the costs and expenses relating to such Independent Clinical Study. Ono will be responsible for all Development of the Licensed Drug Candidates and Licensed Products in the Field for the Ono Territory solely in accordance with the terms of this Agreement and the applicable Global Development Plan.

4.1.8. Ono Territory Development Plan. Other than Global Development Activities, all Development activities to be undertaken with respect to each Licensed Drug Candidate and Licensed Product by or on behalf of Ono with respect to the Ono Territory shall be set forth in a written work plan and time table (the "**Ono Territory Development Plan**"). The initial Ono Territory Development Plan shall be prepared by Ono and, following review and discussion by the JSC, shall then be attached to the JSC meeting minutes and deemed to be attached hereto as the applicable Schedule. Ono shall present the Ono Territory Development Plan and any proposed amendments thereto to the JSC at least [***] in advance of implementation of the Ono Territory Development Plan, and following review and discussion by the JSC, it shall then be attached to the JSC meeting minutes and deemed to be attached hereto as the applicable Schedule. If Ono wishes, pursuant to the Ono Territory Development Plan, to conduct a Clinical Study in an indication that is not included within the applicable Global Development Plan, Repare shall be permitted to block the conduct of such Clinical Study if either (i) Ono cannot provide reasonable, credible evidence that the conduct of such Clinical Study in such indication would not adversely impact the Global Development Activities or the value of a Licensed Product in Repare's Territory from a scientific, epidemiologic or business perspective or (ii) if Repare can provide reasonable, credible evidence that conduct of such Clinical Study in such indication would create a reasonable possibility of an adverse impact on the Global Development Activities, or the value of a Licensed Product in Repare's Territory

4.1.9. Ono Territory Development Costs. Ono shall be responsible for one hundred percent (100%) of all costs and expenses incurred with respect to Development activities that are conducted by Ono pursuant to any Ono Territory Development Plan.

4.2. Performance of Global Development Activities; Diligence.

4.2.1. Performance. Each Party shall conduct and shall cause its Related Parties to conduct all Development activities allocated to such Party in a Global Development Plan in a sound scientific manner and in compliance with applicable Law and the applicable Global Development Plan, as such Global Development Plan may be amended from time to time in accordance with this Agreement.

Notwithstanding anything to the contrary in this Section 4.2.1 (Performance), neither Party shall be obligated to undertake or continue any activity under a Global Development Plan if (a) such Party reasonably determines that performance of activity would violate applicable Law; or (b) with respect to any Global Clinical Study, (i) a Regulatory Authority or independent safety data review board for such Global Clinical Study has required or recommended termination or suspension of such Global Clinical Study or (ii) such Party believes in good faith that termination or suspension of such Global Clinical Study is warranted because of safety or tolerability risks or the lack of suitable risk benefit ratio to the study subjects. In the event that a Party determines not to undertake or continue any activity under a Global Development Plan in accordance with the immediately preceding sentence, such Party shall promptly notify the other Party of such determination, and shall use all reasonable efforts to notify and consult with the other Party prior to making such determination.

4.2.2. Repare Diligence. Repare shall use Commercially Reasonable Efforts to Develop each Licensed Drug Candidate and Licensed Product and obtain Regulatory Approval therefore in the Repare Territory.

4.2.3. Ono Diligence. Ono shall use Commercially Reasonable Efforts to Develop each Licensed Drug Candidate and Licensed Product and obtain Regulatory Approval therefore in the Ono Territory.

4.3. Records, Reports and Information Sharing.

4.3.1. Development Activities Reports. Each Party shall provide and shall cause its Related Parties to provide to the JSC semi-annually, an update regarding Development activities conducted by or on behalf of such Party with respect to such Licensed Drug Candidate and Licensed Product. The Parties shall report to the JSC semi-annually, regarding their respective activities conducted under the Global Development Plan for such Licensed Drug Candidate and Licensed Product. In addition, each Party shall promptly share with the other Party all material developments and information that it comes to possess relating to the Development of any Licensed Drug Candidate and Licensed Products, including safety concerns and study reports and data generated from Clinical Studies of such Licensed Drug Candidate and Licensed Product.

4.3.2. Scientific Records. Each Party shall maintain and shall cause its Related Parties to maintain scientific records, in sufficient detail and in sound scientific manner appropriate for patent and regulatory purposes, which shall fully and properly reflect all work done and results achieved in the performance of the Development activities and Clinical Studies with respect to each Licensed Drug Candidate and Licensed Product by such Party, or its Related Parties.

4.3.3. Information Exchange and Development Assistance. Until the expiration or termination of this Agreement, for JSC semi-annually and any time promptly upon the reasonable request of the other Party, each Party shall provide to and shall cause its Related Party to provide to the other Party, without additional compensation and in a commercially reasonable format, Know-How (including any research information, any CMC information, Clinical Study data or Regulatory Materials) that is generated during the Term of this Agreement, necessary or useful

for the Development or Commercialization of the Licensed Drug Candidates or Licensed Products in the Field in the other Party's Territory, and that Controlled by such Party and/or its Related Party that is licensed to the other Party under this Agreement, including copies of (a) all scientific information and data related to such Licensed Drug Candidate or Licensed Product (including all data made, collected or otherwise generated in the conduct of any pre-clinical studies, Clinical Studies (including clinical data and other related information generated in compliance with CDISC standards), original patient report forms and other original source data, or early access/named patient programs for the Licensed Drug Candidates or Licensed Products), and (b) protocols and investigator brochures, in each case, that are reasonably necessary for the other Party (or its Related Parties) to perform its obligations or exploit its rights under this Agreement with respect to such Licensed Drug Candidate or Licensed Product. Any data provided by one Party to the other Party under this Section 4.3.3 shall be provided in the original language in which such data was generated, provided that, if such original language is not English, then the Party supplying such data shall also provide English translations thereof and the expense for such English translations shall be borne by the receiving Party. The Parties will cooperate and reasonably agree upon formats and procedures to facilitate the orderly and efficient exchange of such Know-How.

4.3.4. Personnel. Each Party may request, through the JSC with respect to a Licensed Drug Candidate and Licensed Product, that the other Party reasonably make available for consultation regarding the Development of such Licensed Drug Candidate and Licensed Product certain of its employees engaged in Development activities with respect to such Licensed Drug Candidate and Licensed Product. The JSC shall reasonably coordinate, upon reasonable notice during normal business hours and at their respective places of employment, consultation between the Parties on the progress of the Development for such Licensed Drug Candidate and Licensed Product.

4.3.5. Confidentiality. All information exchanged by the Parties under Section 4 shall be deemed to be Confidential Information of the disclosing Party and maintained in accordance with Section 9 (Confidentiality and Publication) of this Agreement.

4.4. Third Parties. The Parties shall be entitled to utilize the services of Third Parties to perform their respective Development activities under Section 4, provided that (a) each Party shall require that such Third Party operate in a manner consistent with Section 4, (b) each Party shall remain at all times fully liable for its respective responsibilities and the acts and omissions of such Third Parties engaged by it under this Agreement, and (c) with respect to any Development related to any Licensed Drug Candidate or Licensed Product, the Parties shall make reasonable efforts to share, through the JSC, information regarding any prior experience with specific Third Parties that are anticipated to be engaged to perform work under the applicable Global Development Plan. Each Party shall require that any Third Party agreement entered into pursuant to this Section 4.4 include confidentiality and non-use provisions that are, in the aggregate, not materially less stringent than those set forth in Section 9 (Confidentiality and Publication); provided that, with respect to any academic institution, clinical trial sites, investigators, the duration for the obligation of confidentiality and non-use provided in an agreement with such academic institution, clinical trial sites, investigators or may be less than the duration for the obligation of confidentiality and non-use

in this Agreement so long as such agreement specifies a duration for the obligation of confidentiality and non-use of at least [***] from the expiration or termination date of such agreement. Each Party shall use Commercially Reasonable Efforts to obtain ownership of, but if unable to obtain ownership, the relevant Party shall at least obtain a perpetual, irrevocable, fully-paid, worldwide, fully sublicensable (through multiple tiers) license under and to, any Know-How and Patent Rights that are developed by such Third Party in the performance of such agreement and are reasonably necessary or useful to Develop, Manufacture, have Manufactured or Commercialize Licensed Drug Candidates and Licensed Products in the Field (which license shall be exclusive (even as to such Third Party) with respect to any Licensed Drug Candidate and Licensed Product but not with respect to such Third Party's background technology and improvements thereof). The Party utilizing the services of a Third Party service provider shall be solely responsible for direction of and communications with such Third Party, but such Party shall provide the other Party with reasonably detailed updates regarding any such activities from time to time. For the sake of clarity, (a) in the event a Related Party of a Party is performing Development activities hereunder, such Related Party will not be considered a Third Party for purposes of this Section 4.4 and (b) academic institutions, clinical trial sites, investigators, CROs, Third Party Manufacturers or any other contractors engaged by a Party as described in this Section 4.4 are hereby deemed not to be Related Parties of such Party for purposes of this Section 4.4.

4.5. Investigator Sponsored Clinical Studies. Ono shall have the right to authorize the protocol for each Investigator Sponsored Clinical Study in the Ono Territory and support such Investigator Sponsored Clinical Study at Ono's own discretion, provided, however, Ono agrees to inform Repare of all such Investigator Sponsored Clinical Study(ies) in a timely manner and each proposal shall be subject to review and comment by the JSC. Repare shall have the right to authorize the protocol for each Investigator Sponsored Clinical Study in the Repare Territory and support such Clinical Study at Repare's own discretion, provided, however, Repare agrees to inform Ono of all such Investigator Sponsored Clinical Study(ies) in a timely manner and each proposal shall be subject to review and comment by the JSC. If Ono or one of its Related Parties wishes to authorize or support an Investigator Sponsored Clinical Study in an indication that is not included within the applicable Global Development Plan, the Parties shall employ the processes described in clauses (i) and (ii) in Section 4.1.3.2 (Independent Clinical Studies) as if such proposed Investigator Sponsored Clinical Trial were a proposed Independent Clinical Study and such authorization or support will be permitted only if, based on the results of such process, Ono would have been permitted to conduct such Investigator Sponsored Clinical Trial as an Independent Clinical Study. Neither Party shall authorize or support an Investigator Sponsored Clinical Study in the other Party's Territory without such other Party's prior written consent, which consent may be granted or withheld in the sole discretion of the other Party.

5. REGULATORY MATTERS

5.1. Licensed Products.

5.1.1. Ownership of Regulatory Filings.

5.1.1.1. Repare Territory. Repare will own all INDs, NDAs and related regulatory documentation submitted to any Regulatory Authority in the Repare Territory with respect to any Licensed Drug Candidate and Licensed Product.

5.1.1.2. Ono Territory. Ono will own all INDs, NDAs and related regulatory documentation submitted to any Regulatory Authority in the Ono Territory with respect to any Licensed Drug Candidate and Licensed Product.

5.1.2. Responsibility for Regulatory Matters.

5.1.2.1. Repare Territory. Repare will be solely responsible for all regulatory matters relating to such Licensed Drug Candidate and Licensed Product in the Repare Territory, including (i) overseeing, monitoring and coordinating all regulatory actions, communications and filings with, and submissions to, each Regulatory Authority in the Repare Territory with respect to Licensed Drug Candidates and Licensed Products; (ii) interfacing, corresponding and meeting with each Regulatory Authority in the Repare Territory with respect to Licensed Drug Candidates and Licensed Products; (iii) seeking and maintaining all regulatory filings in the Repare Territory with respect to Licensed Drug Candidates and Licensed Products; and (iv) maintaining and submitting all records required to be maintained or required to be submitted to any Regulatory Authority in the Repare Territory with respect to Licensed Drug Candidates and Licensed Products. Ono shall use reasonable efforts to provide reasonable assistance to Repare in connection with Repare's activities under this Section 5.1.2.1 with respect to each Licensed Drug Candidate or Licensed Product in the Field in the Repare Territory at Repare's sole cost and expense.

5.1.2.2. Ono Territory. Except as otherwise provided in the Global Development Plan, Ono will be solely responsible for all regulatory matters (other than Manufacturing-related matters) relating to any Licensed Drug Candidate and Licensed Product in the Ono Territory, including (i) overseeing, monitoring and coordinating all regulatory actions, communications and filings with, and submissions to, each Regulatory Authority in the Ono Territory with respect to Licensed Drug Candidates and Licensed Products; (ii) interfacing, corresponding and meeting with each Regulatory Authority in the Ono Territory with respect to Licensed Drug Candidates and Licensed Products; (iii) seeking and maintaining all regulatory filings in the Ono Territory with respect to Licensed Drug Candidates and Licensed Products; and (iv) maintaining and submitting all records required to be maintained or required to be submitted to any Regulatory Authority in the Ono Territory with respect to Licensed Drug Candidates and Licensed Products. Repare shall use reasonable efforts to provide reasonable assistance to Ono in connection with Ono's activities under this Section 5.1.2.2 with respect to each Licensed Drug Candidate or Licensed Product in the Field in the Ono Territory at Ono's sole cost and expense.

5.1.3. Communications with Regulatory Authorities.

5.1.3.1. Material Communications.

(a) With respect to any Licensed Drug Candidate or Licensed Product, the Party who received the Material Communication (the "**Noticing Party**") will provide the other Party (the "**Noticed Party**"), with a brief written description in English, of the principal issues raised in such Material Communication with such Regulatory Authority; provided that Repare shall only provide such notice with respect to Material Communications received

from the FDA or EMA and Ono shall only provide such notice with respect to Material Communications received from PMDA. Upon the Noticed Party's reasonable request after receiving a notice from the Noticing Party in accordance with the immediately preceding sentence, the Noticing Party will provide to the Noticed Party complete copies of correspondence of relating to such Material Communication in original language without translation within a reasonable period of time following such request. Ono will allow Repare a reasonable opportunity to review and comment on Ono's proposed response to any Material Communications with PMDA with respect to any Licensed Product, and Ono will reasonably consider all comments timely provided by Repare in connection therewith; provided, that Ono may designate a reasonable time and date by which Repare must respond to a Material Communication by the PMDA in light of the requirements of the PMDA.

(b) Initial notice of a Material Communication under Section 5.1.3.1(a) shall be provided by the Noticing Party to the Noticed Party within [***] of receipt of such Material Communication; provided that any Material Communications from a Regulatory Authority related to a Clinical Study hold or potential Clinical Study hold for safety reasons or for a potential withdrawal from the market for a safety issue or a report of a serious safety finding by a Regulatory Authority, shall be provided within [***] of receipt and Noticing Party will provide Noticed Party, through its Liaison, with a brief written description in English, of the principal issues raised in such Material Communication with the Regulatory Authority.

5.1.3.2. Labeling, Regulatory Materials. Without limiting the obligations under Section 5.1.3.1, Ono shall provide to and shall cause its Related Parties to provide Repare with (a) a copy of each NDA to be filed in the Ono Territory, in electronic format, provided that in cases where the NDA was not filed electronically, Ono shall provide and shall cause its Related Parties to provide the electronic files used to generate such NDA, and (b) copies of the final labeling for the Licensed Product in the local language in all countries in the Ono Territory in which Ono or its Related Parties obtain Regulatory Approvals. Repare shall provide and shall cause its Related Parties to provide Ono with (a) a copy of each NDA filed in the Major Market Countries in the Repare Territory by Repare or its Related Party with the FDA and the EMA, in each case in electronic format, provided that in cases where the NDA was not filed electronically, Repare shall provide and shall cause its Related Parties to provide the electronic files used to generate such submission and (b) copies of the final labeling for the Licensed Product in the local language in all countries in the Repare Territory in which Repare or its Related Parties obtain Regulatory Approvals. Repare further shall, and shall use reasonable efforts to cause its Related Parties to, provide Ono with the Cost-effectiveness model and Budget Impact model, based on which the Health Technology Assessment (HTA) dossier for National Health Insurance Listing Price is made and filed in HTA countries such as UK.

5.1.4. Meetings with Regulatory Authorities. Ono shall provide Repare with reasonable advance notice of all formal meetings and teleconferences with any Regulatory Authority pertaining to any Licensed Drug Candidate and Licensed Product, or with as much advance notice as practicable under the circumstances. Ono

shall use reasonable efforts, to the extent reasonably practicable, to permit Repare to have, at Repare's expense, mutually acceptable representatives of Repare attend as observers, such formal meetings and teleconferences with such Regulatory Authority pertaining to such Licensed Drug Candidate and Licensed Product; provided, however, that Ono shall not be obligated to change or re-schedule any such meeting in order to accommodate the schedule of Repare's representatives.

5.1.5. Submissions. Each Party shall provide the other Party through JSC with notice of the occurrence of each of the following events in such Party's Territory in a timely manner: (i) the submission for Regulatory Approval (including orphan drug applications and designations) of such Licensed Drug Candidate and Licensed Product to any Regulatory Authority in such Party's Territory; and (ii) receipt or denial of Regulatory Approval for such Licensed Drug Candidate and Licensed Product in such Party's Territory.

5.1.6. Right of Reference. Each Party hereby grants to the other Party, and at the request of the other Party will grant to the other Party's Related Parties, the right to rely upon and a right to copy, access, and otherwise use, all information and data (including all CMC information as well as data made, collected or otherwise generated in the conduct of any Clinical Studies or early access/named patient programs for the Licensed Drug Candidates and Licensed Products) included in or used in support of any regulatory filing, Regulatory Approval, drug master file or other Regulatory Material (including orphan drug applications and designations) owned or Controlled by such Party or its Related Parties that relates to any Licensed Drug Candidate or Licensed Product to the extent necessary or useful to obtain Regulatory Approval of a Licensed Drug Candidate or Licensed Product in the Ono Territory or the Repare Territory, and such Party shall, if requested by the other Party, provide a signed statement that the other Party may rely on, and the Regulatory Authority may access, in support of the other Party's application for such Regulatory Approval in its Territory, any underlying raw data or information submitted by such Party and its Related Parties to the Regulatory Authority with respect to any regulatory filing, Regulatory Approval, drug master file or other Regulatory Materials owned or controlled by such Party or its Related Parties that relates to any Licensed Drug Candidate or Licensed Product. In addition, upon request of either Party (on behalf of itself or a Sublicensee), the other Party shall obtain and provide to the requesting Party certificates or other formal or official attestations concerning the regulatory status of the Licensed Drug Candidates and Licensed Products in the Ono Territory or the Repare Territory, as applicable (*e.g.*, Certificates of Free Sale, Certificates for Export, Certificates to Foreign Governments).

5.2. Pharmacovigilance. At least [***] prior to Ono obtaining an IND or at an earlier date at either Party's request, the Parties shall negotiate in good faith and enter into a Safety Data Exchange Agreement ("**SDEA**"), which shall define the pharmacovigilance responsibilities of the Parties and include safety data exchange procedures governing the coordination of collection, investigation, reporting and exchange of information concerning any adverse experiences, and any product complaints associated with adverse experiences, related to any Licensed Drug Candidate and Licensed Product sufficient to enable each Party (and their respective Related Parties, if any) to comply with its legal and regulatory obligations. The SDEA shall be modified in writing before obtaining the Regulatory Approval for such Licensed Drug Candidates and Licensed Products in either

Territory, to enable each Party (and their respective Related Parties, if any) to comply with its legal and regulatory obligations. The Parties shall use Commercially Reasonable Efforts to amend the SDEA to add as parties any Related Parties. The Parties shall in good faith discuss and negotiate to determine the ownership and responsibility for the development and maintenance of the global safety database for Licensed Drug Candidates and Licensed Products at an appropriate timing before the first IND application for the Licensed Drug Candidates and Licensed Products is submitted by either Party to any Regulatory Authority in any country of the world.

5.3. Pricing. As between the Parties, each Party shall have the right to determine the price of the Licensed Product sold in its respective Territory and no Party shall have the right to direct, control or approve the pricing of the Licensed Product in the other Party's Territory.

6. COMMERCIALIZATION

6.1. Licensed Products.

6.1.1. Responsibility, Cost and Diligence.

6.1.1.1. Repare Territory. Subject to the limitations expressly set forth herein, Repare shall be solely responsible, at its own cost and expense, for all Commercialization activities relating to Licensed Products in the Repare Territory.

6.1.1.2. Ono Territory. Subject to the limitations expressly set forth herein, Ono shall be solely responsible, at its own cost and expense, for all Commercialization activities relating to Licensed Products in the Ono Territory.

6.1.1.3. Ono Commercial Diligence. Ono will use Commercially Reasonable Efforts to Commercialize each Licensed Product throughout the Ono Territory.

6.1.2. Global Commercialization Strategy. For each Licensed Product, the key Commercialization principles will be set forth in a written summary of the global Commercialization strategy for such Licensed Product approved by the JSC (each, a "**Global Commercialization Strategy**"). The JSC shall prepare the initial draft of such Global Commercialization Strategy at the appropriate timing determined by the Parties, but no less than [***] prior to expected Regulatory Approval of such Licensed Product, and then annually thereafter. Amendments to any Global Commercialization Strategy will become effective following review and approval by the JSC.

6.1.3. Ono Territory Commercialization Plan. No less than [***] in advance of the reasonably expected first Regulatory Approval in the Ono Territory with respect to a Licensed Product, and on an annual basis thereafter, Ono shall prepare and deliver to the JSC for review a reasonable written plan that summarizes the Commercialization activities to be undertaken with respect to such Licensed Product in the Ono Territory in the next Ono Fiscal Year and Ono's plans to obtain further Regulatory Approvals and Commercialize such Licensed Product in

countries in the Ono Territory in which Ono is not then Commercializing such Licensed Product, and the dates by which such activities are targeted to be accomplished (the “**Ono Territory Commercialization Plan**”). Each Ono Territory Commercialization Plan shall be consistent with the requirements of the most recent Global Commercialization Strategy. The Ono Territory Commercialization Plan for a Licensed Product shall subsequently be updated and modified by Ono, from time to time at its discretion and no less frequently than [***] per Ono Fiscal Year, based upon, among other things, Ono’s Commercialization activities with respect to such Licensed Product in the Ono Territory, a copy of which updated plan will be provided to the JSC.

6.1.4. Ono and its Related Parties shall provide, and Repare shall provide, and shall use Commercially Reasonable Efforts to cause its Related Parties to provide, information regarding its material medical and Commercialization activities in its Territory, including (i) expected day of launch of Licensed Product, (ii) general strategies for the medical activities and marketing, including branding, promoting, detailing, market access and patient advocacy, (iii) reasonable written plan including pre-launch activities, (iv) overall promotional effort and the targeted healthcare- professionals, including but not limited to, the number of full-time equivalent (“FTE”) devoted for medical science liaisons, medical affairs staffs, medical representatives, market access and nurse consultant of each country in its own Territory, (v) its sales department structure, sales marketing structure and medical affairs structure, and (vi) any other material events and activities relating to medical and Commercialization activities of Licensed Product in its own Territory , to the JSC and shall keep the JSC reasonably informed of its medical and Commercialization activities with respect to Licensed Products.

6.1.5. Advertising and Promotional Materials.

6.1.5.1. Global Branding. Repare shall, from time to time during the Term, develop (and thereafter modify and update) a global branding strategy (including global positioning, promotional messages, colors and other visual branding elements) for each Licensed Product for use throughout the world (the “**Global Branding Strategy**”), which shall be consistent with the applicable Global Commercialization Strategy and which the JSC shall review and approve, and which the Parties shall, following such review and approval, implement. Repare will submit the Global Branding Strategy for a Licensed Product to the JSC at least annually. Repare shall consider in good faith any comments provided by Ono with respect to the Global Branding Strategy.

6.1.5.2. Repare A&P. Repare will provide, and will make reasonable efforts to have its Related Parties provide, to Ono written sales, promotion and advertising materials relating to Licensed Products used in the Repare Territory (“**Repare Territory Promotional Materials**”) as well as training manuals and education and communication materials relating to Licensed Products used in the Repare Territory (“**Repare Territory Educational Materials**”) when reasonably requested by Ono.

6.1.5.3. Ono A&P. Ono shall be and shall cause its Related Parties, to be responsible for the creation, preparation, production, reproduction and filing with the applicable Regulatory Authorities, of relevant written sales, promotion and advertising materials relating to each Licensed Product for use in the Ono Territory (“**Ono Territory Promotional Materials**”) as well as training manuals and education and communication materials (“**Ono Territory Educational Materials**”) for sales representatives in the Ono Territory at its own expense. All such Ono Territory Promotional Materials and Ono Territory Educational Materials will be compliant with applicable Law and, if applicable, consistent in all material respects with the Global Branding Strategy for such Licensed Product in the Ono Territory. Ono will submit and will cause its Related Parties to submit representative or core samples of its Ono Territory Promotional Materials and Ono Territory Educational Materials developed by Ono or its Related Parties for use in the Ono Territory to the JSC annually. Ono may use the information contained in Repare Territory Promotional Materials, and Repare Territory Educational Material provided by Repare under Section 6.1.5.2 free of charge, for preparation of Ono Territory Promotional Materials and Ono Territory Educational Materials relating to the Licensed Product for use by Ono or its Related Parties in connection with the Commercialization of the Licensed Product in the Ono Territory and for no other purpose, unless the Parties agree otherwise in writing; provided that if Ono’s use of such information contained in Repare Territory Promotional Materials, and Repare Territory Educational Material would infringe any Third Party right, then both Parties shall negotiate in good faith commercially reasonable terms of such use by Ono.

6.1.6. Reporting Obligations. Ono shall make a yearly report of its Commercialization activity at a regular JSC meeting pursuant to Section 8.1.5, in a slide deck, or in other written materials (which may be delivered in electronic format), which will be shared with Repare in electronic form after such JSC meeting, that, in any case, summarize in reasonable detail Ono’s Commercialization activities for such Licensed Product performed to date (or updating such report for activities performed since the last such report was given hereunder, as applicable). In addition, Each Party shall provide the other Party with written notice of the First Commercial Sale of each Licensed Product in the Major Market Countries in each Territory within [***] after such event; provided, however, that in all circumstances, Ono shall inform Repare of such event prior to public disclosure of such event by Ono. Ono shall provide such information to the JSC as Repare may reasonably request with respect to Commercialization of such Licensed Product and shall keep the JSC reasonably informed of Ono’s Commercialization activities with respect to such Licensed Product.

6.1.7. Sales and Distribution. Each Party and its Related Parties shall be responsible for booking sales in its Territory. Each Party and its Related Parties may warehouse Licensed Products both inside and outside of such Party’s Territory, provided that any sales with respect to such Licensed Products are booked in such Party’s Territory. If a Party receives any orders for any Licensed Product in the other Party’s Territory, it shall refer such orders to the other Party, to the extent it is not prohibited from doing so under applicable Law. Moreover, each Party and its Related Parties shall be solely responsible for handling all returns of any Licensed Product sold in its Territory, as well as all aspects of Licensed Product order processing, invoicing and collection, distribution, inventory and receivables of Licensed Products sold in its Territory.

6.1.8. Recalls, Market Withdrawals or Corrective Actions.

6.1.8.1. Generally. In the event that any Regulatory Authority issues or requests a recall or takes a similar action in connection with a Licensed Product in a Territory, or in the event either Party determines that an event, incident or circumstance has occurred that may result in the need for a recall or market withdrawal of a Licensed Product in its own Territory, the Party notified of such recall or similar action, or the Party that desires such recall or similar action, shall, within [***] of such request, order or determination, notify the other Party by telephone, facsimile or e-mail in accordance with Section 16.10. Each Party, in consultation with the other Party but in its own discretion, shall decide whether to conduct a recall of a Licensed Product in its own Territory and the manner in which any such recall shall be conducted (except in the case of a government mandated recall, when such Party may act without such advance notice but shall notify the other Party as soon as possible). Except as may otherwise be agreed to by the Parties, each Party shall bear the expense of any such recall in its own Territory; provided that the other Party shall bear such cost if the recall occurs due to recklessness, willful misconduct or negligence of the other Party or the other Party's breach of this Agreement or any other agreement. Each Party will make available all of its pertinent records that may be reasonably requested by the other Party in order to effect a recall of a Licensed Product in the other Party's Territory. The Parties' rights and obligations under this Section 6.1.8.1 shall be subject to the terms of any supply agreement(s) entered into between the Parties.

6.1.9. Ex-Territory Sales; Export Monitoring.

6.1.9.1. Ex-Territory Sales. Subject to applicable Law, neither Party shall engage in any advertising or promotional activities relating to any Licensed Product directed primarily to customers or other buyers or users of such Licensed Product located outside its Territory or accept orders for Licensed Products from or sell Licensed Products into such other Party's Territory for its own account, and if a Party receives any order for any Licensed Product in the other Party's Territory, it shall refer such orders to the other Party.

6.1.9.2. Export Monitoring. Each Party and its Related Parties will use Commercially Reasonable Efforts to monitor and prevent exports of Licensed Products from its own Territory for Commercialization in the other Party's Territory at its own cost using methods permitted under applicable Law that are commonly used in the industry for such purpose (if any), and shall promptly inform the other Party of any such exports of Licensed Products from its Territory, and any actions taken to prevent such exports. Each Party agrees to take reasonable actions requested in writing by the other Party that are consistent with applicable Law to prevent exports of Licensed Products from its Territory for Commercialization in the other Party's Territory.

7. MANUFACTURE AND SUPPLY

7.1. **Licensed Drug Candidates and Licensed Products.**

7.1.1. General. Subject to Section 7.3, Repare will have the primary responsibility for the Manufacture of Licensed Drug Candidates and Licensed Products, pursuant to a single, uniform set of specifications and applicable Laws and their requirements, including, but not limited to, cGMP, for the purpose of Development and Commercialization thereof throughout the Repare Territory and the Ono Territory, either by itself or, subject to Section 7.1.2 (Subcontracting), through one or more Third Party contract manufacturing organizations. The Global Development Plan shall include Repare's strategy for commercial scale manufacturing. Repare shall conduct any activity for CMC for the Repare Territory. Ono will be responsible for the CMC and Manufacturing activities in connection with Development of the Polq Program solely for obtaining Manufacturing and Regulatory Approval solely for the Ono Territory.

7.1.2. Subcontracting. If, after the Effective Date, Repare desires to subcontract the Manufacture of any Licensed Drug Candidates or Licensed Products to a Third Party contract manufacturing organization, Repare shall first provide the proposed contract with such contract manufacturing organization (a "**Manufacturing Subcontract**") to Ono for review and comment at least [***] prior to the execution of such Manufacturing Subcontract. Repare shall consider any comments provided by Ono in good faith. Each Manufacturing Subcontract shall (a) be consistent with the terms of this Agreement, (b) contain confidentiality obligations, in the aggregate, not materially less stringent than the requirements of Section 9 (Confidentiality and Publication) and (c) [***].

7.2. Supply Agreements. Upon request by Ono, the Parties will negotiate in good faith towards a supply agreement (and any other necessary ancillary agreements including a quality technical agreement) for clinical or commercial supply of such Licensed Drug Candidate and Licensed Product from Repare to Ono (each, a "**Supply Agreement**") which will be on commercially reasonable terms customary to Third Party contract manufacturing organization supply agreements and shall include key performance indicators (including criteria regarding manufacturing capacity, quantity, timeliness of delivery, quality and cost that are consistent with prevailing industry standards for Third Party contract manufacturing supply agreements). Any Licensed Drug Candidate or Licensed Product supplied under a Supply Agreement will be supplied at a price no greater than [***] for such Licensed Drug Candidate or Licensed Product. In cases where the Licensed Drug Candidate or Licensed Product is Manufactured and supplied by a Third Party contract manufacturing organization, Repare will [***]. Notwithstanding the foregoing, if Repare engages a Third Party contract manufacturing organization to supply Licensed Drug Candidate or Licensed Product, then (a) in its agreement with such Third Party contract manufacturing organization, Repare shall not include any limitations on such Third Party's ability to supply Ono with such Licensed Drug Candidate or Licensed Product, and (b) upon the request of Ono, Repare shall facilitate initial business discussions between Ono and such Third Party contract manufacturing organization for the supply of such Licensed Drug Candidate or Licensed Product to Ono.

7.3. Ono's Right to Manufacture. If Ono elects to Manufacture the Licensed Drug Candidates or the Licensed Products by itself in the Field for the Ono Territory for Development and Commercialization purposes, then within [***] after receipt of such request, Repare shall, in accordance with this Section 7.3, transfer to Ono, an Affiliate of Ono, or a Third Party manufacturer approved by Repare (such approval not to be unreasonably withheld, delayed or conditioned), the Repare Know-How reasonably necessary or useful to enable Manufacture of the applicable Licensed Drug Candidates or Licensed Products for Development and Commercialization for the Ono Territory in the Field and not previously transferred to Ono, such Affiliate of Ono or any such Third Party manufacturer. Such Know-How transfer by Repare shall be conducted using Commercially Reasonable Efforts and shall include copies or samples of relevant documentation, materials, analytical assays for the Licensed Drug Candidates or the Licensed Products and other embodiments of such Repare Know-How. Upon such Know-How transfer, Repare shall also make available its qualified technical personnel on a reasonable basis to consult with Ono, such Affiliate of Ono or such Third Party manufacturer with respect to such Repare Know-How. The details of such Know-How transfer, including a specific list of Repare Know-How to be transferred by Repare, shall be set forth in a written technology transfer plan (the "**Manufacturing Technology Transfer Plan**") executed by the Parties for the purpose of ensuring the complete and timely transfer of such Repare Know-How and the protection of Repare's rights in such Repare Know-How. Manufacturing Technology Transfer Plan shall take into consideration, among other things, the Development and Commercialization activities in or for the Ono Territory, and the other responsibilities for key employees of Repare. Ono shall pay the amounts set forth in the Manufacturing Technology Transfer Plan for the work and transfer performed by Repare and shall reimburse Repare for its Out-of-Pocket Costs incurred in the course of such transfer pursuant to this Section 7.3. Repare shall have no obligation to transfer any Repare Know-How to Ono until the full execution of the Manufacturing Technology Transfer Plan by both Parties. For clarity, during the transfer of such Repare Know-How, Repare shall continue to Manufacture and supply the Licensed Drug Candidates and the Licensed Product to Ono in accordance with the Supply Agreement.

7.4. Related Substance Supply. Ono shall have the right to purchase from Repare, and Repare shall supply to Ono without execution of a Supply Agreement, related substance of the Licensed Drug Candidate (e.g., reference standard, internal standard and impurities) necessary for Ono to conduct non-clinical studies, preclinical studies or Clinical Studies, including, but not limited to analytical test method development or validation, for regulatory submissions or Commercialization in the Ono Territory, at (a) [***] or (b) [***] for such substance of the Licensed Drug Candidates from Repare's Third Party manufacturer.

8. COLLABORATION MANAGEMENT

8.1. Joint Steering Committee.

8.1.1. Overview. Within [***] after the DC Selection Date, the Parties will establish a Joint Steering Committee to review or approve (as the case may be) and guide implementation, management, and modifications of the Global Development Plans and other plans, including but not limited to the

Commercialization plans in the Territory. The Parties agree and acknowledge that the structure or composition of the JSC may be adjusted or expanded to include Related Parties of Repare or to otherwise address changes in the Global Development Plan or other changes in global strategy with respect to the Collaboration, Licensed Drug Candidates or Licensed Products.

8.1.2. Composition. The JSC shall be comprised of six (6) members, with each Party contributing three (3) representatives who are employees of such Party. Each Party shall appoint its respective representatives to the JSC and may substitute one or more of its representatives, in its sole discretion, effective upon notice to the other Party of such change. Repare shall have at least two (2) JSC representatives who are executive level employees (vice president or above), Ono shall have at least two (2) JSC representatives who are director level employees, and all JSC representatives shall have appropriate expertise, seniority, decision-making authority and ongoing familiarity with the Collaboration. Additional representatives or consultants may from time to time, by mutual consent of the Parties, be invited to attend JSC meetings, subject to such representatives and consultants (or the representative's or consultant's employer) undertaking confidentiality obligations, whether in a written agreement or by operation of law, no less stringent than the requirements of Section 9.1 (Nondisclosure Obligation).

8.1.3. JSC Chairperson. The JSC shall be co-chaired, with one chairperson designated by Repare and one chairperson designated by Ono, whose responsibilities shall include conducting meetings, including, when feasible, ensuring that objectives for each meeting are set and achieved. Responsibility for running each meeting of the JSC will alternate between the chairpersons from meeting-to-meeting, with Ono's chairperson running the first meeting.

8.1.4. Liaisons.

8.1.4.1. Each Party shall appoint a liaison who is an employee of such Party (each, a "**Liaison**"). Each Liaison will be responsible to ensure a collaborative work environment between the Parties to ensure that the alliance is run smoothly, professionally and productively. Each Liaison shall act in his or her discretion to facilitate the execution of the Collaboration throughout their organization and will oversee and support implementation plans; promote effectiveness of the governance model and implementation of contractual provisions and lead any changes to enhance the alliance; and facilitate the JSC and JRC (and other bodies) for effective decision making in a timely manner. The Liaison will serve as a primary point of contact for the other Party under the Collaboration and will undertake such other tasks as are detailed in this Agreement or as may be assigned by the JSC or JRC. Each Liaison shall attend each meeting of the JSC and JRC. Each Party may change its Liaison at any time in its sole discretion with written notice to the other Party.

8.1.4.2. The Liaisons shall be responsible for (i) scheduling meetings of the JSC and JRC, (ii) setting agendas for meetings with solicited input from other members and (iii) acting as secretary at each meeting and preparing the draft minutes of such meeting, which shall provide a description in reasonable detail of the discussions held at the meeting and a list of any actions, decisions or determinations approved by the JSC or JRC. Within [***]

after each meeting, the drafting Liaison shall provide the draft minutes to the other Liaison for review and comment. The minutes shall be finalized by approval of all the members of JSC or JRC. Beginning with Repare's Liaison, such responsibilities shall alternate between the Liaisons on a meeting-by-meeting basis after each meeting of the applicable committee.

8.1.5. Meetings. The JSC shall meet no less frequently than [***] per Calendar Year until the [***] anniversary of First Commercial Sale of the first Licensed Product and [***] per Calendar Year after the [***] anniversary of First Commercial Sale of the first Licensed Product during the Term, provided that either Party may from time to time reasonably request that the JSC meet to undertake its duties under Section 8.1.6 (JSC Responsibilities). The JSC may meet in person or by means of teleconference, videoconference or other similar communications equipment, but at least one (1) meeting per Calendar Year of the JSC shall be conducted in person. The location for the in-person meetings of the JSC shall, respectively, alternate between Repare's headquarters and Ono's headquarters (or such other locations as are mutually agreed by the Parties). All meetings and proceedings for the JSC or its subcommittees shall take place in English. Each Party shall bear its own expenses relating to attendance at such meetings by its representatives.

8.1.6. JSC Responsibilities. The JSC shall have the following responsibilities with respect to the Development, Manufacturing, having Manufactured and Commercialization of Licensed Drug Candidates and Licensed Products pursuant to the Collaboration:

- (a) review, discuss and approve the Global Development Plan including regulatory strategy and any updates or amendments thereto;
- (b) review and discuss each Ono Territory Development Plan, and all amendments and updates to such Ono Territory Development Plan;
- (c) review and discuss each Repare Territory Development Plan, and all amendments and updates to such Repare Territory Development Plan;
- (d) endeavor to ensure that each Party is appropriately advised as to Development being conducted by the other Party in its respective Territory;
- (e) report and monitor progress of Development activities and discuss any results thereunder;
- (f) review protocols for Clinical Studies for the Licensed Drug Candidate and Licensed Product, including combination therapy;
- (g) assist in coordinating scientific interactions and division of responsibilities, when applicable, with respect to Development activities;
- (h) review and approve Global Commercialization Strategy;

- (i) review and discuss Ono Territory Commercialization Plan and any updates or amendments thereto, and discuss any results thereunder;
- (j) review and approve Global Branding Strategy and any updates or amendments thereto, and discuss any results thereunder;
- (k) serve as the forum for the settlement of disputes or disagreements, including whether or not either Party is making its Commercially Reasonable Efforts in relation to the Development or the Commercialization of Licensed Drug Candidates and Licensed Products;
- (l) review and approve a proposal from a Party to conduct preclinical and non-clinical studies with respect to Drug Candidates and Licensed Products in other Party's Territory (which approval shall not be unreasonably withheld);
- (m) review, discuss and approve each Global Clinical Study Proposal;
- (n) review and discuss each Party's or its Related Party's long term Development strategy in the respective Territory in a timely manner;
- (o) review, discuss and oversee the CMC and Manufacture of Licensed Drug Candidates and Licensed Products;
- (p) overseeing the JSC's Working Group and ensuring effective participation in each such Working Group's operations by any of its members;
- (q) reviewing the status of Licensed Drug Candidates and Licensed Products, including material Development and Commercialization matters;
- (r) addressing any other matters referred to the JSC by the terms of this Agreement; and
- (s) performing such other activities as the Parties agree in writing from time to time shall be the responsibility of the JSC.

For the avoidance of doubt, decisions with respect to each of the above matters or any other matter that is identified in this Agreement as being subject to JSC approval, shall be subject to the processes set forth in Section 8.1.7 (Decision Making), including the escalation and tie-breaking provisions provided herein, except as otherwise expressly set forth in this Agreement.

8.1.7. Decision-Making.

8.1.7.1. Voting. With respect to decisions of the JSC, the representatives of each Party shall have collectively one vote on behalf of such Party. For each meeting of the JSC, the attendance of at least two (2) representatives of each Party shall constitute a quorum. Action on any matter may be taken at a meeting, by teleconference, by videoconference or by written agreement.

8.1.7.2. Escalation. The JSC shall attempt to resolve disputes before it for decision by consensus. If the JSC is unable to reach consensus with respect to a dispute arising under this Agreement for a period in excess of [***], then the dispute shall be submitted to the Chief Executive Officer of Repare and Corporate Officers of Ono for resolution. If such dispute cannot be resolved for a period in excess of [***] following escalation (or such other period as the Parties may agree), then Section 8.1.7.3 (Tie-Breaking) shall apply.

8.1.7.3. Tie-Breaking. If a dispute cannot be resolved under Section 8.1.7.2 (Escalation), then, subject to Sections 8.1.7.3(c) and 8.1.7.4:

(a) Ono shall have the deciding vote if the dispute relates to: [***];

provided that, [***].

(b) Repare shall have the deciding vote if the dispute relates to: [***];

provided that, [***]

(c) Notwithstanding anything to the contrary in Section 8.1.7.3, neither Party may exercise its deciding vote pursuant to Section 8.1.7.3(a) or Section 8.1.7.3(b): [***].

8.1.7.4. Limitation of Power of JSC. Neither the JSC nor any subcommittee of the JSC shall have decision-making authority regarding, any of the following matters:

(a) Approval of any amendment to the Research Plan;

(b) the imposition of any requirements on the other Party to undertake obligations beyond those for which it is responsible, or forgo any rights, under this Agreement;

(c) the imposition of any requirements that the other Party take or decline to take any action that would result in a violation of any Law or any agreement with any Third Party or the infringement of intellectual property rights of Third Parties;

(d) any matters that would excuse such Party from any of its obligations specifically enumerated under this Agreement; or

(e) modifying the terms of this Agreement or taking any action to expand or narrow the responsibilities of the JSC (but excluding amendments and modifications to any schedules or exhibits to this Agreement that are expressly permitted under this Agreement).

8.2. Joint Research Committee. Within [***] after the Effective Date, the Parties will establish a committee to oversee the research of Drug Candidate, Licensed Drug Candidates and Licensed Products in accordance with the Research Plan and to coordinate the research activities of the Parties with respect thereto (the “JRC”). The JRC shall be subject to Section 8.3 (Working Groups) and this Section 8.2.

8.2.1. Composition. Each Party will initially appoint three (3) representatives to the JRC, with each representative having knowledge and expertise in the Development of Compounds and products similar to the Drug Candidates, Licensed Drug Candidates and Licensed Products and having sufficient seniority within the applicable Party to make decisions arising within the scope of the JRC's responsibilities. The JRC may change its size from time to time, provided that the JRC will consist at all times of an equal number of representatives of each of Repare and Ono. Each Party may replace its JRC representatives at any time upon written notice to the other Party. The JRC may invite non-members to participate in the discussions and meetings of the JRC, provided that such participants have no voting authority at the JRC and are bound under written obligation of confidentiality no less protective of the Parties' Confidential Information than those set forth in this Agreement. The JRC will be co-chaired, with one chairperson designated by Repare and one chairperson designated by Ono, whose responsibilities will include conducting meetings, including, when feasible, ensuring that objectives for each meeting are set and achieved. Responsibility for running each meeting of the JRC will alternate between the chairpersons from meeting-to-meeting, with Repare's chairperson running the first meeting.

8.2.2. Meetings. The JRC will meet [***] per Calendar Quarter, unless the Parties mutually agree in writing to a different frequency. At least [***] meeting per Calendar Year of the JRC shall be conducted in person. The location for the in-person meetings of the JRC shall, respectively, alternate between Repare's headquarters and Ono's headquarters (or such other locations as are mutually agreed by the Parties). No later than [***] Business Days prior to any meeting of the JRC (or such shorter time period as the Parties may agree), the Liaisons will prepare and circulate an agenda for such meeting; provided, however, that either Party will be free to propose additional topics to be included on such agenda, either prior to or in the course of such meeting. Either Party may also call a special meeting of the JRC (by videoconference, teleconference or in person) by providing at least [***] Business Days prior written notice to the other Party if such Party reasonably believes that a significant matter shall be addressed prior to the next scheduled meeting, in which event such Party will work with the Liaisons to provide the members of the JRC no later than [***] Business Days prior to the special meeting with an agenda for the meeting and materials reasonably adequate to enable an informed decision. The JRC may meet in person, by videoconference, or by teleconference; provided that the final quarterly meeting of the JRC of each Calendar Year shall be conducted in person. In- person JRC meetings will be held at locations alternately selected by Repare and by Ono or at any other location mutually agreed by the members of the JRC. All JRC meetings shall take place in English. Each Party will report to the JRC on all material issues relating to the research of Drug Candidates or Licensed Drug Candidates promptly after such issues arise. Each Party will bear the expense of its respective JRC members' participation in JRC meetings. The JRC chairperson will be responsible for preparing reasonably detailed written minutes of JRC meetings that reflect all decisions made and action items identified at such meetings.

8.2.3. JRC Responsibilities. During the Research Term, the JRC shall have the following specific responsibilities:

8.2.3.1. oversee the performance of the Research Plan and coordinate the activities of the Parties under the Research Plan;

8.2.3.2. report and monitor progress of Research Activities under the Research Plan and discuss any results thereunder;

8.2.3.3. review data generated in the course of the Research Service by Repare, including with respect to assay development and results of optimization and screening, and consider and advise on any technical issues that arise in the course of the Research Service;

8.2.3.4. review the progress of activities under the Research Plan and review and approve any amendments thereto, including any necessary amendments to the Research Plan budget as a result of any amendment to the Research Plan, any other amendment to the Research Plan budget, any amendment to Repare's FTE requirements, and any amendment to the timelines or activities under the Research Plan;

8.2.3.5. overseeing the JRC's Working Group and ensuring effective participation in each such Working Group's operations by any of its members;

8.2.3.6. resolve disputes arising at the Working Group;

8.2.3.7. select a list of proposed Drug Candidates;

8.2.3.8. resolve any disagreement between the Parties relating to the Research Plan; and

8.2.3.9. perform such other activities as the Parties agree in writing shall be the responsibility of the JRC or that are otherwise assigned to the JRC under this Agreement.

8.2.4. JRC Decision-Making.

8.2.4.1. Voting. The representatives of each Party on the JRC shall have collectively one vote on behalf of such Party. For each meeting of the JRC, the attendance of at least two (2) representatives of each Party shall constitute a quorum. Action on any matter may be taken at a meeting, by teleconference, videoconference or by written agreement. The JRC shall attempt to resolve any and all disputes before it for decision by consensus.

8.2.4.2. Escalation. The JRC shall attempt to resolve any and all disputes before it for decision by consensus. If the JRC is unable to reach a consensus with respect to any dispute for a period in excess of [***] (or such other period as the Parties may agree), then the dispute shall be submitted to the Chief Executive Officers of Repare and Corporate Officer of Ono for resolution. If the JRC is unable to reach a consensus with respect to any dispute for a period in excess of [***] following escalation (or such other period as the Parties may agree), then Section 8.2.4.3 (Tie-Breaking) shall apply. The phrases "approval by the JRC" and "election by the JRC" and similar phrases used in this Agreement shall mean approval in accordance with Section 8.2.4 or Section 8.1.7 (Decision Making), including the escalation and tie- breaking provisions provided therein, except as otherwise expressly set forth in this Agreement.

8.2.4.3. Tie-Breaking. If a dispute cannot be resolved under Section 8.2.4.2 (Escalation), then, subject to Sections 8.2.4.3(c) and 8.2.4.4:

(a) [***].

(b) Repare shall have the deciding vote if the dispute relates to: [***];

(c) Notwithstanding anything to the contrary in Section 8.2.4.3, neither Party may exercise its deciding vote pursuant to Section 8.2.4.3(a) or Section 8.2.4.3(b): [***];

8.2.4.4. Limitation of Power of JRC. Neither the JRC nor any subcommittee of the JRC shall have decision-making authority regarding, any of the following matters:

(a) approval of any amendment of Research Plan;

(b) any determination whether to discontinue the Polq Program other than in accordance with Section 2.2 (Polq Program Discontinuation);

(c) the imposition of any requirements on the other Party to undertake obligations beyond those for which it is responsible, or forgo any rights, under this Agreement;

(d) the imposition of any requirements that the other Party take or decline to take any action that would result in a violation of any Law or any agreement with any Third Party or the infringement of intellectual property rights of Third Parties;

(e) any matters that would excuse such Party from any of its obligations specifically enumerated under this Agreement; or

(f) modifying the terms of this Agreement or taking any action to expand or narrow the responsibilities of the JRC (but excluding amendments and modifications to any schedules or exhibits to this Agreement that are expressly permitted under this Agreement).

8.2.5. Term. Either Party shall have the right to terminate the JRC upon the expiration of the Research Term.

8.3. Working Groups. Upon mutual agreement, the Parties may establish other committees or working groups (each, a “**Working Group**”) as they deem appropriate. These Working Groups shall report to the JSC or JRC depending on the subject matter of such Working Group’s oversight. Each Working Group shall have equal number of representatives from each Party. Working Group may be established on an ad hoc basis for purposes of a specific project. In no event shall the authority of a Working Group exceed that of the JSC or JRC.

8.4. No Power to Amend. Unless otherwise agreed to by the Parties in writing, the JSC and JRC will have only the powers expressly assigned to it in this Agreement. In no event will any of them have any power to unilaterally amend, modify, or waive compliance with this Agreement.

8.5. Confidentiality. All information disclosed by either Party or its representatives to the other Party or its representatives under Section 8 shall be deemed to be Confidential Information of the disclosing Party and maintained in accordance with Section 9 (Confidentiality and Publication).

8.6. Modifications. The Parties shall meet from time to time to discuss whether any changes to the governance structure for the Collaboration are necessary or advisable.

9. CONFIDENTIALITY AND PUBLICATION

9.1. Nondisclosure Obligation.

9.1.1. All Confidential Information disclosed by one Party to the other Party under this Agreement shall be maintained in confidence by the receiving Party and shall not be disclosed to a Third Party or used for any purpose except as set forth herein without the prior written consent of the disclosing Party, except to the extent that such Confidential Information:

- (a) is known by the receiving Party at the time of its receipt, and not through a prior disclosure by the disclosing Party, as documented by the receiving Party’s business records;
- (b) is known to the public before its receipt from the disclosing Party, or thereafter becomes known to the public through no breach of this Agreement by the receiving Party;
- (c) is subsequently disclosed to the receiving Party by a Third Party who is not known by the receiving Party to be under an obligation of confidentiality to the disclosing Party; or

(d) is developed by the receiving Party independently of Confidential Information received from the disclosing Party, as documented by the receiving Party's business records.

9.1.2. Notwithstanding the obligations of confidentiality and non-use set forth above and in Section 9.1.3 below, a receiving Party may provide Confidential Information disclosed to it, and disclose the existence and terms of this Agreement as may be reasonably required in order to perform its obligations and to exploit its rights under this Agreement, and specifically to (i) Related Parties, and their employees, directors, agents, consultants, advisors or other Third Parties for the performance of its obligations and to exploit its rights hereunder (or for such entities to determine their interest in performing such activities) in accordance with this Agreement in each case who are under an obligation of confidentiality with respect to such information that is no less stringent than the terms of Section 9.1; (ii) Governmental Authorities or other Regulatory Authorities in order to obtain patents or perform its obligations or exploit its rights under this Agreement, provided that such Confidential Information shall be disclosed only to the extent reasonably necessary to do so; (iii) the extent required by Law, including by the rules or regulations of the United States Securities and Exchange Commission or similar regulatory agency in a country other than the United States or of any stock exchange or listing entity; (iv) (a) any bona fide actual or prospective underwriters, investors, lenders or Acquirers of a receiving Party and to consultants and advisors of such Third Party, and (b) any bona fide actual or prospective collaborators or strategic partners and to consultants and advisors of such Third Party, in each case of (a) and (b) during bona fide business discussions provided that the receiving party of such information is under an obligation or confidentiality with respect to such information that is no less stringent than the terms of Section 9.1; and (v) to Third Parties to the extent a Party is required to do so pursuant to the terms of an In-License existing as of the Effective Date. If a Party is required by Law to disclose Confidential Information that is subject to the non-disclosure provisions of Section 9.1, such Party shall promptly inform the other Party of the disclosure that is being sought in order to provide the other Party an opportunity to challenge or limit the disclosure. Notwithstanding Section 9.1.1, Confidential Information that is required to be disclosed by Law shall remain otherwise subject to the confidentiality and non-use provisions of Section 9.1. If either Party concludes that a copy of any of this Agreement shall be filed with the United States Securities and Exchange Commission or similar regulatory agency in a country other than the United States, such Party shall provide the other Party with a copy of such agreement showing any provisions hereof as to which the Party proposes to request confidential treatment, shall provide the other Party with an opportunity to comment on any such proposed redactions and to suggest additional redactions, and shall take such Party's comments into consideration before filing such agreement.

9.1.3. Each Party recognizes that the value to the other Party of the transactions under this Agreement depend, in part, on each Party protecting the secrecy of its Know-How. Therefore, without limiting any Party's right to license its Know-How, subject to the terms of this Agreement, in any way it chooses, each Party shall use commercially reasonable efforts to protect the confidentiality of its Know- How as determined in such Party's reasonable business judgment.

9.2. Publication and Publicity.

9.2.1. Publication. Ono and Repare each acknowledge the other Party's interest in publishing certain key results of the Collaboration. Each Party also recognizes the mutual interest in obtaining valid patent protection and in protecting trade secret information. Consequently, except for disclosures permitted pursuant to Section 9.1 (Nondisclosure Obligation) and 9.2.2 (Publicity), either Party wishing to make a publication or public presentation regarding any Drug Candidate, Licensed Drug Candidate or Licensed Product or that contains the Confidential Information of the other Party shall deliver to the other Party a copy of the proposed written publication or presentation at least [***] prior to submission for publication or presentation. The reviewing Party shall have the right (i) to require modifications to the publication or presentation for patent reasons, trade secret reasons or business reasons, and the publishing Party shall remove all Confidential Information of the other Party if requested by the reviewing Party, or (ii) to request a reasonable delay in publication or presentation in order to protect patentable information. If the reviewing Party requests a delay, the publishing Party shall delay submission or presentation for a period of [***] to enable the non-publishing Party to file patent applications protecting such Party's rights in such information. With respect to any proposed publications or disclosures by investigators or academic or non-profit collaborators, such materials shall be subject to review under this Section 9.2.1 and any such publication or disclosure by Ono shall include an express acknowledgment of the involvement of Repare.

9.2.2. Publicity. Except as set forth in Section 9.1 (Nondisclosure Obligation) and Section 9.2.1 (Publication) above and Section 9.3 (Press Release) below, the terms of any of this Agreement may not be disclosed by either Party, and neither Party shall use the name, Trademark, trade name or logo of the other Party or its employees in any publicity, news release or disclosure relating to any of this Agreement, its subject matter, or the activities of the Parties hereunder without the prior express written permission of the other Party, except as may be required by Law, including by the rules or regulations of the United States Securities and Exchange Commission or similar regulatory agency in any country other than the United States or of any stock exchange or listing entity, or except as expressly permitted by the terms hereof.

9.3. Press Release. Following the execution of this Agreement, the Parties shall issue a press release in the form mutually agreed by the Parties. After such initial press release, neither Party, shall issue a press release or public announcement relating to this Agreement without the prior written approval of the other Party, except that (i) a Party may, once a press release or other public statement is approved in writing by both Parties, make subsequent public disclosure of the information contained in such press release or other written statement without the further approval of the other Party, (ii) a Party may issue a press release or public announcement as required, in the reasonable judgment of the Party, by Law, including by the rules or regulations of the United States Securities and Exchange Commission, or similar regulatory agency in a country other than the United States or of any stock exchange or listing entity, and (iii) a Party may issue a full translation of the press release issued by the other Party. Any press release or public statement pursuant to this Section 9.3 (Press Release) shall not disclose Confidential Information of the other Party except in accordance with the terms of Section 9.1. The Party wishing to issue such press

release or make such a public statement shall provide the other Party with such draft at least [***] prior to such press release or public statement for other Party's review. The reviewing Party shall have the right to propose modifications to such press release or public statement for patent reasons or, trade secret reasons or business reasons, and the publishing Party will remove all Confidential Information of the reviewing Party if requested by the reviewing Party. Notwithstanding the foregoing, a Party may issue such press release or make such a public statement without [***] prior written notice to the other Party in case of (i) and (iii) above, and in case of (ii) above if in the reasonable judgment of such Party, such press release or public statement within the period shorter than [***] is required by Law, provided that the Party shall provide the other Party with a copy of such press release or other public statement no later than when it is issued or released. Restrictions and obligations pertaining to Ono under this [Section 9.3](#) (Press Release) shall be binding upon Ono's Related Parties. Repare shall make reasonable efforts to include provisions in any agreement with a Related Party providing for similar rights and obligations with respect to any press release issued by a Repare Related Party.

9.4. Survival. The provisions in [Section 9](#) shall survive the expiration or the termination of this Agreement for a period of [***] thereafter, except that with respect to trade secrets, such provisions and obligations shall survive for as long as the trade secrets remain secret.

10. LICENSES

10.1. License Grants to Ono.

10.1.1. License Grant during the Research Term. Subject to the terms and conditions of this Agreement, effective upon the DC Selection Date and continuing until the expiration of the Research Term, Repare hereby grants Ono a non-transferable (except as provided in [Section 16.1](#) (Assignment)), sublicensable (including through multiple tiers and subject to [Section 10.1.3](#) (Ono Sublicense Rights)), non-exclusive license under the Repare Technology and Repare's interest in the Joint Technology to conduct the Research Activities allocated to Ono under the Research Plan for the Polq Program in or for the Ono Territory.

10.1.2. Exclusive License Grant during the Term. Subject to the terms and conditions of this Agreement, effective upon the DC Selection Date, Repare hereby grants Ono a non-transferable (except as provided in [Section 16.1](#) (Assignment)), sublicensable (including through multiple tiers and subject to [Section 10.1.3](#) (Ono Sublicense Rights)), exclusive (even as to Repare, except as required for Repare to exercise its rights and perform its obligations hereunder, for example with respect to the Manufacture of Licensed Drug Candidates and Licensed Products) license in the Ono Territory under the Repare Technology and Repare's interest in the Joint Technology to research (other than Research Activities as set forth in [Section 10.1.1](#)), Develop, Manufacture, have Manufactured, use, Commercialize, sell, distribute, market, promote, offer for sale, export and import Licensed Drug Candidates, including but not limited to back-up and follow-on Drug Candidates created by Repare after expiration of the Research Term, and Licensed Products in or for the Ono Territory. The exclusive license granted hereunder shall be royalty-bearing for the Royalty Term applicable to each Licensed Product in each country in the Ono Territory, and, upon expiration of the Royalty Term applicable to such Licensed Product in such country, shall convert to a fully-paid-up, irrevocable, perpetual exclusive license (even as to Repare), sublicensable without restriction in such country.

10.1.3. Ono Sublicense Rights.

(a) Ono shall have the right to sublicense any of its rights under Section 10.1.1 and Section 10.1.2 to any of its Affiliates or to any Third Party without the prior consent of Repare, subject to the requirements of this Section 10.1.3 (Ono Sublicense Rights). Each sublicense granted by Ono pursuant to Section 10.1.3 (Sublicense Rights) shall be subject and subordinate to the terms of this Agreement and shall contain provisions consistent with those in this Agreement. Ono shall promptly provide Repare with a copy of the fully executed sublicense agreement with its Sublicensee covering any sublicense granted hereunder (which copy may be redacted to remove provisions which are not necessary to monitor compliance with Section 10.1.3 (Ono Sublicense Rights)), and each such sublicense agreement shall contain the following provisions: (i) a requirement that the Sublicensee comply with the confidentiality and non-use provisions of Section 9 (Confidentiality and Publication) with respect to Repare's Confidential Information and (ii) if such sublicense agreement contains a sublicense of Licensed Product Commercialization rights, such sublicense agreement shall also contain a requirement that the Sublicensee submit applicable sales or other reports to Ono to the extent necessary or relevant to the reports required to be made or records required to be maintained under this Agreement. Notwithstanding any sublicense, Ono shall remain primarily liable to Repare for the performance of all of Ono's obligations under, and Ono's compliance with all provisions of, this Agreement.

(b) Ono shall cause every Sublicensee of Ono, as part of the relevant sublicense or other agreement, to grant to Ono a perpetual, fully-paid, worldwide, fully sublicensable (through multiple tiers) exclusive (other than with respect to such Sublicensee's background technology) license back to Ono under and to, any Know-How or Patent Rights made, developed or Invented by such Sublicensee that are necessary or useful for the research, Development, Manufacture, have Manufactured or Commercialization of the Drug Candidates, Licensed Drug Candidates or Licensed Products in the Field (the "**Ono Licensed Back Improvements**"). Solely in the event that Ono acquires the Ono Licensed Back Improvements from a Sublicensee, may Ono grant such Sublicensee a license to the Repare Licensed Back Improvements.

10.1.4. Sen-yo Jisshiken Tohroku. Upon Ono's request, Repare agrees that Ono shall be entitled to register, at Ono's sole expense, Ono's license with respect to the Repare Patent Right and Joint Patent Right in the Ono Territory ("**Sen-yo Jisshiken Tohroku**") in accordance with the Patent Law of Japan or any corresponding patent Laws in other countries in the Ono Territory; provided that such registration is not intended to, and shall not, affect the allocation of prosecution and enforcement rights and obligations set forth in Section 14 below. At Ono's request and expense, Repare agrees to render reasonable assistance for such registration by Ono, including providing Ono with any documents duly signed by authorized personnel of Repare which are reasonably requested by Ono and necessary to effect such registration.

10.2. License Grants to Repare.

10.2.1. License Grants during the Research Term. Subject to the terms and conditions of this Agreement, effective upon the DC Selection Date and during the Research Term, Ono hereby grants Repare a non-transferable (except as provided in [Section 16.1](#) (Assignment)), non-sublicensable, non-exclusive license under the Ono Technology and Ono's interest in the Joint Technology to conduct the Research Activities allocated to Repare under the Research Plan for the Polq Program in the Field in the Repare Territory.

10.2.2. License Grant for Repare Territory during the Term. Subject to the terms and conditions of this Agreement, effective upon the DC Selection Date, Ono hereby grants Repare a non-transferable (except as provided in [Section 16.1](#) (Assignment)), sublicensable (including through multiple tiers and subject to [Section 10.2.3](#) (Repare Sublicense Rights)), non-exclusive, royalty-free license under the Ono Technology and Ono's interest in the Joint Technology to research (other than the Research Activities as set forth in [Section 10.2.1](#)), Develop, Manufacture, have Manufactured, use, Commercialize, sell, distribute, market, promote, offer for sale, export and import Licensed Drug Candidates and Licensed Products in the Field in or for the Repare Territory.

10.2.3. Repare Sublicense Rights.

(a) Repare shall have the right to sublicense any of its rights under [Section 10.2.2](#) (License Grant for Repare Territory) to any of its Affiliates or to any Third Party without the prior consent of Ono, subject to the requirements of [Section 10.2.3](#) (Repare Sublicense Rights). Each sublicense granted by Repare pursuant to [Section 10.2.3](#) (Repare Sublicense Rights) shall be subject and subordinate to this Agreement and shall contain provisions consistent with those in this Agreement. Repare shall promptly provide Ono with a copy of the fully executed sublicense agreement with its Sublicensee covering any sublicense granted hereunder (which copy may be redacted to remove provisions which are not necessary to monitor compliance with [Section 10.2.3](#) (Repare Sublicense Rights)), and each such sublicense agreement shall contain a requirement that the Sublicensee comply with the confidentiality and non-use provisions of [Section 9](#) (Confidentiality and Publication) of this Agreement with respect to Ono's Confidential Information. Notwithstanding any sublicense, Repare shall remain primarily liable to Ono for the performance of all of Repare's obligations under, and Repare's compliance with all provisions of, this Agreement.

(b) Repare shall use Commercially Reasonable Efforts to cause any Sublicensee of Repare, as part of the relevant sublicense or other agreement, to provide a perpetual, fully-paid, worldwide, fully sublicensable (through multiple tiers) exclusive (other than with respect to such Sublicensee's background technology) license back to Repare under and to, any Know-How or Patent Rights made, developed or Invented by such Sublicensee that are necessary or useful for the research, Development, Manufacture, having Manufactured or Commercialization of the Drug Candidates, Licensed Drug Candidates or Licensed Products in the Field ("**Repare Licensed Back Improvements**"). Solely in the event that Repare acquires the Repare Licensed Back Improvements from a Sublicensee, may Repare grant such Sublicensee a license to the Ono Licensed Back Improvements.

10.3. Compliance with In-Licenses. All licenses and other rights granted by one Party (the “**Granting Party**”) to the other Party (the “**Non-Granting Party**”) under this Agreement are subject to the rights and obligations of the Granting Party under such Granting Party’s In-Licenses in effect as of the Effective Date. The Non-Granting Party shall comply with all applicable provisions of such Granting Party’s In-Licenses of which the Non-Granting Party has been informed of in writing by the Granting Party, and shall perform and take such actions as may be required to allow the Granting Party to comply with its obligations thereunder, including obligations relating to sublicensing, patent matters, confidentiality, reporting, audit rights, indemnification and diligence. Without limiting the foregoing, the obligations set forth on Schedule 10.3 with respect to the NYU Agreement shall be binding upon Ono as if Ono were a party to the NYU Agreement; provided, however, that if Ono’s indemnification is attributed to the cause of Repare or its Sublicensee, Repare shall and shall cause its Sublicensee, as the case maybe, to compensate Ono’s damages incurred by such Ono’s indemnification, and Repare shall be responsible for all royalty and other payment obligations under the NYU Agreement. Further, the Non-Granting Party shall prepare and deliver to the Granting Party any additional reports required under such Granting Party’s In-Licenses in effect as of the Effective Date and requested by the Granting Party, in each case sufficiently in advance to enable the Granting Party to comply with its obligations under such In-Licenses. This Section 10.3 shall survive termination as it relates to any license granted by one Party to the other pursuant to Section 15.3 (Effect of Termination).

10.4. Polq Non-Specific IP.

10.4.1. If a Party becomes aware after the Effective Date that research, Development, Manufacturing, having Manufactured or Commercialization of Drug Candidates, Licensed Drug Candidates and Licensed Products in the Field in its Territory would infringe or misappropriate Know-How or Patent Right of the other Party which is non-public and not expressly licensed to such Party under this Agreement (the “**Polq Non-Specific IP**”), then the other Party grants to such Party non-exclusive, irrevocable and royalty-free license under such Polq Non-Specific IP to research, Development, Manufacturing, having Manufactured or Commercialization of Drug Candidates, Licensed Drug Candidates and Licensed Products in the Field in or for its Territory in accordance with the terms of this Agreement. For example, the Polq Non-Specific IP that is to be covered by the non-exclusive license includes formulation IP that is not specific to Polq but excludes compositions of matter or Compounds that are not expressly covered by this Agreement.

10.4.2. Except otherwise set forth in Section 10.4.1, in case a Party requests the other Party for a license under Polq Non-Specific IP to research, Develop, Commercialize, Manufacture and have Manufactured of Drug Candidates, Licensed Drug Candidates and Licensed Products in the Field in its Territory, then both Parties will negotiate in good faith towards such license grant.

10.5. Bankruptcy and Bankruptcy Code. All rights and licenses granted under or pursuant to this Agreement by a Party to the other, including those set forth in [Section 10](#) (Licenses), are and shall otherwise be deemed to be licenses of right to “intellectual property” as defined under Bankruptcy Code. The Parties agree that the Parties and their respective Sublicensees, as sublicensees of such rights under this Agreement, shall retain and may fully exercise all of their rights and elections under the Bankruptcy Code. The Parties further agree that upon commencement of a proceeding by or against a Party (the “**Bankrupt Party**”) under the Bankruptcy Code, the other Party (the “**Non-Bankrupt Party**”) will be entitled to a complete duplicate of, or complete access to (as the Non-Bankrupt Party deems appropriate), all such intellectual property and all embodiments of such intellectual property. Such intellectual property and all embodiments of such intellectual property will be promptly delivered to the Non-Bankrupt Party (a) upon any such commencement of a proceeding and upon written request by the Non-Bankrupt Party, unless the Bankrupt Party elects to continue to perform all of its obligations under this Agreement, or (b) if not delivered under (a) above, upon the rejection of this Agreement by or on behalf of the Bankrupt Party and upon written request by the Non-Bankrupt Party. All rights, powers and remedies of a Non-Bankrupt Party hereunder are in addition to and not in substitution for any and all other rights, powers and remedies now or hereafter existing at Law in the event of the commencement of a proceeding under a Bankruptcy Code with respect to the Bankrupt Party. The Parties agree that, in addition to the foregoing rights, they intend for the right to contract directly with any Third Party to perform any obligations of the Bankrupt Party hereunder and complete such contracted work to apply to the maximum extent permitted by law and to be enforceable under the Bankruptcy Code. This Agreement shall be effective before, during and after the commencement of any bankruptcy or insolvency proceeding under the Bankruptcy Code. The provisions of this Agreement shall be binding on any receiver, receiver-manager, proposal trustee, trustee, monitor or Person acting in similar capacity (an “**Insolvency Officer**”) for Repare or over Repare’s business, undertaking, property or assets in any bankruptcy or insolvency proceeding under the Bankruptcy Code, and all references to Repare under this Agreement shall be deemed to include any Insolvency Officer.

10.6. No Other Rights. Except as otherwise expressly provided in this Agreement, under no circumstances shall a Party, as a result of this Agreement, obtain any ownership interest or other right in any Know-How, Patent Rights or other intellectual property rights of the other Party, including items owned, controlled or developed by the other Party, or provided by the other Party to the receiving Party at any time pursuant to this Agreement.

11. FINANCIAL TERMS; ROYALTY REPORTS; PAYMENTS AND AUDITS

11.1. Upfront Fee. Ono shall pay to Repare a non-refundable, non-creditable upfront fee equal to One Hundred Ten Million Japanese Yen (JPY 110,000,000) within fifteen (15) Business Days of receipt by Ono of invoice for such upfront fee and the Taxation Documents delivered from Repare to Ono.

11.2. Development Milestone Payments. Ono will provide Repare with written notice of the achievement by Ono or any of its Related Parties of any development milestone event set forth in this [Section 11.2](#) within [***] after such event has occurred. Repare shall invoice Ono within [***] of receipt of such written notice, and Ono shall pay the associated milestone payment within [***] of the receipt of such invoice and the Taxation Documents delivered from Repare to Ono. Each milestone payment shall be payable only once as applicable, upon the first occurrence of the corresponding milestone event without regard to subsequent achievements of such milestones by any other Compound (including back-up or follow-on Compound) or another indication of the first Licensed Drug Candidate.

Development Milestone Event

1. Upon [***].
2. [***].
3. [***].
4. [***].
5. Upon [***].
6. Upon [***].

Milestone Payment

- ¥[***]
- ¥[***]
- ¥[***]
- ¥[***]
- ¥[***]
- ¥[***]

The total amount of the development milestone payments to be paid by Ono to Repare under this Section 11.2 shall not exceed Five Billion and One Hundred Ten Million Japanese Yen (¥5, 110,000,000). [***].

11.3. Sales Milestones. Ono shall provide Repare with written notice of the achievement during the Royalty Term by Ono or any of its Related Parties of any sales milestone event set forth below in this Section 11.3 within [***] after the end of the Calendar Quarter in which such event has occurred. Repare shall invoice Ono within [***] of receipt of such written notice by Ono, and Ono shall remit the associated milestone payment within [***] of the receipt of such invoice and the Taxation Documents described in Section 11.10 delivered from Repare to Ono. Notwithstanding the foregoing, in the event that more than one of the sales milestone events are achieved simultaneously by a Licensed Product, Ono will make only one sales milestone payment at such time, which will be for the sales milestone event requiring the highest sales milestone payment, and payment for achievement of the lower sales milestone shall be due in the next Calendar Year. Each sales milestone payment set forth below shall be payable only once, regardless of the number of times a sales milestone event is achieved.

Sales Milestone Event

1. Upon [***].
2. Upon [***].
3. Upon [***].

Sales Milestone Payment

- ¥[***]
- ¥[***]
- ¥[***]

Each milestone payment shall be payable only once as applicable, upon the first occurrence of the corresponding milestone event without regard to subsequent achievements of such milestones. The total amount of the sales milestone payments to be paid by Ono to Repare under this Section 11.3 shall not exceed Twelve Billion and One Hundred Million Japanese Yen (¥12,100,000,000).

11.4. Royalties Payable to Repare.

11.4.1. Royalty Rates. Subject to the terms and conditions of this Agreement, Ono shall pay to Repare royalties on annual Net Sales by Ono and its Related Parties of Licensed Products during the Royalty Term, as follows:

Annual Net Sales (during Ono Fiscal Year) of a Licensed Product in the Ono Territory	Royalty (as a percentage of Net Sales)
[***].	[***]%
[***].	[***]%
[***].	[***]%

11.4.2. Royalty Term. The period during which the royalties set forth in Section 11.4.1 (Royalty Rates), on a Licensed Product-by-Licensed Product and country-by-country basis, shall commence with the First Commercial Sale of a Licensed Product in a country in the Ono Territory and continue until the latest of (a) the expiration of the last Valid Claim of such Licensed Product in such country or (b) the tenth (10th) anniversary of the First Commercial Sale of such Licensed Product in such country (each such period, a “Royalty Term”).

11.4.3. Third Party Royalty Offsets. Ono may reduce the amount of royalties payable under Section 11.4 (Royalties Payable to Repare) with respect to any Licensed Product on a country-by-country basis by [***] of the [***] payable by Ono to any Third Party in consideration for a license, granted after the Effective Date, to any Patent Right which claim, or cover or would be practiced by Development, Manufacture, having Manufactured or Commercialization of such Licensed Product in such country; provided, however, that the royalties payable under Section 11.4.1 (Royalty Rates) with respect to such Licensed Product on a country-by-country basis shall not be reduced in any such event below [***] of the amounts set forth in Section 11.4.1 (Royalty Rates) by applying the reduction set forth in this Section 11.4.3; and provided, further, that [***].

11.4.4. Reduction for Generic Competition. Notwithstanding the foregoing, on a country-by-country basis in the Territory, the applicable royalty rates for Net Sales of a Licensed Product set forth in Section 11.4.1 (Royalty Rates) will be reduced by [***] of the royalty rates stipulated in Section 11.4.1 (Royalty Rates) following a launch of a Generic Product in such country. For clarity, if the royalty reductions set forth in both (a) this Section 11.4.4 and (b) Section 11.4.5 apply, the applicable royalty will be reduced to [***] of the royalty rates stipulated in Section 11.4.1 (Royalty Rates); provided that in no event shall the royalty rates be reduced below [***].

11.4.5. Royalty Adjustment for No Repare Patent Rights. If, on a country-by-country and Licensed Product-by-Licensed Product basis at any time during the Royalty Term, the Development, Manufacture, having Manufactured, Commercialize, use, offer for sale, sale or importation of a Licensed Product is not covered by any Valid Claim in such country, then the royalties payable pursuant to Section 11.4 (Royalties Payable to Repare) on the Net Sales of such Licensed Product in such country shall thereafter be reduced to [***] of the amounts otherwise payable pursuant to Section 11.4 (Royalties Payable to Repare) with respect to such Licensed Product in such country.

11.4.6. Royalty Floor. Notwithstanding anything to the contrary herein, in no event during the applicable Royalty Term for a Licensed Product in a country of the Ono Territory shall the royalties payable to Repare hereunder for such Licensed Product in such country for any Calendar Quarter be reduced, by the application of the reductions or credits described in Sections 11.4.3 (Third Party Royalty Offsets), 11.4.4 (Reduction for Generic Competition) and 11.4.5 (Royalty Adjustments for No Repare Patent Rights), whether taken together or separately, below [***].

11.5. Reports; Payment of Royalty. During the Term, following the First Commercial Sale of any Licensed Product in any country in the Ono Territory, Ono shall furnish to Repare (a) an estimate within [***] after the end of each Calendar Quarter of the Net Sales of each Licensed Product in each country of the Ono Territory and the royalties payable under this Agreement; and (b) a written report (each, a “**Royalty Report**”) within [***] after the end of each Calendar Quarter showing, on a Licensed Product-by-Licensed Product and country-by-country basis, the Net Sales of each Licensed Product in each country of the Ono Territory and the royalties payable under this Agreement, along with (i) gross sales of the Licensed Product in the Ono Territory in the relevant Calendar Quarter on a country-by-country basis, (ii) Net Sales in the relevant Calendar Quarter on a country-by-country basis, (iii) all relevant exchange rate conversions in accordance with Section 11.7.3, (iv) all deductions in accordance with Sections 1.87 and 11.4 and (v) the amount of any payment due from Ono to Repare, calculated in accordance with Section 11. Simultaneously with the delivery of each such Royalty Report, Ono shall pay to Repare the total amounts due under Section 11.4 for the period covered by such Royalty Report subject to Ono’s receipt of Taxation Documents. Ono and its Related Parties involved in Commercializing Licensed Products shall keep complete and accurate records in sufficient detail to enable the royalties and other payments payable hereunder to be determined.

11.6. Audits.

11.6.1. Upon the written request of a Party and not more than once in each Calendar Year, the other Party and its Related Parties shall permit an independent certified public accounting firm of internationally-recognized standing selected by the requesting Party and reasonably acceptable to the other Party, at the requesting Party's expense except as set forth below, to have access during normal business hours to such of the records of the other Party as may be reasonably necessary to verify the accuracy of the royalty and other amounts payable or reports under this Agreement (including Research Services Payments and Cost of Goods) for any year ending not more than [***] prior to the date of such request for the sole purpose of verifying the basis and accuracy of payments made and compliance with the financial terms of this Agreement. Notwithstanding the foregoing, a Party may not make more than one (1) such request in a Calendar Year.

11.6.2. If such accounting firm identifies a discrepancy made during such period, the appropriate Party shall pay the other Party the amount of the discrepancy, within [***] after the date the requesting Party delivers to the other Party such accounting firm's written report so concluding, or as otherwise agreed by the Parties in writing. The fees charged by such accounting firm shall be paid by the requesting Party, unless such discrepancy represents (a) an underpayment by the other Party or (b) an overcharge by the other Party, in each case (a) and (b) above, of at least [***] of the payments due in the audited period, in which case such fees shall be paid by the other Party.

11.6.3. Unless an audit for such year has been commenced prior to and is ongoing upon the [***] of the end of such year, the calculation of royalties, expense reimbursement and other payments payable with respect to such year shall be binding and conclusive upon both Parties, and each Party and its Related Parties shall be released from any further liability or accountability with respect to such royalties or expense reimbursement for such year.

11.6.4. Each Party shall treat all financial information subject to review under Section 11.6 or under any sublicense agreement in accordance with the confidentiality and non-use provisions of Section 9 (Confidentiality and Publication), and shall cause its accounting firm to enter into a confidentiality agreement with the other Party or its Related Parties obligating it to retain all such information in confidence pursuant to such confidentiality agreement, which terms shall be no less stringent than the provisions of Section 9 (Confidentiality and Publication). The accounting firm shall only share the results of the audit, not the underlying records, with the auditing Party. Any final audit report shall be shared by the auditing Party with the other Party.

11.7. Payment Exchange Rate.

11.7.1. Payment Method. All payments to be made by Ono under this Agreement shall be made by bank wire transfer in immediately available funds to bank account as may be designated in writing by from time to time. The first designated bank account of Repare shall be as follows: [***]

11.7.2. Currency Conversion. All amounts specified in this Agreement are in Japanese Yen. All payments hereunder shall be made in United States dollars. In the case Ono makes payment under this Agreement, all such payment shall be converted into United States dollars at the exchange rate (TTS rate) for the conversion of Japanese Yen into United States dollars posted by the MUFG Bank, Ltd., on the date on which Ono will make the applicable payment hereunder, provided that no deduction from any amount shall be made in respect of bank fees or charges.

11.7.3. Conversion of Net Sales. In the case of Net Sales made in one or more currencies other than Japanese Yen during a Calendar Quarter (each a “**Third- Country Currency**”). The amount of Net Sales made during any Calendar Quarter shall be determined by converting the portion of such Net Sales made in each Third- Country Currency into Japanese Yen, using the exchange rate for the conversion of foreign currency into Japanese Yen posted by the MUFG Bank, Ltd., between the relevant Third-Country Currency, on the one hand, and Japanese Yen, on the other hand. All currency conversions described in this Section 11.7.3 shall be made in accordance with IFRS, to the extent reasonable and consistently applied.

11.8. Late Payments. If a Party does not receive payment of any sum due to it on or before the due date therefor, simple interest shall thereafter accrue on the sum due to such Party from the due date until the date of payment at a per-annum rate of [***], or the maximum rate allowable by applicable Law, whichever is less.

11.9. Blocked Payments. If, by reason of Laws in any jurisdiction in a Party’s Territory, it becomes impossible or illegal for a Party to transfer milestone payments, royalties or other payments under this Agreement to the other Party, (a) the payor shall promptly notify the payee; and (b) the payor shall pay the payee the amounts due from an account in another jurisdiction in the payor’s Territory; provided, however, that if there is no jurisdiction in the payor’s Territory from which it is legal for the payor to transfer payments to the payee (i) the payor shall deposit such payments in local currency in the relevant jurisdiction to the credit of the payee in a recognized banking institution designated by the payee or, if none is designated by the payee within a period of [***], in a recognized banking institution selected by the payor and identified in a written notice given to the payee, and (ii) the payee may terminate this Agreement if payor is not permitted by Law to transfer payments to payee for a period of [***].

11.10. Taxes. In the event that Ono is required to withhold and pay over any tax to the Governmental Authorities in any country in the Ono Territory in respect of any payment to Repare, the amount thereof shall be deducted from the payment to be made by Ono and timely and properly paid over to such Governmental Authorities; provided that Ono shall furnish Repare with copies of receipts and other documentation evidencing such withholding. Repare shall provide to Ono any Taxation Documents. Without limiting the foregoing, the Parties shall exercise their reasonable efforts to ensure that any withholding taxes imposed are reduced as far as possible under the provisions of any applicable tax treaty, and shall cooperate in filing any forms required for such reduction. Each Party shall cooperate with the other and furnish the other Party with appropriate documents to secure application of the most favorable rate of withholding tax under applicable Law (or exemption from such withholding tax payments, as applicable). If withholding tax leakage with respect to any payments from Ono to Repare under this Agreement is pointed out through the tax inspection by tax authority, Repare shall bear any and all additional tax cost including but not limited to the withholding tax and additional tax for no return after due date. Within [***] after Repare’s receipt of Ono’s invoice for such additional tax cost, Repare shall reimburse such any and all additional tax cost by bank wire transfer in immediately available funds to bank account designated by Ono.

11.11. Payment of Back Royalties. If Ono would owe a royalty payment to Repare under Section 11 (Financial Terms; Royalty Reports; Payments and Audits) but for a decision by a court or other governmental agency of competent jurisdiction holding a patent claim unenforceable, unpatentable or invalid and if such decision is later vacated or reversed by a final nonappealable decision by a court or other governmental agency of competent jurisdiction, Repare may invoice Ono for such unpaid royalty payments after such decision is vacated or reversed and Ono shall make any such unpaid royalty payments to Repare within [***] after receipt of such invoice.

12. REPRESENTATIONS, WARRANTIES AND COVENANTS

12.1. Mutual Representations and Warranties as of the Effective Date. Each Party represents and warrants to the other Party that, as of the Effective Date:

12.1.1. Such Party is a corporation duly organized, validly existing and in good standing under the Laws of its jurisdiction of incorporation or formation.

12.1.2. Such Party has all requisite corporate power and corporate authority to enter into this Agreement and to carry out its obligations under this Agreement.

12.1.3. All requisite corporate action on the part of such Party, its directors and stockholders required by applicable Law for the authorization, execution and delivery by such Party of this Agreement, and the performance of all obligations of such Party under this Agreement, has been taken.

12.1.4. The execution, delivery and performance of this Agreement, and compliance with the provisions of this Agreement, by such Party do not and shall not: (a) violate any provision of applicable Law or any ruling, writ, injunction, order, permit, judgment or decree of any Governmental Authority, (b) constitute a breach of, or default under (or an event which, with notice or lapse of time or both, would become a default under) or conflict with, or give rise to any right of termination, cancellation or acceleration of, any agreement, arrangement or instrument, whether written or oral, by which such Party or any of its assets are bound, or (c) violate or conflict with any of the provisions of such Party's organizational documents (including any articles or memoranda of organization or association, charter, bylaws or similar documents).

12.1.5. No consent, approval, authorization or other order of, or filing with, or notice to, any Governmental Authority or other Third Party is required to be obtained or made by such Party in connection with the authorization, execution and delivery by such Party of this Agreement.

12.1.6. Such Party has not entered into any agreement with any Third Party that grants such Third Party any rights that would be in conflict with a given Drug Candidate becoming a Licensed Drug Candidate or Licensed Product under this Agreement.

12.1.7. This Agreement is legally binding upon it and enforceable in accordance with its terms, subject to the general principles of equity and to bankruptcy, insolvency, moratorium and other similar Law affecting the enforcement of creditors' rights generally.

12.1.8. Neither it nor any of its Affiliates have been debarred or are subject to debarment and neither Party nor any of its Affiliates have used in any capacity, in connection with its Development of a given Drug Candidate becoming a Licensed Drug Candidate or a Licensed Product, any Person that has been debarred pursuant to Section 306 of the U.S. Federal Food, Drug, and Cosmetic Act, as amended, or any comparable Law in any country, or that is the subject of a conviction described in such section or any comparable Law in any country.

12.1.9. Neither it nor its Affiliates, nor any of its or their respective directors, officers, employees or agents have (a) committed an act, (b) made a statement or (c) failed to act or make statement, in any case ((a), (b) or (c)), that (x) would be or create an untrue statement of material fact or fraudulent statement to the FDA or any other Regulatory Authority with respect to the Development, Manufacture, having Manufactured, use or Commercialization of a given Drug Candidate becoming a Licensed Drug Candidate or a Licensed Product or (y) could reasonably be expected to provide a basis for the FDA, MHLW or any other Regulatory Authority to invoke its policy respecting "Fraud, Untrue Statements of Material Facts, Bribery and Illegal Gratuities", set forth in 56 Fed. Reg. 46191 (September 10, 1991) and any amendments thereto or any analogous Laws or policies, with respect to the Development, Manufacture, having Manufactured, use or Commercialization of a given Drug Candidate becoming a Licensed Drug Candidate or a Licensed Product.

12.2. Additional Representations and Warranties of Repare. Repare represent and warrants to Ono that, as of the Effective Date:

12.2.1. Repare is the sole and exclusive owner of, or otherwise Controls pursuant to a Repare In-License, the Repare Technology.

12.2.2. Repare has sufficient legal or beneficial title and ownership of, or sufficient license rights under, the Repare Technology to grant the licenses under such Repare Technology to Ono pursuant to this Agreement and Repare has not granted to any Third Party any rights or licenses under the Repare Technology that would conflict with the licenses granted to Ono hereunder.

12.2.3. (a) Schedule 12.2.3 (Repare Patent Rights) sets forth (i) a complete and accurate list of the Repare Patent Rights owned, either solely or jointly, by Repare, (ii) a complete and accurate list of the Repare Patent Rights sublicensable (including through multiple tiers) and licensed exclusively (even as to the licensor) to Repare and (iii) to the best knowledge of Repare and its Affiliates, a complete and accurate list of the Repare Patent Rights licensed nonexclusively to Repare, (b) to the best knowledge of Repare and its Affiliates, the Repare Patent Rights are, or, upon issuance, will be, valid and enforceable patents and no Third Party has challenged or threatened to challenge the scope, validity or enforceability of any Repare Patent Rights (including, by way of example, through opposition or the institution or written threat of institution of interference, nullity or similar invalidity proceedings before the

United States Patent and Trademark Office or any analogous foreign Governmental Authority), and as to each patent application, has not lapsed in the case of a provisional patent application, or been cancelled, withdrawn or abandoned without the possibility of revival, and (c) Repare or its Affiliates have timely paid all filing and renewal fees payable with respect to such Repare Patent Rights for which Repare controls prosecution and maintenance. Schedule 12.2.3 (Repare Patent Rights) indicates whether each Repare Patent Right is owned exclusively by Repare, is owned jointly by Repare and one or more Third Parties, or is licensed to Repare.

12.2.4. Schedule 12.2.4 (Repare In-Licenses) sets forth a complete and accurate list of all agreements between Repare and a Third Party entered into prior to the Effective Date pursuant to which Repare Controls (or has the right to obtain Control of) Know-How or Patent Rights that are reasonably necessary to Develop, Manufacture, have Manufactured or Commercialize Drug Candidates, Licensed Drug Candidates and Licensed Products in the Field. Repare has provided Ono with true and correct copies of each of the Repare In-Licenses. Without limiting the generality of the foregoing, Repare has obtained all necessary consents and fulfilled all necessary conditions, if any, to sublicense to Ono under this Agreement such Know- How and Patent Rights licensed to Repare under Repare In-Licenses.

12.2.5. To the best knowledge of Repare and its Affiliates, Repare and its Affiliates have complied with all applicable Laws, including any duties of candor to applicable patent offices, in connection with the filing, prosecution and maintenance of the Repare Patent Rights.

12.2.6. To the best knowledge of Repare and its Affiliates, neither Repare nor its Affiliates are in breach or default under any existing Repare In-License, and neither Repare nor its Affiliates have received any written notice of breach or default with respect to any existing Repare In-License.

12.2.7. Repare or its Affiliates have obtained from all inventors of Repare Technology owned by Repare or its Affiliates valid and enforceable agreements assigning to Repare each such inventor's entire right, title and interest in and to all such Repare Technology.

12.2.8. There is no (a) claim, demand, suit, proceeding, arbitration, inquiry, investigation or other legal action of any nature, civil, criminal, regulatory or otherwise, pending or, to the best knowledge of Repare and its Affiliates, threatened against Repare or any of its Affiliates or (b) judgment or settlement against or owed by Repare or any of its Affiliates, in each case in connection with the Repare Technology.

12.2.9. To the best knowledge of Repare and its Affiliates, the use, Development, Manufacture, having Manufactured or Commercialization by Repare or Ono (or their respective Related Parties) of a given Drug Candidate becoming a Licensed Drug Candidate or a Licensed Product as formulated and manufactured as of the Effective Date, or as intended to be formulated and manufactured as of the Effective Date, but in each case excluding any potential Combination Products, (a) does not and will not infringe any issued patent of any Third Party and (b) will not infringe the claims of any published Third Party patent application when and if such claims were to issue in their current form.

12.2.10. True and complete copies of (a) the agreements set forth on Schedule 12.2.4 (Repare In-Licenses), (b) all of the agreements relating to the Polq Program and (c) any funding agreement between Repare and any government or Governmental Authority or any other agreement to which Repare is a party under which requirements and obligations will apply to Ono under this Agreement, in each case (a) – (c) have been made available to Ono through an electronic data room.

12.2.11. Neither Repare nor any of its Affiliates have knowledge of any infringement or misappropriation of any Repare Technology by any Third Party.

12.2.12. Any Repare Technology is free and clear of liens, charges or encumbrances other than licenses granted to or by Third Parties that are not inconsistent with the rights and licenses granted to Ono hereunder.

12.2.13. Repare and its Affiliates have taken all commercially reasonable steps to protect, preserve and maintain the confidentiality of all confidential or non- public information included in Repare Know-How, including by disclosing such Repare Know-How to Third Parties only under terms of confidentiality. To the best knowledge of Repare and its Affiliates, no breach of such confidentiality obligations has been committed by any Third Party.

12.3. Warranty Disclaimer. EXCEPT AS OTHERWISE EXPRESSLY PROVIDED IN THIS AGREEMENT, NEITHER PARTY MAKES ANY REPRESENTATION OR EXTENDS ANY WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, TO THE OTHER PARTY WITH RESPECT TO ANY TECHNOLOGY, ONO TECHNOLOGY (WITH RESPECT TO ONO), REPARE TECHNOLOGY (WITH RESPECT TO REPARE), PRODUCT, PROGRAM, GOODS, SERVICES, RIGHTS OR OTHER SUBJECT MATTER OF THE AGREEMENT AND HEREBY DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT WITH RESPECT TO ANY AND ALL OF THE FOREGOING. EACH PARTY HEREBY DISCLAIMS ANY REPRESENTATION OR WARRANTY THAT THE DEVELOPMENT, MANUFACTURE OR COMMERCIALIZATION OF ANY LICENSED DRUG CANDIDATE OR LICENSED PRODUCT PURSUANT TO THE AGREEMENT SHALL BE SUCCESSFUL OR THAT ANY PARTICULAR SALES LEVEL WITH RESPECT TO ANY LICENSED PRODUCT SHALL BE ACHIEVED.

12.4. Exclusivity.

12.4.1. During the term of the Agreement, Repare and its Affiliates may work outside of the Ono Territory on any Compound or product, including any product which relies upon the inhibition or modulation of Polq to achieve its primary therapeutic effect, either alone or with Third Parties, but shall not and shall cause its Affiliates not to, either alone or with Third Parties, (a) research or Develop any product that it reasonably believes relies on the inhibition or modulation of Polq to achieve its primary therapeutic effect in the Ono Territory, and (b) submit materials to any Regulatory Authority for the purpose of obtaining Regulatory Approval to Manufacture for commercial purpose, or Commercialize, sell, distribute, market, promote, offer for sale, export or import any product that it reasonably believes relies on the inhibition or modulation of Polq, to achieve its primary therapeutic effect in the Ono Territory.

12.4.2. During the term of the Agreement, Ono shall not and shall cause its Affiliates not to, either alone or with Third Parties, research, Develop, Manufacture or Commercialize any product that it reasonably believes relies on the inhibition or modulation of Polq to achieve its primary therapeutic effect other than the Drug Candidates, Licensed Drug Candidate or Licensed Product anywhere in the Ono Territory.

12.5. Certain Other Covenants.

12.5.1. Compliance. Each Party and its Related Parties shall conduct the Collaboration and the Development, Manufacture, having Manufactured and Commercialization of the Drug Candidates, Licensed Drug Candidates and Licensed Products in material compliance with all applicable Laws, including current governmental regulations concerning GLP, GCP and cGMP.

12.5.2. Know-How. Repare and its Affiliates shall not use any Know-How that it does not Control in the Development or Manufacture of Drug Candidate, Licensed Drug Candidates or Licensed Products. Repare shall obtain sufficient legal or beneficial title and ownership of, or sufficient rights under, any Know-How that is used by Repare or its Affiliates in the Development or Manufacture of Drug Candidates, Licensed Drug Candidates or Licensed Products to grant the licenses and rights to such Know-How that would be granted to Ono under this Agreement.

12.5.3. Repare In-Licenses. Repare shall maintain Control of all Know- How and Patent Rights licensed to Repare under the existing Repare In-Licenses that are reasonably necessary for Ono to Develop, Manufacture, have Manufactured or Commercialize any Licensed Drug Candidates and Licensed Products in the Field in or for the Ono Territory. For clarity, with regard to any Drug Candidate, Licensed Drug Candidate and Licensed Product, any Patent Right comprising a Valid Claim that covers such Drug Candidate, Licensed Drug Candidate or Licensed Product, including whether it is an "Improvement" or an "IDD" as defined in NYU Agreement, is deemed to be a necessary Patent Right, and Repare shall Control such Patent Right. Repare shall not materially breach or be in material default under any of its obligations under any Repare In-License, subject to applicable cure process made by Repare (not by Ono) under any such Repare In-License and provided that, Repare shall not be deemed to have materially breached or be in material default under any Repare In-License if such breach or default is a result of Ono's or one of Ono's Related Parties' acts or omissions. Repare will not voluntarily amend or terminate any Repare In-License in a manner that would increase the royalty floor under Section 11.4.6 (Royalty Floor) or terminate rights sublicensed to Ono under this Agreement.

12.5.4. Additional In-Licenses. During the Term, neither Party shall enter into a license agreement with a Third Party with respect to any Drug Candidate, Licensed Drug Candidate or any Licensed Products in the other Party's Territory without the prior written consent of such other Party; provided that Repare may do so if Repare makes the intellectual property rights under such license agreement available to Ono pursuant to Section 10.1 (License Grants to Ono). Notwithstanding the foregoing, nothing in this Section 12.5.4 shall restrict either Party's right to enter into a license agreement with a Third Party for any intellectual property rights that may be reasonably necessary or useful for any other product or program of such Party.

12.5.5. Conflicting Agreements. During the Term, neither Party shall enter into any agreement with any Third Party that would conflict with, limit or restrict such Party's ability to comply with this Agreement nor shall grant any right to any Third Party that would conflict with the rights granted to the other Party hereunder.

12.5.6. No Debarment. Each Party shall use commercially reasonable efforts to not use, in any capacity in connection with the Collaboration or the performance of its obligations under this Agreement, any Person that has been debarred pursuant to Section 306 of the FD&C Act, or that is the subject of a conviction described in such section. Each Party agrees to inform the other Party in writing immediately if it or any Person that is performing activities in the Collaboration or under this Agreement, is debarred or is subject to debarment or is the subject of a conviction described in Section 306, or if any action, suit, claim, investigation or legal or administrative proceeding is pending or, to the best of the notifying Party's knowledge, is threatened, relating to the debarment or conviction of the notifying Party or any Person or entity used in any capacity by such Party or any of its Affiliates in connection with the Collaboration or the performance of its other obligations under this Agreement.

12.5.7. Stand-by Licenses. During the Term, the Non-Granting Party may reasonably request that the Granting Party reasonably cooperate in good faith with the Non-Granting Party's efforts to obtain stand-by license agreements with respect to the Granting Party's In-Licenses, pursuant to which, upon termination of the relevant In- License, the Non-Granting Party would receive a direct license from the applicable Third Party licensor under any Patent Rights or Know-How that are sublicensed to the Non-Granting Party pursuant to this Agreement. Any costs incurred by the Granting Party in cooperating with the Non-Granting Party's efforts to obtain any such stand- by license agreement shall be reimbursed by the Non-Granting Party.

12.5.8. Repare covenants to Ono that Repare will avoid or terminate any liens, charges or encumbrances on the Repare Technology that would materially impair the rights and license granted to Ono hereunder other than licenses granted to or by Third Parties that are not inconsistent with the rights and licenses granted to Ono hereunder.

12.5.9. Each Party will generate, prepare, maintain and retain all data and Regulatory Materials in accordance with good laboratory and clinical practice and applicable Law and will conduct, (and each of their respective contractors and consultants will conduct), all Development of the Drug Candidate, Licensed Drug Candidate or Licensed Product in accordance with good laboratory and clinical practice and applicable Law.

13. INDEMNIFICATION; LIMITATION OF LIABILITY; INSURANCE

13.1. General Indemnification by Ono. Ono shall indemnify, hold harmless and defend Repare, its Related Parties, and their respective directors, officers, employees and agents ("**Repare Indemnitees**") from and against any and all Third Party claims, suits, losses, liabilities, damages, costs, fees and expenses (including reasonable attorneys' fees and litigation expenses) (collectively, "**Losses**") arising out of or resulting from, directly or indirectly, (a) any breach of, or inaccuracy in, any representation or warranty made by Ono in this Agreement, any breach or violation of any covenant or agreement of Ono in or in the

performance of this Agreement or any other agreement between the Parties, or (b) the negligence or willful misconduct by or of Ono and its Related Parties, and their respective directors, officers, employees and agents in the performance of Ono's obligations under this Agreement or any other agreement between the Parties. Ono shall have no obligation to indemnify the Repare Indemnitees to the extent that the Losses arise out of or result from, directly or indirectly, any breach of, or inaccuracy in, any representation or warranty made by Repare in this Agreement, or any breach or violation of any covenant or agreement of Repare in or in the performance of this Agreement or any other agreement, or the negligence or willful misconduct by or of any of the Repare Indemnitees, or matters for which Repare is obligated to indemnify Ono under Section 13.2 (General Indemnification by Repare) or 13.3 (Product Liability).

13.2. General Indemnification by Repare. Repare shall indemnify, hold harmless, and defend Ono, its Related Parties and their respective directors, officers, employees and agents ("**Ono Indemnitees**") from and against any and all Losses arising out of or resulting from, directly or indirectly, (a) any breach of, or inaccuracy in, any representation or warranty made by Repare in this Agreement, or any breach or violation of any covenant or agreement of Repare in or in the performance of this Agreement or any other agreement between the Parties, or (b) the negligence or willful misconduct by or of Repare and its Related Parties, and their respective directors, officers, employees and agents in the performance of Repare's obligations under this Agreement or any other agreement. Repare shall have no obligation to indemnify the Ono Indemnitees to the extent that the Losses arise out of or result from, directly or indirectly, any breach of, or inaccuracy in, any representation or warranty made by Ono in this Agreement, or any breach or violation of any covenant or agreement of Ono in or in the performance of this Agreement or any other agreement between the Parties, or the negligence or willful misconduct by or of any of the Ono Indemnitees, or matters for which Ono is obligated to indemnify Repare under Section 13.1 (General Indemnification by Ono).

13.3. Product Liability. Subject to any Supply Agreements, any Losses arising out of Third Party product liability claims arising from the Development or Commercialization of Licensed Drug Candidates and Licensed Products shall be (a) borne by Ono, to the extent such Losses were incurred with respect to the Development or Commercialization by or on behalf of Ono or its Related Parties of a Drug Candidate, Licensed Drug Candidate and a Licensed Product in or for the Ono Territory and (b) borne by Repare, to the extent such Losses were incurred with respect to Development or Commercialization of a Drug Candidate, Licensed Drug Candidate and a Licensed Product in or for the Repare Territory by or on behalf of Repare and its Related Parties. The Party required to bear such Losses in accordance with this Section 13.3 shall indemnify, hold harmless and defend the other Party and its Related Parties and their respective directors, officers, employees and agents from and against such Losses. Each shall have no obligation to bear such Losses nor indemnify the Indemnitees of the other Party to the extent that the Losses arise out of or result from, directly or indirectly, matters for which the other Party is obligated to indemnify such Party under Section 13.1 (General Indemnification by Ono) or Section 13.2 (General Indemnification by Repare).

13.4. Indemnification Procedure. In the event of any such claim against any Ono Indemnitee or Repare Indemnitee (individually, an "**Indemnitee**"), the indemnified Party shall promptly notify the other Party in writing of the claim and the indemnifying Party shall manage and control, at its sole expense, the defense of the claim and its settlement. The

Indemnitee shall cooperate with the indemnifying Party and may, at its option and expense, be represented in any such action or proceeding. The indemnifying Party shall not be liable for any settlements, litigation costs or expenses incurred by any Indemnitee without the indemnifying Party's written authorization. Notwithstanding the foregoing, if the indemnifying Party believes that any of the exceptions to its obligation of indemnification of the Indemnitees set forth in Sections 13.1 (General Indemnification by Ono), 13.2 (General Indemnification by Repare) or 13.3 (Product Liability) may apply, the indemnifying Party shall promptly notify the Indemnitees, which shall then have the right to be represented in any such action or proceeding by separate counsel at their expense, provided that the indemnifying Party shall be responsible for payment of such expenses if the Indemnitees are ultimately determined to be entitled to indemnification from the indemnifying Party for the matters to which the indemnifying Party notified the Indemnitees that such exception(s) may apply.

13.5. Limitation of Liability. NEITHER PARTY HERETO SHALL BE LIABLE FOR SPECIAL, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES ARISING OUT OF THIS AGREEMENT OR THE EXERCISE OF ITS RIGHTS HEREUNDER, INCLUDING LOST PROFITS ARISING FROM OR RELATING TO ANY BREACH OF THE AGREEMENT, REGARDLESS OF ANY NOTICE OF SUCH DAMAGES, EXCEPT AS A RESULT OF A PARTY'S WILLFUL MISCONDUCT, GROSS NEGLIGENCE OR A BREACH OF SECTION 9 (CONFIDENTIALITY AND PUBLICATION), THE EXCLUSIVITY TERMS OR THE LICENSES GRANTED IN SECTION 10 (LICENSES) OR SECTION 12 (REPRESENTATIONS, WARRANTIES AND COVENANTS). NOTHING IN THIS SECTION 13.5 IS INTENDED TO LIMIT OR RESTRICT THE INDEMNIFICATION RIGHTS OR OBLIGATIONS OF EITHER PARTY.

13.6. Insurance. Prior to initiation of any Clinical Study, Repare shall obtain and maintain insurance during the Term and for a period of at least [***] after the last commercial sale of any Licensed Product generated under the Collaboration, with a reputable, solvent insurer in an amount appropriate for its business and products of the type that are the subject of this Agreement, and for its obligations under this Agreement. Upon request, Repare shall provide Ono with evidence of the existence and maintenance of such insurance coverage.

14. INTELLECTUAL PROPERTY OWNERSHIP, PROTECTION AND RELATED MATTERS

14.1. Inventorship; Ownership.

14.1.1. Inventorship. Inventorship for inventions made during the course of the performance of the Collaboration shall be determined in accordance with United States patent laws for determining inventorship, provided it does not interfere with any local patent laws in a given country or territory (each a "Local Law") and in such case, the Parties will seek to adapt to such Local Law with a view to providing the Parties with the best patent protection available.

14.1.2. Ownership of Technology. Repare shall own the entire right, title and interest in and to all Repare Technology. Ono shall own the entire right, title and interest in and to all Ono Technology. The Parties shall jointly own any Joint Technology.

14.1.3. Employee Assignment. Each Party shall ensure that all of its employees and all of its Affiliates' employees acting under its or its Affiliates' authority in the performance of this Agreement assign to such Party under a binding written agreement all Know-How and Patent Rights discovered, made, conceived by such employee as a result of such employee's employment. In the case of all Third Parties acting in the performance a Party's obligations under this Agreement, such as consultants, subcontractors, licensees, Sublicensees, outside contractors, clinical investigators, agents, or non-employees working for non-profit academic institutions, the Party that engages such Third Party shall ensure that such Third Party is also so obligated under such an agreement, unless otherwise approved by the Parties.

14.1.4. Right to Practice Joint Technology. Subject to the rights and licenses granted to, and the obligations (including royalty obligations in Section 11.4 and the exclusivity obligations set forth in Section 12.4) of each Party, either Party is entitled to practice Joint Technology for all purposes on a worldwide basis and license Joint Technology without consent of and without a duty of accounting to the other Party. Each Party will grant and hereby does grant all permissions, consents and waivers with respect to, and all licenses under, the Joint Technology, throughout the world, necessary to provide the other Party with such rights of use and exploitation of the Joint Technology, and will execute documents as necessary to accomplish the foregoing.

14.1.5. Disclosure. Each Party shall promptly disclose to the other Party any invention, whether patentable or not, made in the performance of its Collaboration under this Agreement and the Parties shall discuss and determine each Party's sharing of the costs and expenses, and interest of Joint Patent Rights.

14.2. Prosecution and Maintenance of Patent Rights.

14.2.1. Prosecution of Repare Patent Rights and Joint Patent Rights.

14.2.1.1. Subject to Section 14.2.1.3, Repare has the sole responsibility to, at Repare's discretion and at Repare's sole cost and expense, file, prosecute, and maintain all Repare Patent Rights throughout the world, and Joint Patent Rights in the Repare Territory.

14.2.1.2. Repare shall furnish to Ono, via electronic mail or such other method as mutually agreed by the Parties, copies of documents received from outside counsel in the course of filing, prosecution or maintenance of or copies of documents filed with, or material communications with, the relevant national or regional patent offices with respect to the filing, prosecution, and maintenance of all Repare Patent Rights in the Ono Territory, and Joint Patent Rights in the Repare Territory, within a reasonable time after the receipt or filing of such documents. Repare shall provide Ono and its patent counsel with a reasonable opportunity to consult with and provide comments to Repare and its patent counsel regarding the filing and contents of any such application, amendment, submission or response. All timely advice and suggestions of Ono and its patent counsel shall be taken into consideration in good faith by Repare and its patent counsel in connection with such filing. Repare shall pursue in good faith all reasonable claims requested by Ono in the prosecution of any Repare Patent Rights throughout the world, or Joint Patent Rights in the Repare Territory.

14.2.1.3. In the event that Repare elects not to maintain patent protection on any Repare Patent Rights in the Ono Territory, or Joint Patent Rights in the Repare Territory, Repare shall notify Ono at least [***] before any such Patent Rights would become abandoned or otherwise forfeited, and subject to the provisions of any applicable Repare In-License, Repare shall assign all of its right, title and interest in and to such Repare Patent Rights or Joint Patent Rights to Ono at Ono's sole cost and expense, and such Repare Patent Rights or Joint Patent Rights shall become Ono Patent Rights or Ono Know-How, as applicable; provided that, if such assignment is not possible, then Ono shall have the right (but not the obligation), at its sole cost and expense, to prosecute and maintain in any country in the Ono Territory or the Repare Territory, as applicable, patent protection on such Repare Patent Rights or Joint Patent Right in the name of Repare. Repare shall use commercially reasonable efforts to make available to Ono its authorized attorneys, agents or representatives, or such of its employees as are reasonably necessary to assist Ono in maintaining and defending the patent protection described under this Section 14.2.1.3. Repare shall sign or use commercially reasonable efforts to have signed all legal documents as are reasonably necessary to maintain, prosecute and defend such patents and patent applications.

14.2.2. Prosecution and Maintenance of Ono Patent Rights and Joint Patent Rights.

14.2.2.1. Subject to Section 14.2.2.3, Ono shall have the sole responsibility to, at Ono's discretion and at Ono's sole cost and expense, file, prosecute, and maintain all Ono Patent Rights, and the Joint Patent Rights in the Ono Territory.

14.2.2.2. Ono shall furnish to Repare, via electronic mail or such other method as mutually agreed by the Parties, copies of documents received from outside counsel in the course of filing, prosecution or maintenance of or copies of documents filed with, or material communications with, the relevant national patent offices with respect to the filing, prosecution, and maintenance of all Ono Patent Rights in the Repare Territory, and Joint Patent Rights in the Ono Territory, within a reasonable time after the receipt or filing of such documents. Ono shall provide Repare and its patent counsel with a reasonable opportunity to consult with and provide comments to Ono and its patent counsel regarding the filing and contents of any such application, amendment, submission or response. All timely advice and suggestions of Repare and its patent counsel shall be taken into consideration in good faith by Ono and its patent counsel in connection with such filing. Ono shall pursue in good faith all reasonable claims requested by Repare in the prosecution of any Ono Patent Rights in the Repare Territory or Joint Patent Rights in the Ono Territory.

14.2.2.3. In the event that Ono elects not to maintain patent protection on any Ono Patent Rights in the Repare Territory, or Joint Patent Rights in the Ono Territory, Ono shall notify Repare at least [***] before any such Patent Rights would become abandoned or otherwise forfeited, and subject to the provisions of any applicable Ono In-License, Ono shall assign all of its right, title and interest in and to such Ono Patent Rights or Joint Patent Rights to Repare at Repare's sole cost and expense, and such Ono Patent Rights

or Joint Patent Rights shall become Repare Patent Rights; provided that, if such assignment is not possible, then Repare shall have the right (but not the obligation), at its sole cost and expense, to maintain in any country in the Repare Territory or the Ono Territory, as applicable, patent protection on such Ono Patent Rights or Joint Patent Rights in the name of Ono. Ono shall use commercially reasonable efforts to make available to Repare its authorized attorneys, agents or representatives, or such of its employees as are reasonably necessary to assist Repare in maintaining and defending the patent protection described under this [Section 14.2.2.3](#). Ono shall sign or use commercially reasonable efforts to have signed all legal documents as are reasonably necessary to maintain, prosecute and defend such patents and patent applications.

14.2.3. Cooperation. Each Party hereby agrees: (a) to make its employees, agents and consultants reasonably available to the other Party (or to the other Party's authorized attorneys, agents or representatives), to the extent reasonably necessary to enable such Party to undertake patent prosecution as contemplated by this Agreement; (b) to cooperate, if necessary and appropriate, with the other Party in gaining patent term extensions wherever applicable to patents that are subject to this Agreement; and (c) to endeavor in good faith to coordinate its efforts with the other Party to minimize or avoid interference with the prosecution and maintenance of the other Party's patent applications that are subject to this Agreement.

14.3. Third Party Infringement.

14.3.1. Notice of Infringement. During the Term, each Party will promptly notify the other Party in writing of any known or suspected infringement or unauthorized use or misappropriation by a Third Party of Ono Technology, Repare Technology, or Joint Technology concerning any product intended for use in any Field (including development, manufacture, or commercialization) (such infringement or unauthorized use or misappropriation, "**Competing Infringement**") of which such Party becomes aware. The notifying Party will provide the other Party with all evidence available to it supporting its belief that there is Competing Infringement.

14.3.2. Ono's Right to Enforce and Defend.

14.3.2.1. Infringement Actions. Ono shall have (i) the sole and exclusive right, but not the obligation, to take any reasonable measures it deems appropriate with respect to any Third Party's activities concerning any Competing Infringement in the Ono Territory of any Ono Technology and (ii) subject to the provisions of any Repare In-License, a first right, but not the obligation, to take any reasonable measures it deems appropriate with respect to any Third Party's activities concerning any Competing Infringement in the Ono Territory of any Repare Technology. Such measures may include (a) initiating or prosecuting an infringement, misappropriation or other appropriate suit or action (each an "**Infringement Action**") in the Ono Territory, or (b) subject to [Section 10.1.3](#) (Ono Sublicense Rights), granting adequate rights and licenses to any Third Party necessary to render continued Competitive Infringement in the Ono Territory non-infringing. Notwithstanding the foregoing, if Ono does not inform Repare that it intends to either initiate such an Infringement Action or grant adequate rights and licenses to such Third Party within [***] after Ono's receipt of a notice of infringement pursuant to [Section 14.3.1](#) (Notice of Infringement), then Repare will have the second right to initiate such Infringement Action, but solely with respect to any Repare Technology.

14.3.2.2. Challenge Actions. Ono shall have the first right, but not the obligation, to defend any Challenge Action with respect to the Repare Technology or Ono Technology, in the Ono Territory in each case, that covers the applicable Licensed Product which is the subject of such Challenge Action. Notwithstanding the foregoing, if Ono does not inform Repare that it intends to defend such a Challenge Action with respect to any Repare Technology within [***] of such Challenge Action being filed, then Repare will have the second right, but not the obligation, to defend such Challenge Action with respect to any Repare Technology.

14.3.3. Repare's Right to Enforce and Defend.

14.3.3.1. Infringement Actions. Repare shall have (i) the sole and exclusive right, but not the obligation, to take any reasonable measures it deems appropriate with respect to any Third Party's activities concerning any Competing Infringement in the Repare Territory of any Repare Technology and (ii) subject to the provisions of any Ono In-License, a first right, but not the obligation, to take any reasonable measures it deems appropriate with respect to any Third Party's activities concerning any Competing Infringement in the Repare Territory of any Ono Technology. Such measures may include (a) initiating or prosecuting an Infringement Action, or (b) subject to Section 10.2.3 (Repare Sublicense Rights), granting adequate rights and licenses to any Third Party necessary to render continued Competing Infringement in the Repare Territory non-infringing. Notwithstanding the foregoing, if Repare does not inform Ono that it intends to either initiate such an Infringement Action or grant adequate rights and licenses to such Third Party within [***] after Repare's receipt of a notice of infringement pursuant to Section 14.3.1 (Notice of Infringement), then Ono will have the second right to initiate such Infringement Action, but solely with respect to any Ono Technology.

14.3.3.2. Challenge Actions. Repare shall have the first right, but not the obligation, to defend any Challenge Action with respect to the Repare Technology or Ono Technology, in the Repare Territory in each case, that covers the applicable Licensed Product which is the subject of such Challenge Action. Notwithstanding the foregoing, if Repare does not inform Ono that it intends to defend such a Challenge Action with respect to any Ono Technology within [***] of such Challenge Action being filed, then Ono will have the second right, but not the obligation, to defend such Challenge Action with respect to any Ono Technology.

14.3.3.3. Rights to Enforce and Defend with respect to the Joint Patents. The Parties shall discuss in good faith as to which of the Parties will become a Responsible Party in case of any Infringement Action and Challenge Action with respect to Joint Patents.

14.3.4. Control; Cooperation. The Party initiating any Infringement Action or defending any Challenge Action with respect thereto (such Party, the “**Responsible Party**”) shall have the right to control the initiation and prosecution of any Infringement Action or defense of any Challenge Action, including the right to select counsel therefor, at its own expense. If requested by the Responsible Party, the other Party shall join as a party to such Infringement Action or Challenge Action and will execute and cause its Affiliates to execute all documents necessary for the Responsible Party to initiate, prosecute, maintain or defend such action or proceeding. In addition, at the Responsible Party’s request, the other Party shall provide reasonable assistance to the Responsible Party in connection with an Infringement Action or Challenge Action at no charge to the Responsible Party except for reimbursement by the Responsible Party of reasonable Out-of-Pocket Costs incurred in rendering such assistance.

14.3.5. Sharing of Recoveries.

14.3.5.1. Recoveries in the Ono Territory. Any amounts recovered by either Party pursuant to Section 14.3 (Third Party Infringement) in the Ono Territory will be used first to reimburse the Parties for their reasonable costs and expenses, including attorneys’ fees incurred in making such recovery (which amounts will be allocated pro rata if insufficient to cover the totality of such expenses) with any remainder (i) if Ono controls such enforcement action, to be retained by Ono and deemed Net Sales and subject to royalty payment under Section 11.4 and (ii) if Repare controls such enforcement action, to be allocated [***] to Ono and [***] to Repare.

14.3.5.2. Recoveries in the Repare Territory. Any amounts recovered by either Party pursuant to Section 14.3 (Third Party Infringement) in the Repare Territory will be used first to reimburse the Parties for their reasonable costs and expenses, including attorneys’ fees incurred in making such recovery (which amounts will be allocated pro rata if insufficient to cover the totality of such expenses) with any (i) if Repare controls such enforcement action, to be retained by Repare and (ii) if Ono controls such enforcement action, to be allocated [***] to Repare and [***] to be retained by Ono.

14.4. Notification of Patent Certification. Repare and Ono will each notify and provide the other Party with copies of any notice of a Paragraph IV Patent Certification (including any associated documents) by a Third Party filing an ANDA, an application under §505(b)(2) of the FD&C Act (as amended or any replacement thereof), or any other similar patent certification by a Third Party, and any foreign equivalent thereof. Such notification and copies will be provided to the other Party within [***] after receipt of such notification and will be sent to the address set forth in Section 16.10 (Notices).

14.5. Third Party Claims. If a Third Party sues a Party (the “**Sued Party**”) or its Related Party alleging that the Party’s, or the Party’s Related Party’s, Development, Manufacture having Manufactured or Commercialization of the Drug Candidate, Licensed Drug Candidate and Licensed Product infringes or will infringe said Third Party’s intellectual property, then upon the Sued Party’s request and in connection with the Sued Party’s defense of any such Third Party suit, the other Party will provide reasonable assistance to the Sued Party for such defense. The Sued Party will keep the other Party, if such other Party has not joined in such suit, reasonably informed on a quarterly basis, in person or by telephone, prior to and during the pendency of any such suit.

14.6. Common Interest. All information exchanged between the Parties representatives pursuant to Section 14 (Intellectual Property) regarding the preparation, filing, prosecution, maintenance, or enforcement of Patent Rights under Section 14 (Intellectual Property) will be deemed Confidential Information. In addition, the Parties acknowledge and agree that, with regard to such preparation, filing, prosecution, maintenance, and enforcement of the Repare Patent Rights the interests of the Parties as collaborators and licensor and licensee are to obtain the strongest patent protection possible, and as such, are aligned and are legal in nature. The Parties agree and acknowledge that they have not waived, and nothing in this Agreement constitutes a waiver of, any legal privilege concerning such Patent Rights, including privilege under the common interest doctrine and similar or related doctrines.

14.7. Patent Term Extensions.

14.7.1. Patent Rights. Repare shall obtain all available extensions of any Repare Patent Rights and Joint Patent Rights. Ono shall provide any reasonably necessary powers of attorney and shall provide any other assistance, at Repare's sole cost and expense, that Repare reasonably requests to enable Repare to obtain any such extensions.

14.8. CREATE Act Acknowledgement. It is the intention of the Parties that this Agreement is a "joint research agreement" as that phrase is defined in Section 35 U.S.C. 100(h).

14.9. Trademarks.

14.9.1. Both Parties acknowledge and agree that the Commercialization of the Licensed Product under a common brand name or trademark throughout the world would be beneficial for both Parties in order to maximize the value of the Licensed Product. In furtherance of the foregoing, each Party shall have the right (but not the obligation) to propose to the other Party a limited number of brand names under consideration for use in Commercializing the Licensed Product and shall consider in good faith any comments the other Party has on such brand names. If the Parties select one brand name for, or a Party selects the same brand name that the other Party has decided to use, in Commercializing the Licensed Product ("**Common Brand Name**"), then, subject to successful registration and approval of such Common Brand Name by the applicable Governmental Authorities, each Party shall use such Common Brand Name for the Commercialization of the Licensed Product in its respective Territory. Repare shall search the possibility of the registration worldwide, and if confirmed the possibility shall file the application for registration of the trademark rights for the Common Brand Name using counsel of its own choice at Repare's cost for the Repare Territory and Ono's cost for the Ono Territory. After registration, Repare shall assign the rights to the Common Brand Name in the Ono Territory to Ono without requiring Ono any compensation for such assignment. The costs of procedure related to such assignment shall be borne by Ono. Repare shall be responsible for the prosecution, registration and maintenance of such trademark rights in the Repare Territory at Repare's sole costs. Repare shall be responsible for the prosecution and registration of such trademark rights in the Ono Territory at Ono's sole costs, and after its registration Ono shall be responsible for the maintenance of such trademark rights in the Ono Territory at Ono's sole costs.

14.9.2. If the Parties do not reach an agreement on a Common Brand Name, each Party may use, for Commercializing the Licensed Product in countries in each Party's respective Territory, its own trademark it considers appropriate and which is reasonably suitable for such Licensed Product in such countries. Both Parties shall own respectively all rights, title and interests in and to its own trademarks throughout the world and shall have the sole right to register, prosecute and maintain its trademarks using counsel of its own choice and at its own expense.

15. TERM AND TERMINATION; REMEDIES

15.1. Term. The Agreement shall be effective as of the Effective Date and, unless terminated earlier pursuant to Section 15.2 (Termination Rights), this Agreement shall continue in effect until the expiration of the last to expire of the Royalty Terms ("Term").

15.2. Termination Rights. This Agreement may not be terminated by either Party except as provided in this Section 15.2.

15.2.1. Termination of Agreement Without Cause. One shall have the right to terminate the Agreement on a Licensed Product-by-Licensed Product (or a Licensed Drug Candidate-by- Licensed Drug Candidate) and country-by-country basis at any time after the Effective Date on [***] prior written notice to Repare.

15.2.2. Termination for Safety or Efficacy Reasons. One shall have the right to terminate this Agreement, on a Licensed Product-by-Licensed Product (or a Licensed Drug Candidate-by-Licensed Drug Candidate), for safety or efficacy reasons upon [***] written notice to Repare or within a shorter period if required under applicable Law.

15.2.3. Termination for Cause. This Agreement may be terminated in its entirety at any time during the Term upon written notice by either Party if the other Party is in material breach of its obligations hereunder and has not cured such breach within [***] in the case of a payment breach, or within [***] in the case of all other breaches, after notice requesting cure of the breach; provided, however, that if any breach other than a payment breach is not reasonably curable within [***] and if a Party is making a bona fide effort to cure such breach, such termination shall be delayed for a time period to be agreed by both Parties, not to exceed an additional [***], in order to permit such Party a reasonable period of time to cure such breach.

15.2.4. Termination for Patent Challenge. If, during the Term, either Party (a) commences or participates in any action or proceeding (including any patent opposition or re-examination proceeding), or otherwise asserts any claim, challenging or denying the validity or enforceability of any claim of the other Party's Patent Rights that are licensed to such challenging Party under this Agreement or (b) actively assists any other Person in bringing or prosecuting any action or proceeding (including any patent opposition or re-examination proceeding) challenging or denying the validity or enforceability of any claim of the other Party's Patent Rights that are licensed to such challenging Party under this Agreement (each of (a) and (b), a "Patent Challenge"), then, to the extent permitted by the applicable Laws, the other Party shall have the right, exercisable within [***] following receipt of

notice regarding such Patent Challenge, in its sole discretion, to give notice to such challenging Party that the other Party may terminate the license(s) granted under such Patent Right(s) to such challenging Party pursuant to this Agreement [***] following such notice (or such longer period as the other Party may designate in such notice), and, unless such challenging Party withdraws or causes to be withdrawn all such challenge(s) (or in the case of *ex-parte* proceedings, multi-party proceedings, or other Patent Challenges that such challenging Party does not have the power to unilaterally withdraw or cause to be withdrawn, such challenging Party ceases actively assisting any other party to such Patent Challenge and, to the extent such challenging Party is a party to such Patent Challenge, it withdraws from such Patent Challenge) within such [***] period, the other Party shall have the right to terminate the license(s) granted under such Patent Right(s) to such challenging Party pursuant to the Agreement by providing written notice thereof to such challenging Party. The foregoing sentence shall not apply (i) with respect to any claim of the other Party's Patent Rights that is licensed to such challenging Party under this Agreement that the other Party first asserts against such challenging Party or any of its Affiliates where the Patent Challenge is made in defense of such assertion, or (ii) with respect to any Patent Challenge commenced by a Third Party that after the Effective Date acquires or is acquired by a Party or its Affiliates or its or their business or assets, whether by stock purchase, merger, asset purchase or otherwise, but only with respect to Patent Challenges commenced prior to the closing of such acquisition.

15.2.5. Termination Upon Bankruptcy. Either Party may terminate this Agreement if, at any time, the other Party becomes insolvent or an order is made or a resolution passed for the administration, winding-up or dissolution of such other Party (other than for the purposes of a solvent amalgamation or reconstruction) or an Insolvency Officer is appointed over all or any substantial part of the assets of such other Party or such other Party enters into or proposes any composition or arrangement with its creditors generally or anything analogous to the foregoing occurs in any applicable jurisdiction.

15.3. Effect of Termination.

15.3.1. Effects of Termination of Agreement by Repare or by Ono Other than by Ono for Cause. If this Agreement is terminated by either Party for any reason other than by Ono pursuant to: (i) Section 15.2.3 (Termination for Cause), (ii) Section 15.2.4 (Termination for Patent Challenge) or (iii) Section 15.2.5 (Termination Upon Bankruptcy), then the following terms shall apply:

15.3.1.1. The Polq Program will revert to Repare, and Ono hereby grants to Repare, effective upon the effective date of termination, an irrevocable, worldwide license, which Repare may sublicense through multiple tiers, under the Ono Technology that has been used in the Development, Manufacture, having Manufactured or Commercialization of any Drug Candidate, Licensed Drug Candidate or Licensed Product prior to the effective date of termination, to Develop, Manufacture, having Manufactured and Commercialize Licensed Drug Candidates and Licensed Products (the "**Reversion License**"); provided that the Parties agree to negotiate in good faith commercially reasonable terms for such Reversion License; provided further that in the case of termination by Repare pursuant to Section 15.2.3, Repare shall have the right to offset the full amount of any losses it has suffered as a result of Ono's material breach against

any financial terms of the Reversion License and (b) in no event shall the royalty to be paid to Ono by Repare (if any) under the Reversion License be greater than [***] of the net sales of Licensed Products. In addition, if Ono is required to make any Third Party License Payments as a result of the Development, Manufacture, having Manufactured or Commercialization of a Drug Candidate, Licensed Drug Candidate or Licensed Product by Repare following the effective date of termination, Repare shall reimburse Ono for any such payments within [***] after receipt of an invoice from Ono.

15.3.1.2. Ono shall responsibly wind-down any on-going Development, Manufacture, having Manufactured, use or Commercialization of the Drug Candidate, Licensed Drug Candidate, or Licensed Product. Ono shall be responsible for any costs associated with such wind-down. Ono may begin such wind-down upon Ono's termination notice to Repare if this Agreement is terminated by Ono pursuant to Section 15.2.1.

15.3.1.3. Repare shall responsibly wind-down any on-going Research Services. Ono shall be responsible for any costs associated with such wind-down; provided, however, that Ono shall not be obligated to make any payment under Section 2.5 if corresponding Research Services Payment Trigger occurs after the termination notice from terminating Party to the other Party.

15.3.1.4. Ono shall provide any other assistance reasonably requested by Repare for the purpose of allowing Repare or its designee to proceed expeditiously with the Development, Manufacture, having Manufactured, use and Commercialization of the Drug Candidate and the Licensed Product or the Licensed Drug Candidate in or for the Ono Territory for [***] from the effective date of termination of this Agreement;

15.3.1.5. Ono shall, upon Repare's written request, transfer to Repare any inventory of Licensed Drug Candidates and Licensed Products owned or controlled by Ono or its Affiliates as of the termination date at the (i) Ono's cost of goods for such Licensed Drug Candidates or Licensed Products or (ii) actual price paid by Ono to Repare or its Third Party manufacturer for such supply, as applicable.

15.3.1.6. Ono agrees (and shall cause Ono's Related Parties to so agree) to commercially reasonably cooperate with Repare for up to [***] from the effective date of termination to ensure the availability and supply of Drug Candidate, Licensed Product and Licensed Drug Candidate to subjects in any ongoing Clinical Studies and to patients in the Field in or for the Ono Territory, at Repare's cost.

15.3.2. Effects of Termination of Agreement by Ono for Cause. If Ono is entitled to terminate this Agreement pursuant to Section 15.2.3 (Termination for Cause), Section 15.2.4 (Termination for Patent Challenge) or Section 15.2.5 (Termination Upon Bankruptcy), then, Ono may choose, by written notice to Repare within [***] after Ono becomes entitled to so terminate this Agreement, to (i) waive its right to terminate this Agreement for such uncured material breach by Repare and instead, as its sole remedy, to continue this Agreement in full force and effect, provided that any royalties payable to Repare for Net Sales of Licensed Products under Section 11.4 will be reduced by [***], provided that [***]. or (ii) terminate this Agreement, in which case the following terms shall apply:

15.3.2.1. All licenses granted in this Agreement (and any Sublicenses thereunder) with respect to the Collaboration (including all Licensed Drug Candidates and Licensed Products within the Collaboration) shall immediately terminate.

15.3.2.2. Ono shall responsibly wind-down any on-going Development, Manufacture, having Manufactured, use or Commercialization of the Drug Candidate, Licensed Drug Candidate, or Licensed Product. Repare shall be responsible for any reasonable costs associated with such wind-down.

15.3.2.3. Repare shall responsibly wind-down any on-going Research Services. Ono shall be responsible for any costs associated with such wind-down; provided, however, that Ono shall not be obligated to make any payment under Section 2.5 if corresponding Research Services Payment Trigger occurs after the termination notice from terminating Party to the other Party.

15.3.2.4. Ono may, upon Repare's written request, transfer to Repare any inventory of Licensed Drug Candidates and Licensed Products owned or controlled by Ono or its Affiliates as of the termination date at the (i) Ono's cost of goods for such Licensed Drug Candidates or Licensed Products or (ii) actual price paid by Ono to Repare or its Third Party manufacturer for such supply, as applicable.

15.3.2.5. Repare agrees (and shall cause Repare's Related Parties to so agree) to commercially reasonably cooperate with Ono for up to [***] from the effective date of termination to ensure the availability and supply of Drug Candidate, Licensed Product and Licensed Drug Candidate to subjects in any ongoing Clinical Studies and to patients in the Field in or for the Ono Territory, at Ono's cost.

15.4. Effect of Expiration or Termination; Survival. Expiration or termination of this Agreement shall not relieve the Parties of any obligation accruing prior to such expiration or termination. Any expiration or termination of this Agreement shall be without prejudice to the rights of either Party against the other accrued or accruing under this Agreement, as applicable, prior to expiration or termination, including the obligation to pay royalties for the Licensed Product sold prior to such expiration or termination or other payments under this Agreement. The following sections will survive expiration or termination of this Agreement and will remain in full force and effect: Sections 1 and 2.6.4, Section 4.3.2 (for a period of [***] after the effective date of termination), Sections 4.3.5 and 8.5, Section 9.4, Section 11.5-11.6 (for a period of [***] after the effective date of termination), Sections 13, 14.6, 15.3, 15.4, and 16.2-16.13. Except as otherwise set forth in Section 15, upon termination or expiration of this Agreement all rights and obligations of the Parties under this Agreement, shall cease.

15.5. Equitable Remedies. The Parties agree and acknowledge that irreparable damage, for which money damages may not constitute an adequate remedy, would occur if any provision of this Agreement were not performed in accordance with the terms hereof and that a Party shall be entitled, without proof of actual damages, to an injunction or injunctions to prevent breaches of this Agreement or to enforce specifically the performance of the terms and provisions hereof, in addition to any other remedy to which a Party is entitled at Law, in equity, or otherwise. The Parties further agree that the Parties will not oppose or otherwise challenge the appropriateness of any equitable relief or the entry by a court of competent jurisdiction of an order granting equitable relief that is consistent with the terms of this Section 15.5.

16. MISCELLANEOUS

16.1. Assignment. Except as provided in this Section 16.1, this Agreement may not be assigned or otherwise transferred, nor may any right or obligation hereunder be assigned or transferred, by either Party without the written consent of the other Party. Notwithstanding the foregoing, either Party may, without the other Party's written consent, assign this Agreement and its rights and obligations hereunder in whole or in part to an Affiliate or to an or to a Third Party that acquires, by or otherwise in connection with, the merger, sale of assets or otherwise, all or substantially all of the business of the assigning Party to which the subject matter of this Agreement relates, provided that such Affiliate or Third Party assumes all of the assigning Party's obligations under this Agreement, subject to Section 16.15.1 (Future Acquisition of a Party or its Business). The assigning Party shall remain responsible for the performance by such Affiliate or Third Party of this Agreement or any obligations hereunder so assigned. Any purported assignment in violation of this Section 16.1 shall be void.

16.2. Governing Law. This Agreement shall be construed and the respective rights or obligations of the Parties determined in accordance with the substantive Law of the State of New York, other than (a) its conflicts of laws principles; (b) the United Nations Convention on Contracts for the International Sale of Goods; (c) the 1974 Convention on the Limitation Period in the International Sale of Goods (the "**1974 Convention**"); and (d) the Protocol amending the 1974 Convention, done at Vienna April 11, 1980.

16.3. Arbitration. The Parties will first attempt to resolve any dispute arising out of or in connection with this Agreement amicably by negotiation between the Parties. All disputes which remain unresolved for [***] after either Party requests in writing to proceed to negotiation under this Section 16.3 shall be finally settled by arbitration under the Rules of Arbitration of the International Chamber of Commerce by three (3) arbitrators appointed in accordance with the said Rules. The place of arbitration shall be New York, New York, United States. The language of the arbitration shall be English. Each Party shall nominate one (1) arbitrator, and the two (2) arbitrators so nominated shall nominate a third (3rd) arbitrator, who shall act as the chairperson. If the tribunal orders production of documents, the tribunal shall take guidance from the IBA Rules on the Taking of Evidence in International Arbitration as current on the date of the commencement of the arbitration. The existence and content of the arbitral proceedings, any information exchanged between Parties during the arbitral proceedings and any rulings or award shall be kept confidential by the Parties and members of the tribunal except (i) to the extent that disclosure may be required by a Party to fulfill a legal duty, protect or pursue a legal right, or enforce or challenge an award in bona fide legal proceedings before a court or other judicial authority, (ii) with the consent of both Parties, (iii) where needed for the preparation or presentation of a

claim or defense in this arbitration, (iv) where such information is already in the public domain other than as a result of a breach of this clause, or (v) by order of the tribunal upon application of a Party. The costs and expenses of translation of relevant documents and translators relating to the arbitration shall be deemed as the costs and expenses of the arbitration, and may be allocated to any Party in the award by the tribunal. The tribunal may include in its award an allocation to any Party of costs and expenses relating to the arbitration, excluding lawyers' fee, as the tribunal deems reasonable. Each Party shall bear its own cost and expenses for its own lawyers. The award rendered by the tribunal shall be final and binding upon the Parties and may be entered in any competent court of appropriate jurisdiction. The Emergency Arbitrator Provisions shall not apply.

16.4. Entire Agreement; Amendments. The Agreement contains the entire understanding of the Parties with respect to the subject matter hereof, and supersedes all previous arrangements with respect to the subject matter hereof, whether written or oral, including that certain Confidential Disclosure Agreement by and between the Parties, dated March 8, 2018 and its Amendment No.1 dated May 17, 2018 (provided that all information disclosed or exchanged under such agreement will be treated as Confidential Information hereunder). This Agreement (other than the Schedules attached hereto) may be amended, or any term hereof modified, only by a written instrument duly-executed by authorized representatives of both Parties hereto. The Schedules attached hereto may be amended, or any term hereof modified, only by a written instrument duly-executed by authorized representatives of both Parties hereto, except to the extent expressly provided in this Agreement.

16.5. Severability. If any provision hereof should be held invalid, illegal or unenforceable in any respect by a competent court in any jurisdiction, the invalid, illegal or unenforceable provision(s) shall be severed from this Agreement and shall not affect the validity of this Agreement as a whole.

16.6. Headings. The captions to the Sections hereof are not a part of this Agreement, but are merely for convenience to assist in locating and reading the several Sections hereof.

16.7. Waiver of Rule of Construction. Each Party has had the opportunity to consult with counsel in connection with the review, drafting and negotiation of this Agreement. Accordingly, the rule of construction that any ambiguity in this Agreement shall be construed against the drafting Party shall not apply.

16.8. Interpretation. Except where the context expressly requires otherwise, (a) the use of any gender herein shall be deemed to encompass references to either or both genders, and the use of the singular shall be deemed to include the plural (and vice versa); (b) the words "include", "includes" and "including" shall be deemed to be followed by the phrase "without limitation" and shall not be interpreted to limit the provision to which it relates; (c) the word "will" shall be construed to have the same meaning and effect as the word "shall"; (d) any definition of or reference to any agreement, instrument or other document herein shall be construed as referring to such agreement, instrument or other document as from time to time amended, supplemented or otherwise modified (subject to any restrictions on such amendments, supplements or modifications set forth herein); (e) any reference herein to any Person shall be construed to include the Person's successors and permitted assigns (subject to Section 16.1 with respect to a Party); (f) the words "herein", "hereof" and "hereunder", and words of similar import, shall be construed to refer to this

Agreement in each of their entirety, as the context requires, and not to any particular provision hereof; (g) all references herein to Sections or Schedules shall be construed to refer to Sections or Schedules of this Agreement, and references to this Agreement include all Schedules hereto; (h) the word "notice" means notice in writing (whether or not specifically stated) and shall include notices, consents, approvals and other written communications contemplated under this Agreement; (i) provisions that require that a Party, the Parties or any committee hereunder "agree," "consent" or "approve" or the like shall require that such agreement, consent or approval be specific and in writing, whether by written agreement, letter, approved minutes or otherwise (but excluding e-mail and instant messaging); (j) references to any specific law, rule or regulation, or article, Section or other division thereof, shall be deemed to include the then-current amendments thereto or any replacement or successor law, rule or regulation thereof; and (k) the term "or" shall be interpreted in the inclusive sense commonly associated with the term "and/or"; and (l) the reference to "day" shall mean a calendar day unless "Business Day" is specified.

16.9. No Implied Waivers; Rights Cumulative. Except as expressly provided in this Agreement, no failure on the part of Repare or Ono to exercise, and no delay in exercising, any right, power, remedy or privilege under this Agreement, or provided by statute or at Law or in equity or otherwise, shall impair, prejudice or constitute a waiver of any such right, power, remedy or privilege or be construed as a waiver of any breach of this Agreement or as an acquiescence therein, nor shall any single or partial exercise of any such right, power, remedy or privilege preclude any other or further exercise thereof or the exercise of any other right, power, remedy or privilege.

16.10. Notices. All notices which are required or permitted hereunder shall be in writing and sufficient if delivered personally, sent by facsimile (and promptly confirmed by personal delivery, registered or certified mail or overnight courier), sent by nationally- recognized overnight courier or sent by registered or certified mail, postage prepaid, return receipt requested, addressed as follows:

If to Repare, to: Repare Therapeutics, Inc.
7210 Frederick-Banting St.
Suite 100
Saint-Laurent, QC H4S 2A1 Canada
Attention: President
Facsimile No.:

With a copy to: Goodwin Procter LLP
100 Northern Avenue
Boston, Massachusetts 02110
Attention: Christopher Denn
Facsimile No.:

If to Ono, to: Ono Pharmaceutical Co., Ltd.
8-2, Kyutaromachi 1-Chome,
Chuo-ku, Osaka 541-8564 Japan
Attention: Director, License
Facsimile No.:

With a copy to: Ono Pharmaceutical Co., Ltd.
Attention: General Manager, Legal Department
Facsimile No.:

Ono Pharma USA, Inc.,
2000 Lenox Drive, Suite 101, Lawrenceville, New Jersey 08648, USA
Attention: President
Facsimile No.:

or to such other address as the Party to whom notice is to be given may have furnished to the other Party in writing in accordance herewith. In addition, each Party shall deliver a courtesy copy to the other Party's Liaison concurrently with such notice. Any such notice shall be deemed to have been given: (a) when delivered if personally delivered or sent by facsimile on a Business Day (or if delivered or sent on a non-Business Day, then on the next Business Day); (b) on receipt if sent by overnight courier; or (c) on receipt if sent by mail.

16.11. Compliance with Export Regulations. Neither Party shall export any technology licensed to it by the other Party under this Agreement except in compliance with U.S. export Laws and other applicable foreign export Laws.

16.12. Force Majeure. Neither Party shall be held liable to the other Party nor be deemed to have defaulted under or breached this Agreement for failure or delay in performing any obligation under this Agreement (except payment of money obligations), to the extent that such failure or delay is caused by or results from causes which are unforeseeable and irresistible, potentially including embargoes, war, acts of war (whether war be declared or not), insurrections, riots, civil commotions, strikes, lockouts or other labor disturbances, fire, floods, earthquake, tsunami or other acts of God. The affected Party shall notify the other Party of such force majeure circumstances as soon as reasonably practical, and shall promptly undertake all reasonable efforts necessary to cure such force majeure circumstances.

16.13. Independent Parties. It is expressly agreed that Repare and Ono shall be independent contractors and that the relationship between Repare and Ono shall not constitute a partnership, joint venture or agency. Repare shall not have the authority to make any statements, representations or commitments of any kind, or to take any action, which shall be binding on Ono, without the prior written consent of Ono, and Ono shall not have the authority to make any statements, representations or commitments of any kind, or to take any action, which shall be binding on Repare without the prior written consent of Repare.

16.14. Performance by Affiliates. Each Party acknowledges and accepts that the other Party may exercise its rights and perform its obligations under this Agreement either directly or through one or more of its Affiliates. A Party's Affiliates will have the benefit of all rights (including all licenses) of such Party under this Agreement. Accordingly, in this Agreement "Ono" will be interpreted to mean "Ono or its Affiliates" and "Repare" will be interpreted to mean "Repare or its Affiliates" where necessary to give each Party's Affiliates the benefit of the rights provided to such Party in this Agreement; provided, however, that in any event each Party will remain responsible for the acts and omissions, including financial liabilities, of its Affiliates.

16.15. Acquisitions.

16.15.1. Future Acquisition of a Party or its Business. Subject to Sections 16.15.2.1 and 16.15.2.2, in the event of an acquisition of a Party or its business by a an Acquirer after the Effective Date, whether by merger, asset purchase or otherwise, as to any such Acquirer, the other Party shall not obtain rights, licenses, options or access to any Patent Rights, Know-How, product candidates or products that are held by the Acquirer or any Affiliate of the Acquirer that becomes an Affiliate of the acquired Party as a result of such acquisition (but excluding the acquired Party), that were not generated through any use or access to the Know-How or Patent Rights of the acquired Party, or that are not used by the acquired Party in connection with a Drug Candidate, Licensed Drug Candidate and a Licensed Product.

16.15.2. Acquired Programs.

16.15.2.1. The Parties acknowledge and agree that the restrictions in Section 12.4 (Exclusivity) shall not apply to the following circumstances as and to the extent provided in this Section 16.15.2.1: (i) an acquisition of a Party or its business after the Effective Date by an Acquirer, whether by merger, asset purchase or otherwise, which Acquirer is, prior to such acquisition, conducting a research, development or commercialization program that, if conducted by a Party at such time, would be a breach of such Party's exclusivity obligation in Section 12.4 (Exclusivity) and (ii) an acquisition by a Party ("**Acquiring Party**") after the Effective Date of the business or assets of a Third Party, whether by merger, asset purchase or otherwise, which Third Party is, prior to such acquisition, conducting a research, development or commercialization program that, if conducted by a Party at such time, would be a breach of such Party's exclusivity obligation in Section 12.4 (Exclusivity) (each program described in the foregoing clauses (i) and (ii) is a "**Competing Program**") on the condition the following are met:

(a) [***].

(b) [***]

16.15.2.2. [***].

16.16. Binding Effect; No Third Party Beneficiaries. As of the Effective Date, this Agreement shall be binding upon and inure to the benefit of the Parties and their respective permitted successors and permitted assigns. Except as expressly set forth in this Agreement, no Person other than the Parties and their respective Affiliates and permitted assignees hereunder shall be deemed an intended beneficiary hereunder or have any right to enforce any obligation of this Agreement.

16.17. Counterparts. The Agreement may be executed in two (2) or more counterparts, including by facsimile or PDF signature pages or other electronic means, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

[THE REMAINDER OF THIS PAGE HAS BEEN LEFT INTENTIONALLY BLANK]

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Effective Date.

ONO PHARMACEUTICAL CO., LTD.

BY: /s/ Gyo Sagara
NAME: Gyo Sagara
TITLE: President, Representative Director and CEO

REPARE THERAPEUTICS, INC.

BY: /s/ Lloyd M. Segal
NAME: Lloyd M. Segal
TITLE: President & CEO

Schedule 2.4.1
RESEARCH PLAN
(attached)



RESEARCH SERVICE
PLAN

[***]

SPECIFIC OBLIGATIONS UNDER THE NYU AGREEMENT

The following Sections are excerpted from the NYU Agreement and shall be applicable to this Agreement with: (i) Ono having the rights and obligations of a “sublicensee” under the following provisions and (ii) this Agreement constituting a “sublicense” for purposes of the following provisions:

5.05 Repare shall be entitled to grant sublicenses under the License on terms and conditions in compliance and are materially consistent with the terms and conditions of this Agreement (i) to Affiliates or (ii) to Third Parties, in each case for consideration and in an arms- length transaction. All sublicenses shall only be granted by Repare under a written agreement, a copy of which shall be provided by Repare to NYU as soon as practicable after the signing thereof. Each sublicense granted by Repare hereunder shall be subject and subordinate to the terms and conditions of this License Agreement and shall contain (inter-alia) the following provisions:

- (1) the sublicensee may have step-in rights, whereby a sublicensee could cure a breach of this Agreement by Repare during the cure period provided in Section 15.02, and thereafter the sublicense granted hereunder would continue as provided in Section 15.03; provided that in all other circumstances, the sublicense would terminate at the end of such cure period;
- (2) the sublicense shall not be assignable, in whole or in part;
- (3) the sublicensee shall be able to grant further sublicenses thereunder subject to the term of this Section 5.05; and
- (4) both during the term of the sublicense and thereafter the sublicensee shall agree to a confidentiality obligation similar to that imposed on Repare in Section 9 below, and that the sublicensee shall impose on its employees, both during the terms of their employment and thereafter, a similar undertaking of confidentiality; and
- (5) the sublicense agreement shall include the text of Sections 13 and 14 of this Agreement and shall state that NYU is an intended Third Party beneficiary of such sublicense agreement for the purpose of enforcing such indemnification and insurance provisions.

Repare shall not be subject to the provisions of this Section 5.05 with respect to agreements with a distributor or to a contractor or a subcontractor to the extent the purpose is manufacturing, research and development, packaging and distributing and other similar services for which such services are compensated by Repare (the “Excluded Sublicensees”).

13. Liability and Indemnification.

13.1 Repare shall indemnify, defend and hold harmless NYU and its contractors and each of their affiliates, and each of their trustees, officers, medical and professional staff, employees, students and agents and their respective successors, heirs and assigns (the "Indemnitees"), against any liability, damage, loss or expense (including reasonable attorneys' fees and expenses of litigation) incurred by or imposed upon the Indemnitees or any one of them in connection with any claims, suits, actions, demands or judgments (i) arising out of the design, production, manufacture, sale, use in commerce or in human clinical trials, lease, or promotion by Repare or by a licensee, Affiliate or agent of Repare of any Licensed Drug Candidate and Licensed Product, process or service relating to, or developed pursuant to, this Agreement or (ii) arising out of any other activities to be carried out pursuant to this Agreement.

13.2 With respect to an Indemnitee, Repare's indemnification under subsection 13.01(i) shall apply to any liability, damage, loss or expense whether or not it is attributable to the negligent activities of such Indemnitee. Repare's indemnification obligation under subsection 13.01(ii) shall not apply to any liability, damage, loss or expense to the extent that it is attributable to the fraud, willful misconduct or grossly negligent activities of NYU or any Indemnitees or otherwise arising from NYU's breach of any representation, warranty or covenant of this Agreement.

13.3 Repare agrees, at its own expense, to provide attorneys reasonably acceptable to NYU to defend against any actions brought or filed against any Indemnitee with respect to the subject of indemnity to which such Indemnitee is entitled hereunder, whether or not such actions are rightfully brought.

14. Insurance.

14.1 At such time as any Licensed Product, process or service relating to, or developed pursuant to, this Agreement is being commercially distributed or sold or tested in clinical trials by Repare or by a licensee, Affiliate or agent of Repare, Repare shall at its sole cost and expense, procure and maintain policies of comprehensive general liability insurance in amounts not less than (i) \$[***] per incident and \$[***] annual aggregate during the period that such Licensed Product, process, or service is being tested in clinical trials prior to commercial sale, and (ii) \$[***] per incident and \$[***] annual aggregate, during the period that such Licensed Product, process, or service is being commercially distributed or sold, and in each case naming the Indemnitees as additional insureds. Such comprehensive general liability insurance shall provide (i) product liability coverage and (ii) broad form contractual liability coverage for Repare's indemnification under Section 14 of this Agreement. If Repare elects to self-insure all or part of the limits described above including deductibles or retentions which are in excess of U.S. \$[***] annual aggregate such self-insurance program shall include assets or reserves which have been actuarially determined for the liabilities associated with this Agreement and shall be reasonably acceptable to NYU.

The minimum amounts of insurance coverage required under this Section 14 shall not be construed to create a limit of Repare's liability with respect to its indemnification under Section 13 of this Agreement.

14.2 Repare shall provide NYU with written evidence of such insurance upon request of NYU. Repare shall provide NYU with written notice at least [***] prior to the cancellation, non-renewal or material change in such insurance; if such insurance is terminated or no longer in compliance with this Section 14, and Repare does not obtain replacement insurance NYU shall have the right to terminate this Agreement without notice or any additional waiting periods.

14.3 Repare shall maintain such comprehensive general liability insurance beyond the expiration or termination of this Agreement during (i) the period that any product, process or service, relating to, or developed pursuant to, this Agreement is being commercially distributed or sold or tested in clinical trials by Repare or by a sublicensee, Affiliate or agent of Repare and (ii) statute of limitations applicable to such activities.

15. Expiry and Termination

15.1 Unless earlier terminated pursuant to this Section 15, hereof, this Agreement shall expire upon the expiration of the period of the License in all countries as set forth in Section 5.04 above.

15.2 At any time prior to expiration of this Agreement, either Party may terminate this Agreement forthwith for cause, as “cause” is described below, by giving written notice to the other Party. Cause for termination by one Party of this Agreement shall be deemed to exist if the other Party materially breaches or defaults in the performance or observance of any of the provisions of this Agreement and such breach or default is not cured within [***] or, in the case of failure to pay any amounts due hereunder, [***] (unless otherwise specified herein) after the giving of notice by the other Party specifying such breach or default and provided such breach or default is not cured, or if either NYU or Repare discontinues its business or becomes insolvent or bankrupt.

15.3 Upon termination of this Agreement for any reason and prior to expiration as set forth in Section 15.01 hereof, all rights granted hereunder to the NYU Technology shall revert to NYU and Repare shall not be entitled to make any further use whatsoever of the NYU Technology. Notwithstanding the foregoing, if any sublicense agreements that were granted in compliance with Section 5.05 remain in good standing as of the date of such termination, then the rights licensed herein shall be extended to such Sublicensee in the same scope as is provided in such sublicense agreement, provided that the relevant Sublicensee signs a written agreement with NYU agreeing to be bound by the terms of this Agreement and agreeing that NYU’s only obligation hereunder shall be to maintain the effectiveness of the scope of the rights licensed hereunder to such Sublicensee.

Schedule 12.2.3

REPARE PATENT RIGHTS

[***]

Schedule 12.2.4
REPARE IN-LICENSES

NYU Agreement

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [*], HAS BEEN OMITTED BECAUSE REPARE THERAPEUTICS INC. HAS DETERMINED THE INFORMATION (I) IS NOT MATERIAL AND (II) WOULD LIKELY CAUSE COMPETITIVE HARM TO REPARE THERAPEUTICS INC. IF PUBLICLY DISCLOSED.**

AMENDED AND RESTATED LICENSE AGREEMENT

This AMENDED AND RESTATED LICENSE AGREEMENT (the “Agreement”), made as of July 9th, 2018, and effective as of the Effective Date (as hereinafter defined) is by and between:

NEW YORK UNIVERSITY (hereinafter “NYU”), a not-for-profit academic institution organized and existing under the laws of the State of New York and having a place of business at 70 Washington Square South, New York, New York 10012.

AND

REPARE THERAPEUTICS INC. (hereinafter “Repare”), a corporation organized and existing under the laws of Canada and having its principal office at 7210 Frederick-Banting, Suite 100, St-Laurent, Quebec, H4S 2A1, Canada.

The term “Party” refers to either Repare or NYU and the term the “Parties” refers to Repare and NYU.

RECITALS

WHEREAS, NYU and Repare are parties to a License Agreement dated December 20, 2016 (the “Effective Date”), which was previously amended by one amendment dated February 28, 2017;

WHEREAS, NYU and Repare wish to enter into this Amended and Restated License Agreement, to incorporate the prior amendment into a single document, and to further amend the License Agreement;

WHEREAS, NYU and Highline Therapeutics, Inc. (hereinafter, “Highline”) are parties to a Master Research Agreement dated December 15, 2015, under which Highline funded a project at NYU related to PolQ Inhibition for the Treatment of Cancer under the direction of Dr. Agnel Sfeir of NYU (hereinafter “Sfeir”) and the NYU Office of Therapeutics Alliances (hereinafter “OTA”), pursuant to a Research Project Specification dated April 21, 2016 (hereinafter, “the Highline-Funded PolQ Project”);

WHEREAS, Sfeir and the NYU OTA have made certain inventions and developed certain data related to inhibitors of PolQ for the treatment of cancer, prior to and during the Highline-Funded PolQ Project as described in Appendix I (“the Pre-Existing Inventions”);

WHEREAS, Highline has assigned any rights it had to the NYU Technology (as hereinafter defined) to Repare; and

WHEREAS, subject to the terms and conditions hereinafter set forth, NYU is willing to grant to Repare and Repare is willing to accept from NYU the License (as hereinafter defined).

NOW, THEREFORE, in consideration of the mutual promises and agreements contained herein, the Parties hereto hereby agree as follows:

1. Definitions.

Whenever used in this Agreement, the following terms shall have the following meanings:

1.01 "Affiliate" shall mean any company or other legal entity which controls, or is controlled by, or is under common control with, Repare; control means the holding of fifty percent (50%) or more of (i) the capital and/or (ii) the voting rights and/or (iii) the right to elect or appoint directors.

1.02 "Agreement" shall having the meaning set out in the preamble.

1.03 "Calendar Year" shall mean any consecutive period of twelve months commencing on the first day of January of any year.

1.04 "Change of Control" means, with respect to Repare and a Third Party [***], (a) a merger or consolidation of Repare with such Third Party that results in the voting securities of Repare outstanding immediately prior thereto, or any securities into which such voting securities have been converted or exchanged, ceasing to represent more than 50% of the combined voting power of the surviving entity or the parent of the surviving entity immediately after such merger or consolidation, or (b) a transaction or series of related transactions in which such Third Party, together with its affiliates, becomes the direct or beneficial owner of more than 50% of the combined voting power of the outstanding securities of Repare, or (c) the sale or other transfer to such Third Party of all or substantially all of Repare's business to which the subject matter of this Agreement relates. Notwithstanding anything to the contrary in this paragraph, the sale of equity securities for capital raising purposes in a financing transaction shall not be deemed to result in a Change of Control.

1.05 "Commercialize" shall mean manufacture, have made, use, market, sale, offer to sell, have sold, import, export, license, distribute and/or otherwise conduct a similar activity and "Commercialization" shall have a corresponding meaning.

1.06 "Date of First Commercial Sale" shall mean the date on which a Licensed Product is first offered for sale by Repare or an Affiliate or sublicensee of Repare to a Third Party.

1.07 "Excluded Sublicensees" shall have the meaning set out in Section 5.

1.08 "Field" shall mean all uses.

1.09 "Highline" shall having the meaning set out in the preamble.

1.10 "Improvements" means NYU's interest in any inventions, discoveries and/or data relating to directly targeting or otherwise directly inhibiting PoIQ which (i) is invented, discovered, or developed [***] and (ii) which NYU owns or otherwise has rights to out-license.

1.11 "IND" shall have the meaning set out in Section 6.01(d).

1.12 "Indemnitees" has the meaning set out in Section 13.

1.13 "Initiation" of a clinical trial shall mean dosing of the first patient of such clinical trial.

1.14 "Intellectual Property" or "IP" shall mean inventions (whether patentable or unpatentable), discoveries, written material, compounds, information, know-how, trade secrets, copyrights, designs, ideas (including but not limited to any computer software), formulae, algorithms, concepts, proprietary data, techniques, instructions, processes, expert opinions, information, materials, program listings, flow charts, logic diagrams, manuals, specifications, instructions, or any copies of the foregoing in any medium, or the expression thereof.

1.15 "Intellectual Property Rights" shall mean means any rights in Intellectual Property which a Person owns, seeks to own, and/or seeks to enforce, including any regular or provisional patent applications filed in the U.S., Canada or any other jurisdiction, and any divisionals, continuations, continuations-in-part, and any and all patents issuing thereon and/or renewals, and/or reissues, and/or extensions and any and all patents and patent applications in other countries corresponding thereto.

1.16 "License" shall mean the exclusive worldwide license to practice NYU's rights in the NYU Technology (as hereinafter defined) for the research, development, and/or Commercialization of the Licensed Products (as hereinafter defined) in the Field.

1.17 "Licensed Know-How Products" shall mean all products and services, excluding Licensed Patent Products, which: (i) incorporate or are developed using NYU Know-How or (ii) modulate PolQ as a basis for their therapeutic effect. From and after a Change of Control of Repare, no product arising from a development or commercial program of the acquirer of Repare in such Change of Control, or such acquirer's affiliates, and constituting a bona fide drug candidate of such acquirer or its affiliates in existence and, with data generated by such acquirer in biochemical, cellular, and animal studies showing such drug candidate to modulate PolQ as a basis for its therapeutic effect prior to the date of such Change of Control shall be considered a Licensed Know-How Product; provided that from and after such Change of Control neither Repare nor such acquirer nor their affiliates use or incorporate, directly or indirectly, any NYU Patents, NYU Know-How or NYU Materials, or any intellectual property or materials of Repare or its Affiliates relating to PolQ including, but not limited to, pharmaceutical, chemical, biological and biochemical products, structures, assays, technical and non-technical data, materials methods and processes and any drawings, plans, diagrams, specifications and/or other documents containing such information and existing prior to such Change of Control, in each case in connection with (including in identification or development of) such compound or program, and provided further that Repare, such acquirer and their affiliates have and enforce processes, policies, procedures and systems to prevent any such use or incorporation.

1.18 "Licensed Patent Products" shall mean all products and services covered by a claim of any unexpired NYU Patent (as hereinafter defined), which has not been disclaimed or held invalid by a court of competent jurisdiction from which no appeal can be taken.

1.19 "Licensed Products" shall mean Licensed Know-How Products and Licensed Patent Products.

1.20 "Net Sales" shall mean [***].

1.21 "NYU" shall have the meaning set out in the preamble.

1.22 "NYU Know-How" shall mean the Pre-Existing Inventions and Improvements and any information and materials related to the Pre-Existing Inventions and Improvements, including, but not limited to, pharmaceutical, chemical, biological and biochemical products, technical and

non-technical data, materials, methods and processes and any drawings, plans, diagrams, specifications and/or other documents containing such information, invented, discovered, developed or acquired [***] which NYU owns or has rights to out-license.

1.23 “NYU Materials” has the meaning set out in Section 9.04.

1.24 “NYU Patents” shall mean Intellectual Property Rights which claim the Pre-Existing Inventions and Improvements; provided that with respect to patent applications, reasonable efforts are being made to prosecute such applications and such applications have not been pending for more than [***] from the date of the [***], provided further that such patent applications which have been pending for more than [***] shall again be considered NYU Patents upon allowance of claims in such patent applications.

1.25 “NYU Technology” shall mean all NYU Patents and NYU Know-How.

1.26 “OTA” shall have the meaning set out in the Recitals.

1.27 “Party” or “Parties” shall have the meaning set out in the preamble.

1.28 “Pre-Existing Inventions” shall have the meaning set out in the Recitals.

1.29 “Repair” shall have the meaning set out in the preamble.

1.30 “Securities Act” has the meaning set out in Section 17(7).

1.31 “Semi-Year Report” shall have the meaning set out in Section 6.03.

1.32 “Sfeir” shall have the meaning set out in the Recitals.

1.33 “Sublicense Date” for a particular sublicense shall mean the date that Repare enters into a sublicense agreement, or if earlier, the date that Repare enters into an agreement granting an option to enter into a sublicense.

1.34 “Sublicense Income” shall mean consideration in any form received by Repare and/or an Affiliate(s) for the grant of a sublicense or any other right, license, privilege or immunity, or an option to acquire such a right, under the License, including but not limited to the right to make, have made, use, have used, develop, have developed, sell or have sold Licensed Products. Sublicense Income shall include any [***].

1.35 “Sublicensee” means any Third Party that Repare grants a sublicense or any other right, license, privilege or immunity, or an option to acquire such a right, under the License, including but not limited to the right to make, have made, use, have used, develop, have developed, sell or have sold Licensed Products. For avoidance of doubt, purchasers of Licensed Products are not Sublicensees solely by virtue of making such purchase.

1.36 “Third Party” means a person or entity other than a Party or an Affiliate or sublicensee of a Party.

1.37 “Third Party Milestone Payment” shall have the meaning set out in Section 6.01(b).

1.38 "PolQ" shall mean the gene PolQ and the protein DNA Polymerase Theta encoded by PolQ.

2. Effective Date.

This Agreement shall be effective as of the Effective Date and shall remain in full force and effect until it expires or is terminated in accordance with Section 15 hereof.

3. Title.

3.01 Subject to the License granted to Repare hereunder, all right, title and interest, in and to the NYU Technology, and in and to any drawings, plans, diagrams, specifications, and other documents containing any of the NYU Technology shall vest solely in NYU. At the request of NYU, Repare shall take all steps as may be necessary to give full effect to said right, title and interest of NYU including, but not limited to, the execution of any documents that may be required to record such right, title and interest with the appropriate agency or government office.

3.02 Repare shall notify NYU in writing prior to engaging [***].

3.03 [***].

4. Patents and Patent Applications.

4.01 NYU will promptly disclose to Repare discoveries, inventions and/or data, which constitute Improvements.

4.02 At the initiative of Repare or NYU, the Parties shall consult with each other regarding the prosecution of all patent applications with respect to the NYU Patents. Such patent applications shall be filed, prosecuted and maintained by patent counsel jointly selected by NYU and Repare. Copies of all such patent applications and patent office actions shall be forwarded to each of NYU and Repare. NYU and Repare shall each also have the right to have such patent applications and patent office actions independently reviewed by other patent counsel separately retained by NYU or Repare, upon prior notice to and consent of the other Party, which consent shall not unreasonably be withheld.

4.03 All patent applications and proceedings with respect to the NYU Patents shall be filed, prosecuted and maintained by NYU at the expense of Repare. Against the submission of invoices, Repare shall reimburse NYU for all costs and fees incurred by NYU during the term of this Agreement, in connection with the filing, maintenance, prosecution, post-grant proceedings, protection and the like of the NYU Patents, payable within thirty (30) days after receipt of an invoice from NYU. At any time following the Effective Date, NYU shall have the right at NYU's reasonable discretion and only in specific circumstances where required to engage foreign patent counsel, by written notice, to require Repare to provide advanced payment of any specific patent expenses for a particular NYU Patent prior to NYU incurring such expenses, and to abandon such NYU Patent if Repare does not provide such advanced payment.

4.04 NYU and Repare shall assist, and cause their respective employees and consultants to assist each other, in assembling inventorship information and data (including, without limitation, all relevant data generated with the NYU Materials) for the filing and prosecution of patent applications on inventions pertaining to the NYU Technology.

4.05 If at any time during the term of this Agreement Repare decides that it is undesirable, as to one or more countries, to prosecute or maintain any patents or patent applications within the NYU Patents, it shall give prompt written notice thereof to NYU, and upon receipt of such notice Repare shall be released from its obligations to bear all of the expenses to be incurred thereafter as to such countries in conjunction with such patent(s) or patent application(s) and such patent(s) or application(s) shall be deleted from the NYU Patents and NYU shall be free to grant rights in and to the NYU Technology in such countries to Third Parties, without further notice or obligation to Repare, and Repare shall have no rights whatsoever to exploit the NYU Patents in such countries.

4.06 Nothing herein contained shall be deemed to be a warranty by NYU that

- i) NYU can or will be able to obtain any patent or patents on any patent application or applications in the NYU Patents or any portion thereof, or that any of the NYU Patents will afford adequate or commercially worthwhile protection, or
- ii) that the manufacture, use, or sale of any element of the NYU Technology or any Licensed Product will not infringe any patent(s) of a Third Party.

4.07 Repare shall take commercially reasonable steps to support NYU in obtaining patent term extension(s) for NYU Patents, if eligible, pursuant to 35 U.S.C.156 et seq., as appropriate. In respect of NYU Patents which may be eligible for patent term extension, Repare shall keep NYU fully informed of its submissions to governmental authorities for regulatory review for applicable Licensed Patent Products. Repare agrees to cooperate fully with NYU, at no cost to NYU, in preparing such applications for patent term extension. Upon request by NYU or its designee, Repare will join in such application for patent term extension. Repare shall fully support such application and shall provide such information in a timely manner as may reasonably be requested in support of the application by NYU or by the government.

4.08 Repare shall, and shall require its Affiliates and sublicensees to, apply patent markings that meet all requirements of U.S. law, 35 U.S.C. § 287, to the extent applicable, with respect to all Licensed Products.

5. Grant of License.

5.01 Subject to the terms and conditions hereinafter set forth, NYU hereby grants to Repare and Repare hereby accepts from NYU the License. NYU shall promptly provide Repare of the details of any Improvements, provided that such Improvements shall be covered by the License Agreement whether or not such notice is given.

5.02 NYU reserves the right to use, and to permit other not-for-profit entities engaged in medical research to use, the NYU Technology for educational and research purposes only, provided that each such other entity will enter into an agreement with NYU agreeing not to further distribute any materials provided without NYU permission, and to maintain any confidential information in confidence and to limit use of the NYU Technology for educational and research purposes only.

5.03 The Parties acknowledge that the United States government retains rights in intellectual property funded under any grant or similar contract with a Federal agency. The License is expressly subject to all applicable United States government rights, including, but not

limited to, any applicable requirement that products, which result from such intellectual property and are sold in the United States, must be substantially manufactured in the United States.

5.04 The License granted Repare in Section 5.01 hereto shall commence upon the Effective Date and shall remain force on a country-by-country basis, if not previously terminated under the terms of this Agreement, for ten (10) years from the Date of First Commercial Sale in such country or until the expiration date of the last to expire of the NYU Patents whichever shall be later. Repare shall inform NYU in writing of the Date of First Commercial Sale with respect to each Licensed Product in each country as soon as practicable after the making of each such first commercial sale.

5.05 Repare shall be entitled to grant sublicenses under the License on terms and conditions in compliance and are materially consistent with the terms and conditions of this Agreement (i) to Affiliates or (ii) to Third Parties, in each case for consideration and in an arms-length transaction. All sublicenses shall only be granted by Repare under a written agreement, a copy of which shall be provided by Repare to NYU as soon as practicable after the signing thereof. Each sublicense granted by Repare hereunder shall be subject and subordinate to the terms and conditions of this License Agreement and shall contain (inter-alia) the following provisions:

- (1) the sublicensee may have step-in rights, whereby a sublicensee could cure a breach of this Agreement by Repare during the cure period provided in Section 15.02, and thereafter the sublicense granted hereunder would continue as provided in Section 15.03; provided that in all other circumstances, the sublicense would terminate at the end of such cure period;
- (2) the sublicense shall not be assignable, in whole or in part;
- (3) the sublicensee shall be able to grant further sublicenses thereunder subject to the term of this Section 5.05; and
- (4) both during the term of the sublicense and thereafter the sublicensee shall agree to a confidentiality obligation similar to that imposed on Repare in Section 9 below, and that the sublicensee shall impose on its employees, both during the terms of their employment and thereafter, a similar undertaking of confidentiality; and
- (5) the sublicense agreement shall include the text of Sections 13 and 14 of this Agreement and shall state that NYU is an intended Third Party beneficiary of such sublicense agreement for the purpose of enforcing such indemnification and insurance provisions.

Repare shall not be subject to the provisions of this Section 5.05 with respect to agreements with a distributor or to a contractor or a subcontractor to the extent the purpose is manufacturing, research and development, packaging and distributing and other similar services for which such services are compensated by Repare (the "Excluded Sublicensees").

5.06 With respect to any inventions, discoveries and/or data that would have been Improvements but for the fact that they were invented, discovered, developed or acquired after the [***] but on or prior to the [***] ("IDDs"), NYU shall promptly give notice and details hereof in writing to Repare. Subject to any third party rights existing at such time, Repare is hereby granted a [***] exclusive right of first negotiation from the date of receipt of any such notice to exclusively license any such IDD from NYU. Unless Repare waives its right of first negotiation in writing, Repare and NYU will negotiate in good faith an exclusive license therefor until the expiry of such [***], NYU shall not grant any license in respect of, or sell its rights to or under, any such IDD to any third parties or have any discussions or communication regarding the licensing or sale of IDD of any kind in conflict with such right of first negotiation, except to not-for-profit entities

engaged in medical research. If any such IDD's have not been licensed to Repare following the expiration of such [***], Repare's right of first negotiation will lapse and NYU will be free to dispose of those IDD's in its sole and absolute discretion, and without any further notice or accounting to Repare.

6. Payments for License.

6.01 In consideration for the grant and during the term of the License with respect to each Licensed Product, Repare shall pay to NYU:

- (a) non-refundable license fees of [***] on the first anniversary of the Effective Date in respect of the second Calendar Year, [***] each on each of the second and each succeeding anniversary of the Effective Date in respect of the third and succeeding Calendar Years, which shall be creditable against milestone payments due to NYU under Section 6.01(b) below and royalties on sales due to NYU under Section 6.01(c) below, for milestone payments and royalties due during the respective Calendar Year in which each such license fee payment is due.
- (b) within ninety (90) days following the achievement of each of the following technical milestones, with respect to each Licensed Patent Product or Licensed Know-How Product, the payments as indicated below:
 - (i) For the first indication, the milestone payments for License Patent Products and License Know-How Products will be as shown in Table A and Table B, below, respectively:

Licensed Patent Product Milestone Payments ("Table A")

[***]	U.S.\$[***]
[***]	U.S.\$[***]
[***]	U.S.\$[***]
[***]	U.S.\$[***]
[***]	U.S.\$[***]

Licensed Know-How Product Milestone Payments ("Table B")

[***]	U.S.\$[***]
[***]	U.S.\$[***]
[***]	U.S.\$[***]
[***]	U.S.\$[***]
[***]	U.S.\$[***]

- (ii) For the second indication, the milestone payments for License Patent Products and License Know-How Products will be [***] of the payments listed in Table A and Table B, respectively.
- (iii) For the third and fourth indications, the milestone payments for License Patent Product and License Know-How Products will be [***] of the payments listed in Table A and Table B, respectively, [***].
- (iv) There shall no milestone payments for the fifth and any subsequent indications.
- (v) A Phase IIA clinical trial shall not be deemed a Phase II clinical trial for purposes hereof.

If Repare is required to obtain one or more licenses under Intellectual Property Rights of one or more Third Parties to Commercialize a particular Licensed Product, Repare may reduce the milestone payments payable to NYU hereunder on such Licensed Product by [***] of the amounts paid as milestones prior thereto to such Third Parties with respect to such Licensed Product (“Third Party Milestone Payment”); [***].

- (c) For all Licensed Patent Products, a royalty of [***] of the Net Sales of Repare and each Affiliate and sublicensee of Repare, and for all Licensed Know-How Products, a royalty of [***] of the Net Sales of Repare and each Affiliate and sublicensee of Repare. If Repare is required to obtain one or more licenses under patent rights of one or more Third Parties to manufacture or sell a particular Licensed Product, Repare may reduce the royalties payable to NYU hereunder on such Licensed Product by [***] paid to such Third Parties on such Licensed Product; provided, however, that the royalty amount or amount paid to NYU shall not be reduced to less than [***] of what NYU otherwise would have received. For clarity, royalties shall not be payable ,provided Repare does not receive remuneration beyond the recovery of out-of-pocket expenses, on the sale of Licensed Products which are: (i) used solely for internal research and development applications; (ii) used as surplus and for training products distributed by Repare; (iii) in kind donations, such as for compassionate use programs; (iv) for clinical and research studies sponsored in whole or in part by Repare or (v) on transfers of Licensed Product between Repare and its Affiliates or between a Sublicensee and its Affiliates.
- (d) A percentage of any Sublicense Income received by Repare from a Sublicensee (other than an Affiliate) equal to [***].
- (e) Payments in respect of Net Sales or sublicense in a country shall remain in force on a product-by-product, country-by-country basis, if not previously terminated under the terms of this Agreement, (i) with respect to Licensed Know How Products, for ten (10) years from the Date of First Commercial Sale in such country and (ii) with respect to Licensed Patent Products, until the expiration date of the last to expire of the NYU Patents covering the Licensed Patent Product or the Licensed Patent Product’s manufacture or use in the applicable country (“Product Patent Expiration Date”). Repare shall inform NYU in writing of the Date of First Commercial Sale with respect to each Licensed Product in each country as soon as practicable after the occurrence thereof. For the avoidance of doubt, should the

Product Patent Expiration Date occur less than ten (10) years from the Date of First Commercial Sale for a particular Licensed Patent Product, then such product shall thereafter be a Licensed Know-How Product, and NYU shall receive royalties at the Licensed Know-How Product royalty rate for the remainder of such ten (10) year term.

6.02 In further consideration for the grant of the License, upon the Effective Date, Repare shall issue to NYU a number of common shares of stock in Repare corresponding to a [***] fully diluted shares as a non-refundable, non-creditable fee, subject to execution by NYU of a unanimous shareholder agreement pursuant to which NYU is provided with similar rights to those provided to any and all other common shareholders of Repare.

6.03 For the purpose of computing the royalties due to NYU hereunder, the year shall be divided into two parts ending on June 30 and December 31. Not later than [***] after each June and December in each Calendar Year during the term of the License occurring after the Date of First Commercial Sale, Repare shall submit to NYU a full and detailed report of royalties or payments due NYU under the terms of this Agreement for the preceding quarter year (hereinafter "the Semi-Year Report"), setting forth the Net Sales and/or lump sum payments and all other payments or consideration from sublicensees upon which such royalties are computed and including at least:

- i) the quantity of Licensed Products used, sold, transferred or otherwise disposed of;
- ii) the selling price of each Licensed Product;
- iii) the deductions permitted under Section 1.20 to arrive at Net Sales;
- iv) the royalty computations and subject of payment; and
- v) license and royalty payments to Third Parties in respect of the Licensed Product.

If no royalties or other payments are due, a statement shall be sent to NYU stating such fact. Payment of the full amount of any royalties or other payments due to NYU for the preceding half year shall accompany each Semi-Year Report on royalties and payments. Repare shall keep for a period of at least [***] after the date of entry, full, accurate and complete books and records consistent with sound business and accounting practices and in such form and in such detail as to enable the determination of the amounts due to NYU from Repare pursuant to the terms of this Agreement.

6.04 On reasonable notice and during regular business hours, NYU or the authorized representative of NYU shall each have the right to inspect the books of accounts, records and other relevant documentation of Repare or of Affiliate and the sublicensees of Repare insofar as they relate to the production, marketing and sale of the Licensed Products, in order to ascertain or verify the amount of royalties and other payments due to NYU hereunder, and the accuracy of the information provided to NYU in the aforementioned reports. The cost of such inspection shall be borne by NYU, unless it is determined in such inspection that NYU has been underpaid for the period under review by more than [***] of the amount which NYU should have been paid, in which case the cost of such inspection shall be reimbursed to NYU by Repare.

7. Method of Payment.

7.01 Royalties and other payments due to NYU hereunder shall be paid to NYU in United States dollars. Any such royalties on or other payments relating to transactions in a foreign currency shall be converted into United States dollars based on the closing buying rate for buying United States dollars listed on [***] for the particular currency on the last business day of the accounting period for which such royalty or other payment is due.

7.02 Repare shall be responsible for payment to NYU of all royalties due on sale, transfer or disposition of Licensed Products by each Affiliate and sublicensee of Repare.

7.03 Any amount payable hereunder by one of the Parties to the other, which has not been paid by the date on which such payment is due, shall bear interest from such date until the date on which such payment is made, at the rate of [***] in excess of [***], during the period of arrears and such amount and the interest thereon may be set off against any amount due, whether in terms of this Agreement or otherwise, to the Party in default by any non-defaulting Party.

8. Development and Commercialization.

8.01 Repare undertakes to use reasonable diligence to carry out the further research, development and Commercialization of the NYU Technology, provided if such efforts cease, NYU may terminate this Agreement on [***] prior written notice if such activities do not recommence in a bonafide manner during such [***]. Repare shall provide NYU with a Development Plan, reasonably acceptable to NYU, describing planned efforts to develop Licensed Products, by the first anniversary of the Effective Date.

8.02 The performance of the tests, trials, studies and other activities shall be carried out in accordance with the applicable law.

8.03 Repare shall provide NYU with written summaries of activities and actions undertaken by Repare to develop and commercialize the Licensed Products; within [***] after each June 30 and December 31 of the duration of this Agreement, commencing [***] after the Effective Date.

8.04 [***].

9. Confidential Information and Material Transfer.

9.01 Except as otherwise provided in Sections 9.02 and 9.03 below Repare shall maintain any and all of the NYU Technology in confidence and shall not release or disclose any tangible or intangible component thereof to any Third Party without first receiving the prior written consent of NYU to said release or disclosure.

9.02 This obligation of confidentiality set forth in Section 9.01 shall not apply to any component of the NYU Technology which was part of the public domain prior to the Effective Date or which becomes a part of the public domain not due to some unauthorized act by or omission of Repare after the Effective Date or which is disclosed to the Repare by a Third Party who has the right to make such disclosure.

9.03 The provisions of Section 9.01 notwithstanding, Repare may disclose the NYU Technology to Third Parties in order to conduct the business of research, development and/or Commercialization of Licensed Products and the financing of Repare, including without limitation, potential and actual contractors, lenders, bankers, underwriters, partners, acquirers, investors, advisors, consultants, legal and accounting professionals and others on a need to know basis under circumstances that reasonably ensure the confidentiality thereof.

9.04 The following terms shall govern the transfer of materials from NYU to Repare, including those materials provided under the letter agreement, dated October 18, 2016, between the Parties relating to the transfer of PoIQ- related substances (the "NYU Materials"):

- i) Repare shall have the right to distribute the NYU Materials only to subcontractors who agree not to further distribute the NYU Materials.
- ii) Repare and its subcontractors shall not use the NYU Materials in humans.
- iii) THE NYU MATERIAL IS PROVIDED "AS IS" and NYU MAKES NO REPRESENTATIONS AND EXTENDS NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED. THERE ARE NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR THAT THE USE OF THE MATERIAL WILL NOT INFRINGE ANY PATENT, COPYRIGHT, TRADEMARK, OR OTHER PROPRIETARY RIGHTS.
- iv) The NYU Materials provided hereunder shall be considered NYU Know-How.
- v) [***].

10. Publication.

10.01 Prior to submission for publication of a manuscript describing the results of any aspect of NYU Technology, NYU shall send Repare a copy of the manuscript to be submitted, and shall allow Repare [***] from the date of the proposed submission to determine whether the manuscript contains such subject matter for which patent protection should be sought prior to publication of such manuscript. Should Repare believe the subject matter of the manuscript contains a patentable invention, then, prior to the expiration of such [***] from the mailing date of such manuscript to Repare by NYU, Repare shall give written notification to NYU of: (i) its determination that such manuscript contains patentable subject matter for which patent protection should be sought; (ii) the countries in which such patent protection should be sought; and (iii) any comments to the publication.

10.02 In the case of other public presentations describing the results or any aspect of the NYU Technology, NYU shall provide Repare with any such proposed abstract or presentation relating thereto by delivering a copy thereof to Repare no less than [***] before the intended presentation. Repare shall have [***] from its receipt of such abstract or presentation in which to give written notification to NYU of: (i) its determination that such abstract or presentation contains patentable subject matter for which patent protection should be sought; and (ii) the countries in which such patent protection should be sought; and (iii) any comments to the abstract or publication.

10.03 After the expiration of such [***] or [***], as applicable, from the date of receipt of manuscript, abstract or presentation, as applicable, to Repare, unless NYU has received the written notice specified above from Repare, NYU shall be free to submit such manuscript for publication to publish the disclosed research results in any manner consistent with academic standards.

10.04 Upon receipt of such written notice from Repare pursuant to Section 10.01 or 10.02 above, NYU (i) will attempt to incorporate any comments received by Repare in NYU's reasonable discretion and (ii) if requested by Repare, delay submission of the manuscript or date of presentation for an additional period of up to [***] to permit the preparation and filing in accordance with Section 4 hereof of any patent applications by NYU on the subject matter to be disclosed in such manuscript. After expiration of such [***], or the filing of a patent application on each such invention, whichever shall occur first, NYU shall be free to submit the manuscript and to publish the disclosed results or to give the presentation, as applicable.

11. Infringement of NYU Patent.

11.01 In the event a Party to this Agreement acquires information that a Third Party is infringing one or more of the NYU Patents, the Party acquiring such information shall promptly notify the other Party to the Agreement in writing of such infringement.

11.02 In the event of an infringement of an NYU Patent, Repare and/or the sublicensee shall have the right but shall not be required to bring suit against the infringer. Should Repare elect to bring suit against an infringer and NYU is joined as a Party plaintiff in any such suit, NYU shall have the right to approve, such approval not to be unreasonably withheld, the counsel selected by Repare to represent Repare and NYU. The expenses of such suit or suits that Repare elects to bring, including any reasonable expenses of NYU incurred in conjunction with the prosecution of such suit or the settlement thereof, shall be paid for entirely by Repare and Repare shall hold NYU free, clear and harmless from and against any and all costs of such litigation, including attorneys' fees. Repare shall not compromise or settle such litigation without the prior written consent of NYU, which shall not be unreasonably withheld, provided NYU's consent is not required if such settlement is consistent with the sublicense terms of this Agreement, and would not compromise the viability of NYU's Patents or require any monetary or other obligations of NYU, and Repare does not make any admission of invalidity or non-infringement or otherwise regarding any NYU Patents or otherwise with respect to NYU.

11.03 In the event Repare exercises the right to sue herein conferred, it shall have the right to first reimburse itself out of any sums recovered in such suit or in settlement thereof for all costs and expenses of every kind and character, including reasonable attorneys' fees, necessarily involved in the prosecution of any such suit, and if after such reimbursement, any funds shall remain from said recovery, [***].

11.04 If Repare does not bring suit against said infringer pursuant to Section 11.02 herein, or has not commenced negotiations with said infringer for discontinuance of said infringement, within [***] after receipt of such notice, NYU shall have the right, but shall not be obligated, to bring suit for such infringement. Should NYU elect to bring suit against an infringer and Repare is joined as a Party plaintiff in any such suit, Repare shall have the right to approve, such approval not to be unreasonably withheld, the counsel selected by NYU to represent NYU

and Repare, and NYU shall hold Repare free, clear and harmless from and against any and all costs and expenses of such litigation, including attorneys' fees. If Repare has commenced negotiations with an alleged infringer of the NYU Patent for discontinuance of such infringement within such [***], Repare shall have an additional [***] from the termination of such initial [***] to conclude its negotiations before NYU may bring suit for such infringement. In the event NYU brings suit for infringement of any NYU Patent, NYU shall have the right to settle any such suit by licensing the alleged infringer. In the event NYU brings suit for infringement of any NYU Patent, NYU shall have the right to first reimburse itself out of any sums recovered in such suit or settlement thereof for all costs and expenses of every kind and character, including reasonable attorneys' fees necessarily involved in the prosecution of such suit, and if after such reimbursement, any funds shall remain from said recovery, [***].

11.05 Each Party agree to cooperate fully with the other Party at the request of the other Party, including, by giving testimony and producing documents lawfully requested in the prosecution of any suit for infringement of the NYU Patents; provided, the Party having carriage of the litigation shall pay all reasonable expenses (including attorneys' fees) incurred by the other Party in connection with such cooperation. Without limiting the foregoing, NYU and Sfeir shall cooperate with Repare at the request of Repare, including by giving testimony and producing documents lawfully requested, in the prosecution of any suit by Repare for infringement of the NYU Patents; provided, that Repare shall pay all reasonable expenses (including attorneys' fees) incurred by NYU in connection with such cooperation.

12. Infringement of Third Party Intellectual Property Rights

12.01 In the event that any Third Party brings or asserts a claim against Repare or NYU that the Commercialization of the NYU Technology or a Licensed Product infringes rights in Intellectual Property owned or otherwise controlled by such Third Party (an "Infringement Suit"), the following shall apply:

12.02 the Party receiving a claim, or learning of the threat of such a claim, shall give the other Party prompt written notice within [***] detailing as many facts as possible concerning the claim;

12.03 Repare and/or its sublicensees, in its sole discretion, shall have the first right, but not an obligation, to defend against the Infringement Suit;

12.04 if Repare and/or its sublicensees does not take steps to defend against the Infringement Suit within [***] after the date that notice thereof was received from or delivered to the NYU, NYU may take such legally permissible action as it deems necessary or appropriate to defend against the Infringement Suit, but shall not be obligated to do so;

12.05 the Party defending against the Infringement Suit (in this Subsection, the "Litigating Party") shall have the right to control such litigation and shall bear all legal expenses (including court costs and legal fees), but it shall have no right to settle any dispute in any manner which would abridge the rights of the other Parties under this Agreement. By way of example and not by way of limitation, no Party may stipulate or admit to the invalidity, or unenforceability of any Intellectual Property Rights relating to the NYU Technology, or that a Licensed Product or the NYU Technology infringes Third Party Intellectual Property. Before any action is taken by a Party which could abridge the rights of the other Parties hereunder, the Parties agree, in good faith, to consult with each other with a goal of adopting a mutually satisfactory position;

12.06 the Litigating Party shall keep the other Parties fully informed of the actions and positions taken or proposed to be taken by the Litigating Party and the actions and positions taken by all other Parties to such litigation; and

12.07 in the event that Repare defends against the Infringement Suit, NYU may elect to participate formally in the Infringement Suit to the extent that the court may permit, provided that any additional expenses generated by NYU's formal participation shall be paid by NYU.

12.08 Where either Repare, its sublicensees or NYU wishes to act alone, provided it is in compliance with the foregoing, but formalities require participation of the other Parties, then the other Parties shall join in the proceeding to the extent necessary for formalities. Each Party will cooperate with the other Party in making available all necessary documents and witnesses for any legal proceedings, without charging any fees to the other Party.

12.09 The rights and obligations of Repare under this Section 12 are not intended to modify or limit Repare's obligations under Section 13 and in the event of the a conflict between any term in Section 12 and any term in Section 13, the terms of Section 13 will apply.

13. Liability and Indemnification.

13.01 Repare shall indemnify, defend and hold harmless NYU and its contractors and each of their affiliates, and each of their trustees, officers, medical and professional staff, employees, students and agents and their respective successors, heirs and assigns (the "Indemnitees"), against any liability, damage, loss or expense (including reasonable attorneys' fees and expenses of litigation) incurred by or imposed upon the Indemnitees or any one of them in connection with any claims, suits, actions, demands or judgments (i) arising out of the design, production, manufacture, sale, use in commerce or in human clinical trials, lease, or promotion by Repare or by a licensee, Affiliate or agent of Repare of any Licensed Product, process or service relating to, or developed pursuant to, this Agreement or (ii) arising out of any other activities to be carried out pursuant to this Agreement.

13.02 With respect to an Indemnitee, Repare's indemnification under subsection 13.01(i) shall apply to any liability, damage, loss or expense whether or not it is attributable to the negligent activities of such Indemnitee. Repare's indemnification obligation under subsection 13.01(ii) shall not apply to any liability, damage, loss or expense to the extent that it is attributable to the fraud, wilful misconduct or grossly negligent activities of NYU or any Indemnitees or otherwise arising from NYU's breach of any representation, warranty or covenant of this Agreement.

13.03 Repare agrees, at its own expense, to provide attorneys reasonably acceptable to NYU to defend against any actions brought or filed against any Indemnitee with respect to the subject of indemnity to which such Indemnitee is entitled hereunder, whether or not such actions are rightfully brought.

14. Insurance.

14.01 At such time as any Licensed Product, process or service relating to, or developed pursuant to, this Agreement is being commercially distributed or sold or tested in clinical trials by Repare or by a licensee, Affiliate or agent of Repare, Repare shall at its sole cost and expense, procure and maintain policies of comprehensive general liability insurance in amounts not less than (i) \$[***] per incident and \$[***] annual aggregate during the period that such Licensed Product, process, or service is being tested in clinical trials prior to commercial sale, and (ii) \$[***]

per incident and\$[***] annual aggregate , during the period that such Licensed Product, process, or service is being commercially distributed or sold, and in each case naming the Indemnitees as additional insureds. Such comprehensive general liability insurance shall provide (i) product liability coverage and (ii) broad form contractual liability coverage for Repare's indemnification under Section 14 of this Agreement. If Repare elects to self-insure all or part of the limits described above including deductibles or retentions which are in excess of U.S.\$[***] annual aggregate) such self-insurance program shall include assets or reserves which have been actuarially determined for the liabilities associated with this Agreement and must be reasonably acceptable to NYU.

The minimum amounts of insurance coverage required under this Section 14 shall not be construed to create a limit of Repare's liability with respect to its indemnification under Section 13 of this Agreement.

14.02 Repare shall provide NYU with written evidence of such insurance upon request of NYU. Repare shall provide NYU with written notice at least [***] prior to the cancellation, non-renewal or material change in such insurance; if such insurance is terminated or no longer in compliance with this Section 14, and Repare does not obtain replacement insurance NYU shall have the right to terminate this Agreement without notice or any additional waiting periods.

14.03 Repare shall maintain such comprehensive general liability insurance beyond the expiration or termination of this Agreement during (i) the period that any product, process or service, relating to, or developed pursuant to, this Agreement is being commercially distributed or sold or tested in clinical trials by Repare or by a sublicensee, Affiliate or agent of Repare and (ii) statute of limitations applicable to such activities.

15. Expiry and Termination

15.01 Unless earlier terminated pursuant to this Section 15, hereof, this Agreement shall expire upon the expiration of the period of the License in all countries as set forth in Section 5.04 above.

15.02 At any time prior to expiration of this Agreement, either Party may terminate this Agreement forthwith for cause, as "cause" is described below, by giving written notice to the other Party. Cause for termination by one Party of this Agreement shall be deemed to exist if the other Party materially breaches or defaults in the performance or observance of any of the provisions of this Agreement and such breach or default is not cured within [***] or, in the case of failure to pay any amounts due hereunder, [***] (unless otherwise specified herein) after the giving of notice by the other Party specifying such breach or default and provided such breach or default is not cured, or if either NYU or Repare discontinues its business or becomes insolvent or bankrupt.

15.03 Upon termination of this Agreement for any reason and prior to expiration as set forth in Section 15.01 hereof, all rights granted hereunder to the NYU Technology shall revert to NYU and Repare shall not be entitled to make any further use whatsoever of the NYU Technology. Notwithstanding the foregoing, if any sublicense agreements that were granted in compliance with Section 5.05 remain in good standing as of the date of such termination, then the rights licensed herein shall be extended to such Sublicensee in the same scope as is provided in such sublicense agreement, provided that the relevant Sublicensee signs a written agreement with NYU agreeing to be bound by the terms of this Agreement and agreeing that NYU's only obligation hereunder shall be to maintain the effectiveness of the scope of the rights licensed hereunder to such Sublicensee.

15.04 [***].

15.05 Termination of this Agreement shall not relieve either Party of any obligation to the other Party incurred prior to such termination.

15.06 Sections 3, 5.05(1), 9, 13, 14, 15, 16, 17, 19, 20, 21 and 22 hereof shall survive and remain in full force and effect after any termination, cancellation or expiration of this Agreement. Sections 6.01(d), 7.01 and 7.03 hereof shall survive and remain in full force and effect after any termination, cancellation or expiration of this Agreement but only with respect to Sublicense Income described in the last sentence of Section 1.34 (the definition of Sublicense Income.)

16. Representations and Warranties by Repare.

Repare hereby represents and warrants to NYU as follows:

(1) Repare is a corporation duly organized, validly existing and in good standing under the laws of Canada. Repare has been granted all requisite power and authority to carry on its business and to own and operate its properties and assets. Repare has taken all necessary corporate action, steps and proceedings to approve or authorize, validly and effectively, the execution, delivery and performance of this Agreement.

(2) There is no pending or, to Repare's knowledge, threatened litigation involving Repare which would have any effect on this Agreement or on Repare's ability to perform its obligations hereunder; and

(3) The execution and delivery of this Agreement by it and the performance of its obligations hereunder shall not result in either a breach or violation of any of the provisions of, or constitute a default under, or conflict with or cause the acceleration of any of its obligations under: (a) any indenture, contract agreement to which it is a Party or is otherwise bound by; (b) any of the terms and provisions of its constating documents or by-laws, or resolutions of the board of directors (or any committee thereof); (c) any judgment, decree, order or award of any court, governmental body or arbitrator having jurisdiction over it; (d) any license, permit, approval, consent or authorization held by it; or (e) any applicable law, statute, ordinance, regulation or rule.

17. Representations and Warranties by NYU.

NYU hereby represents and warrants to Repare as follows:

(1) NYU is a corporation duly organized, validly existing and in good standing under the laws of the State of New York. NYU has been granted all requisite power and authority to carry on its business and to own and operate its properties and assets. NYU has taken all necessary corporate action, steps and proceedings to approve or authorize, validly and effectively, the execution, delivery and performance of this Agreement.

(2) There is no pending or, to NYU's knowledge, threatened litigation involving NYU which would have any effect on this Agreement or on NYU's ability to perform its obligations hereunder. Without limiting the foregoing, there are no legal claims, judgments or settlements against or owed by NYU or pending legal claims or litigation, in each case relating to the NYU Technology, and it has not received notice of any action, suit, inquiry, investigation or other proceeding threatened, pending or ongoing brought by any Third Party that challenges or

threatens the validity or enforceability of any of the patents or patent applications included in the NYU Technology or that alleges that the development, manufacture, commercialization and use of Licensed Products would infringe or misappropriate the Intellectual Property or Intellectual Property Rights of any Third Party.

(3) The execution and delivery of this Agreement by it and the performance of its obligations hereunder shall not result in either a breach or violation of any of the provisions of, or constitute a default under, or conflict with or cause the acceleration of any of its obligations under: (a) any indenture, contract agreement to which it is a Party or is otherwise bound by; (b) any of the terms and provisions of its charter or by-laws, or resolutions of the board of directors (or any committee thereof); (c) any judgment, decree, order or award of any court, governmental body or arbitrator having jurisdiction over it; (d) any license, permit, approval, consent or authorization held by it; or (e) any applicable law, statute, ordinance, regulation or rule.

(4) NYU is the owner of the NYU Patents, free and clear of any lien, encumbrance, or Third Party rights, except for those set forth in Section 5.03 above and those assigned by Highline to Repare as referenced above.

(5) (i) to the knowledge of NYU as on the Effective Date and without any requirement on NYU to conduct any search and/or inquiry, (ii) no Third Party is infringing or misappropriating any NYU Technology, and (iii) the NYU Technology is not subject to any existing royalty or other payment obligation to any Third Party.

(6) It has the right to grant to Repare the rights and licenses that it purports to grant hereunder and has not granted to any Third Party any rights that would interfere or be inconsistent with the rights and licenses granted to Repare hereunder.

(7) It is an “accredited investor” as such term is defined in National Instrument 45-106 *Prospectus and Registration Exemptions* and for purposes of Regulation D of the *U.S. Securities Act of 1933*, as amended (the “Securities Act”), and is acquiring the Issued Shares as principal and solely for its own account and beneficial interest, for investment and not for sale or with a view to distribution of the Issued Shares or any part thereof, has no present intention of selling (in connection with a distribution or otherwise), granting any participation in, or otherwise distributing the same, and does not presently have reason to anticipate a change in such intention.

(8) (1) It has received all the information it has requested from Repare and it considers necessary or appropriate for deciding whether to acquire the Issued Shares, (2) it has had an opportunity to ask questions and receive answers from Repare regarding the terms and conditions of the offering of the Issued Shares and to obtain any additional information necessary to verify the accuracy of the information given to NYU, and (3) it has knowledge and experience in financial and business matters such that it is capable of evaluating the merits and risk of its investment in the Issued Shares. Without in any way limiting the representations set forth above, NYU further acknowledges that it is aware of: (A) the applicable restrictions on the resale of the Issued Shares imposed by the *Securities Act* (Ontario) and the Securities Act and applicable state securities laws, the regulations and rules made thereunder and all administrative policy statements, blanket orders, notices, directions and rulings issued by the Ontario Securities Commission, all as amended, and (B) the fact that NYU may not be able to resell such Issued Shares except in accordance with applicable securities legislation and regulatory policies. NYU agrees and acknowledges that it is solely responsible (and Repare is not in any way responsible) for compliance with all applicable resale restrictions;

The certificates evidencing the Issued Shares shall be marked with legends substantially similar to the following (in addition to any other legend required under applicable securities legislation and regulatory policies):

UNLESS PERMITTED UNDER SECURITIES LEGISLATION, THE HOLDER OF THIS SECURITY MUST NOT TRADE THE SECURITY BEFORE THE DATE THAT IS FOUR (4) MONTHS AND A DAY AFTER THE LATER OF (I) ***[INSERT THE DATE OF ISSUANCE OF REPARE SECURITIES]***, AND (II) THE DATE THE ISSUER BECAME A REPORTING ISSUER IN ANY PROVINCE OR TERRITORY OF CANADA.

THERE ARE RESTRICTIONS ON THE RIGHT TO TRANSFER THE SHARES REPRESENTED BY THIS CERTIFICATE. IN ADDITION, THESE SHARES ARE SUBJECT TO AN AMENDED AND RESTATED UNANIMOUS SHAREHOLDERS' AGREEMENT DATED AS OF , 2016 BETWEEN THE REPARE AND EACH AND ALL OF THE HOLDERS OF SHARES OF THE REPARE, AS THE SAME MAY BE AMENDED FROM TIME TO TIME, AND MAY NOT BE PLEDGED, SOLD OR OTHERWISE TRANSFERRED EXCEPT IN ACCORDANCE WITH THAT UNANIMOUS SHAREHOLDERS' AGREEMENT;

(9) prior to its receipt of any Issued Shares, NYU must agree to be bound by the Unanimous Shareholders' Agreement dated as of December 19, 2016 between Repare and each and all of the holders of shares of Repare, as the same may be amended, superseded or otherwise revised from time to time, and any Issued Shares shall be subject to all of the provisions of such Unanimous Shareholders' Agreement. For the avoidance of any doubt, under no circumstances will NYU's obligation to be bound by the Unanimous Shareholders' Agreement, and to any amendment, modification, or revision thereof, be deemed an amendment to this Agreement or to relieve Repare of any of its obligations hereunder; and

(10) at any time, and from time to time, NYU promptly execute and deliver to Repare such further instruments and documents and take such further action as Repare may reasonably require in connection with the issuance of the Issued Shares to NYU as necessary to comply with all applicable securities laws or other regulatory approvals.

18. Fair Market Value.

The Parties agree and acknowledge that the compensation provided under the terms of this Agreement is consistent with the fair market value of the License contemplated by this Agreement negotiated in arm's-length transactions, is not given in exchange for any implicit or explicit agreement to provide favorable procurement decisions with regard to the Repare's products or services, and has not been determined in any manner which takes into account the value or volume of any business generated between the Parties, including any of their Affiliates.

19. No Assignment.

Neither Repare nor NYU shall have the right to assign, delegate or transfer at any time to any Party, in whole or in part, any or all of the rights, duties and interest herein granted without first obtaining the written consent of the other to such assignment, which consent shall be reasonably considered by NYU. Notwithstanding the foregoing, Repare may assign all of its rights and obligations under this Agreement to (i) an entity in connection with a merger, acquisition, or sale

of all of its assets provided such entity acquires all of Repare's rights and obligations under this Agreement [***] and is in the business of drug development and/or Commercialization of biopharma and/or pharma products and has a plan and the resources to pursue Commercialization of the NYU Technology, or (ii) an Affiliate of Repare, in each case without the consent of NYU.

20. Use of Name.

Without the prior written consent of the other Party, neither Repare nor NYU shall use the name of the other Party or any adaptation thereof or of any staff member, employee or student of the other Party: (i) in any product labeling, advertising, promotional or sales literature; or (ii) in connection with any public offering or private placement documentation or prospectus or in conjunction with any application for regulatory approval, unless disclosure is otherwise required by law, in which case either Party may make factual statements concerning the Agreement or file copies of the Agreement after providing the other Party with an opportunity to comment and reasonable time within which to do so on such statement in draft or statements that have previously been publicly disclosed as approved by the Parties or otherwise in compliance of this Agreement.

Except as provided herein, neither NYU nor Repare will issue public announcements about this Agreement or the status or existence of the License without prior written approval of the other Party, which consent shall not be unreasonably withheld.

21. Dispute Resolution; Remedies.

21.01 The Parties agree to use good faith efforts to resolve amicably among themselves any dispute arising out of or in connection with this Agreement.

21.02 If the Parties are unable to resolve the dispute under Section 13.01, the dispute shall be referred to the individual CEO/Presidents of each of the Parties or their designees for their discussion and resolution. The Parties may, but are not required to, agree to mediation of the dispute prior to the litigation contemplated in Section 21.03.

21.03 Any dispute which cannot be settled amicably between the Parties as provided in Sections 21.01 and 21.02 may be submitted to litigation in accordance with the provisions of the Section 22.03.

21.04 The Parties acknowledge and agree that the Parties may be irreparably damaged if any of the provisions of the Agreement are not performed in accordance with their specific terms or are otherwise breached and that any non-performance or breach of this agreement by any Party or any Party's Affiliate may not be adequately compensated by monetary damages alone and that the Parties may not have any adequate remedy at law. Accordingly, in addition to any and all other rights and remedies existing, each Party and/or its successors or assigns shall be entitled to seek an injunction, specific performance or other appropriate equitable relief upon application to any court of competent jurisdiction in order to enforce or prevent any breach or threatened breach of this agreement by the other Parties, in each case without the requirement of posting a bond or proving actual damages.

22. Miscellaneous.

22.01 In carrying out this Agreement the Parties shall comply with all applicable local, state and federal laws and regulations including but not limited to, the provisions of Title 35 United States Code §200 et seq. and 15 CFR §§730-774.

22.02 If any provision of this Agreement is determined to be invalid or void, the remaining provisions shall remain in effect.

22.03 This Agreement shall be governed by and construed in accordance with the laws of New York, without regard to principles relating to conflicts of law. The courts of the State of New York in New York County and the United States District Court for the Southern District of New York shall have exclusive jurisdiction over the Parties with respect to any dispute or controversy between them arising under or in connection with this Agreement and, by execution and delivery of this Agreement, the Parties to this Agreement submit to the jurisdiction of those courts, including, but not limited to, the in personam and subject matter jurisdiction of those courts, waive any objection to such jurisdiction on the grounds of venue or forum non conveniens, the absence of in personam or subject matter jurisdiction and any similar grounds, consent to service of process by mail in accordance with Section 22.04 or any other manner permitted by law and irrevocably agree to be bound by any such judgment rendered thereby in connection with this Agreement. These consents to jurisdiction shall not be deemed to confer rights on any person other than the Parties to this Agreement.

22.04 All payments or notices required or permitted to be given under this Agreement shall be given in writing and shall be effective when either personally delivered or deposited, postage prepaid, in the United States registered or certified mail, or sent via a recognized national overnight delivery service (e.g., Federal Express or DHL), addressed as follows:

To NYU: New York University
Office of Industrial Liaison
One Park Avenue, 6th Floor
New York, NY 10016

Attention: Abram M. Goldfinger
Executive Director,
Industrial Liaison/Technology Transfer

and

Annette B. Johnson, Esq.
Senior Counsel, NYU School of Medicine
NYU Langone Medical Center
550 First Ave. HCC 15
New York, NY 10016

To Repare:

Repare Therapeutics Inc.
7210 Frederick-Banting, Suite 100
St-Laurent, QC H4S2A1

Attention: Lloyd M. Segal, CEO

with a copy (which shall not constitute notice to):

Goodwin Procter LLP
100 Northern Avenue
Boston, MA 02210
Attention: Christopher J. Denn

or such other address or addresses as either Party may hereafter specify by written notice to the other. Such notices and communications shall be deemed effective on the date of delivery or fourteen (14) days after having been sent by registered or certified mail, whichever is earlier.

22.05 This Agreement (and the annexed appendices) constitute the entire Agreement between the Parties and no variation, modification or waiver of any of the terms or conditions hereof shall be deemed valid unless made in writing and signed by both Parties hereto. This Agreement supersedes any and all prior agreements or understandings, whether oral or written, between Repare and NYU relating to the subject matter hereof, including, without limitation, the letter agreement, dated October 18, 2016, between the Parties relating to the transfer of PolQ- related substances. For clarity, this Agreement is not intended to supersede the Master Research Agreement, dated as of December 15, 2015, between Highline Therapeutics, Inc. and New York University School of Medicine.

22.06 No waiver by either Party of any non-performance or violation by the other Party of any of the covenants, obligations or agreements of such other Party hereunder shall be deemed to be a waiver of any subsequent violation or non-performance of the same or any other covenant, agreement or obligation, nor shall forbearance by either Party be deemed to be a waiver by such Party of its rights or remedies with respect to such violation or non-performance.

22.07 The descriptive headings contained in this Agreement are included for convenience and reference only and shall not be held to expand, modify or aid in the interpretation, construction or meaning of this Agreement.

22.08 It is not the intent of the Parties to create a partnership or joint venture or to assume partnership responsibility or liability. The obligations of the Parties shall be limited to those set out herein and such obligations shall be several and not joint.

22.09 This Agreement may be executed in one or more counterparts, each of which will be deemed an original, and all of which will constitute one and the same instrument. Each Party may execute this Agreement by facsimile transmission or in Portable Document Format sent by electronic means. Signatures of authorized signatories of the Parties transmitted by facsimile or sent by electronic means in Portable Document Format shall be deemed to be original signatures, shall be valid and binding, and, upon delivery, shall constitute due execution of this Agreement.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement effective as of the date and year first above written.

NEW YORK UNIVERSITY

By: /s/ Abram M. Goldfinger
Abram M. Goldfinger
Executive Director,
Industrial Liaison/Technology Transfer

REPAIRE THERAPEUTICS INC.

By: /s/ Lloyd M. Segal
Name: Lloyd M. Segal
Title: CEO

For the purposes of Section 3.02 and 11.05 only:

/s/ Dr. Agnel Sfeir

Dr. Agnel Sfeir

APPENDIX 1

SCHEDULE A

RESEARCH PROJECT SPECIFICATION (RPS) TEMPLATE

[***]

Subsidiaries of Repare Therapeutics Inc.

<u>Name of Subsidiary</u>	<u>Jurisdiction of Organization</u>
Repare Therapeutics USA Inc.	United States (Delaware)