UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended September 30, 2022

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission File Number: 001-39335

Repare Therapeutics Inc.

(Exact Name of Registrant as Specified in its Charter)

Québec	**Not applicable**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
7210 Frederick-Banting, Suite 100 St-Laurent, Québec, Canada	**H4S 2A1**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (857) 412-7018

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common shares, no par value	RPTX	The Nasdaq Stock Market LLC

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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	☒	Accelerated filer	☐
Non-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 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of October 31, 2022, there were 41,961,510 of the registrant's common shares, no par value per share, outstanding.

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SPECIAL NOTE REGARDING FORWARD LOOKING STATEMENTS

This Quarterly Report on Form 10-Q 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 Quarterly Report on Form 10-Q, including statements regarding our strategy, future financial condition, future operations, research and development costs, plans and objectives of management, 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. Although we believe that we have a reasonable basis for each forward-looking statement contained in this Quarterly Report on Form 10-Q, we caution you that these statements are based on a combination of facts and factors currently known by us and our expectations of the future, about which we cannot be certain.

The forward-looking statements in this Quarterly Report on Form 10-Q include, among other things, statements about:

- 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-6306 and any of our other 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 or pandemic, such as the coronavirus disease, or COVID-19 pandemic;
- the evolving impact of the COVID-19 pandemic and any variants on our operations, the continuity of our business, including our preclinical studies and clinical trials, supply chains, general economic conditions and our ability to raise additional capital;
- our ability to enroll patients in clinical trials, to timely and successfully complete those trials and to receive necessary regulatory approvals;
- the timing of completion of enrollment and availability of data from our current preclinical studies and clinical trials, including our Phase 1 clinical trials of RP-6306;
- the expected timing of filings with regulatory authorities for any product candidates that we develop, including RP-2119;
- 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-6306, camonsertib, RP-2119 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
- other risks and uncertainties, including those listed under the section titled "Risk Factors" in this Quarterly Report.

Although we believe that the expectations reflected in these forward-looking statements are reasonable, these statements relate to our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans, objectives of management and expected market growth, and involve known and unknown risks, uncertainties and other factors including, without limitation, risks, uncertainties and assumptions regarding the impact of the COVID-19 pandemic on our business, operations, strategy, goals and anticipated timelines, our ongoing and planned preclinical activities, our ability to initiate, enroll, conduct or complete ongoing and planned clinical trials, our timelines for regulatory submissions and our financial position that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. You are urged to carefully review the disclosures we make concerning these risks and other factors that may affect our business and operating results in this Quarterly Report on Form 10-Q. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this document. Except as required by law, we do not intend, and undertake no obligation, to update any forward-looking information to reflect events or circumstances.

SUMMARY RISK FACTORS

Investing in our common shares involves numerous risks, including the risks described in "Part II—Item 1A. Risk Factors" of this Quarterly Report on Form 10-Q. Below are some of our principal risks, any one of which could materially adversely affect our business, financial condition, results of operations, and prospects:

- 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. If we are unable to advance our product candidates into and through clinical development, obtain regulatory approval and ultimately commercialize any of our product candidates, or experience significant delays in doing so, our business will 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 initial product candidates, camonsertib and RP-6306. If we, or our collaborators, 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 effects of health epidemics, including the ongoing COVID-19 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, 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.
- 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 ongoing and planned clinical trials with the genomic alterations that these trials are designed to target.
- We face substantial competition, which may result in others developing or commercializing drugs before or more successfully than us.
- 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.
- 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.
- Our success depends in part on our ability to obtain intellectual property rights for our proprietary technologies and product candidates, as well as 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 future success depends on our ability to retain key executives and to attract, retain and motivate qualified personnel.
- The trading price of our common shares has been and is likely to continue to be volatile and fluctuate substantially.

PART I—FINANCIAL INFORMATION

Item 1. Financial Statements.

Repare Therapeutics Inc.
Condensed Consolidated Balance Sheets
(Unaudited)
(Amounts in thousands of U.S. dollars, except share data)

	As of September 30, 2022	As of December 31, 2021
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 155,191	$ 334,427
Marketable securities	215,162	7,439
Research and development tax credits receivable	2,907	2,580
Income tax receivable	629	—
Collaboration revenue receivable	9,626	—
Other receivables	1,447	654
Prepaid expenses	5,635	6,314
Total current assets	390,597	351,414
Property and equipment, net	4,683	5,604
Operating lease right-of-use assets	5,904	7,491
Other assets	497	586
Deferred tax assets	7,477	3,620
TOTAL ASSETS	$ 409,158	$ 368,715
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	$ 9,345	$ 2,302
Accrued expenses and other current liabilities	15,615	18,622
Operating lease liability, current portion	2,127	1,721
Deferred revenue, current portion	34,784	11,921
Income tax payable	—	523
Total current liabilities	61,871	35,089
Operating lease liability, net of current portion	3,767	5,592
Deferred revenue, net of current portion	37,744	39,613
TOTAL LIABILITIES	103,382	80,294
SHAREHOLDERS' EQUITY		
Preferred shares, no par value per share; unlimited shares authorized as of September 30, 2022 and December 31, 2021, respectively; 0 shares issued and outstanding as of September 30, 2022, and December 31, 2021, respectively	—	—
Common shares, no par value per share; unlimited shares authorized as of September 30, 2022 and December 31, 2021; 41,961,510 and 41,850,162 shares issued and outstanding as of September 30, 2022 and December 31, 2021, respectively	481,782	480,699
Additional paid-in capital	32,173	17,988
Accumulated other comprehensive loss	(524)	—
Accumulated deficit	(207,655)	(210,266)
Total shareholders' equity	305,776	288,421
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	$ 409,158	$ 368,715

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements

Repare Therapeutics Inc.
Condensed Consolidated Statements of Operations and Comprehensive Loss
(Unaudited)
(Amounts in thousands of U.S. dollars, except share and per share data)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Revenue:				
Collaboration agreements	$ 112,545	$ 278	$ 113,632	$ 723
Operating expenses:				
Research and development, net of tax credits	31,242	25,361	89,175	62,075
General and administrative	7,904	6,596	24,621	18,574
Total operating expenses	39,146	31,957	113,796	80,649
Income (loss) from operations	73,399	(31,679)	(164)	(79,926)
Other income (expense), net				
Realized and unrealized gain (loss) on foreign exchange	126	33	250	(92)
Interest income	2,027	53	2,700	155
Other expense	(37)	(7)	(56)	(21)
Total other income, net	2,116	79	2,894	42
Income (loss) before income taxes	75,515	(31,600)	2,730	(79,884)
Income tax recovery (expense)	(54)	708	(119)	1,266
Net income (loss)	$ 75,461	$ (30,892)	$ 2,611	$ (78,618)
Other comprehensive loss:				
Unrealized loss on available-for-sale marketable securities	$ (524)	$ —	$ (524)	$ —
Total other comprehensive loss	(524)	—	(524)	—
Comprehensive income (loss)	$ 74,937	$ (30,892)	$ 2,087	$ (78,618)
Net income (loss) per share attributable to common shareholders:				
Basic	$ 1.80	$ (0.83)	$ 0.06	$ (2.12)
Diluted	$ 1.71	$ (0.83)	$ 0.06	$ (2.12)
Weighted-average common shares outstanding:				
Basic	41,945,617	37,122,668	41,902,554	37,026,116
Diluted	44,177,376	37,122,668	44,160,481	37,026,116

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements

Repare Therapeutics Inc.
Condensed Consolidated Statements of Shareholders' Equity
(Unaudited)
(Amounts in thousands of U.S. dollars, except share data)

	Common Shares		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Shareholders' Equity
	Shares	Amount				
Balance, December 31, 2020	36,902,924	$ 384,313	$ 5,875	$ —	$ (103,358)	$ 286,830
Exercise of stock options	87,786	297	(114)	—	—	183
Share-based compensation expense	—	—	2,057	—	—	2,057
Net loss and comprehensive loss	—	—	—	—	(21,417)	(21,417)
Balance, March 31, 2021	36,990,710	$ 384,610	$ 7,818	$ —	$ (124,775)	$ 267,653
Exercise of stock options	115,497	731	(282)	—	—	449
Share-based compensation expense	—	—	3,183	—	—	3,183
Issuance of common shares	3,299	113	—	—	—	113
Net loss and comprehensive loss	—	—	—	—	(26,309)	(26,309)
Balance, June 30, 2021	37,109,506	$ 385,454	$ 10,719	$ —	$ (151,084)	$ 245,089
Exercise of stock options	14,489	129	(49)	—	—	80
Share-based compensation expense	—	—	3,693	—	—	3,693
Issuance of common shares under the 2020 Employee Share Purchase Plan	9,943	407	(124)	—	—	283
Net loss and comprehensive loss	—	—	—	—	(30,892)	(30,892)
Balance, September 30, 2021	37,133,938	$ 385,990	$ 14,239	$ —	$ (181,976)	$ 218,253
Balance, December 31, 2021	41,850,162	$ 480,699	$ 17,988	$ —	$ (210,266)	$ 288,421
Exercise of stock options	12,235	46	(18)	—	—	28
Share-based compensation expense	—	—	4,755	—	—	4,755
Issuance of common shares under the 2020 Employee Share Purchase Plan	16,807	303	(90)	—	—	213
Net loss and comprehensive loss	—	—	—	—	(34,757)	(34,757)
Balance, March 31, 2022	41,879,204	$ 481,048	$ 22,635	$ —	$ (245,023)	$ 258,660
Exercise of stock options	44,268	332	(127)	—	—	205
Share-based compensation expense	—	—	4,745	—	—	4,745
Net loss and comprehensive loss	—	—	—	—	(38,093)	(38,093)
Balance, June 30, 2022	41,923,472	$ 481,380	$ 27,253	$ —	$ (283,116)	$ 225,517
Exercise of stock options	16,930	80	(30)	—	—	50
Share-based compensation expense	—	—	5,053	—	—	5,053
Issuance of common shares under the 2020 Employee Share Purchase Plan	21,108	322	(103)	—	—	219
Other comprehensive loss	—	—	—	(524)	—	(524)
Net income	—	—	—	—	75,461	75,461
Balance, September 30, 2022	41,961,510	$ 481,782	$ 32,173	$ (524)	$ (207,655)	$ 305,776

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements

Repare Therapeutics Inc.
Condensed Consolidated Statements of Cash Flows
(Unaudited)
(Amounts in thousands of U.S. dollars)

	Nine Months Ended September 30,	
	2022	**2021**
Cash Flows From Operating Activities:		
Net income (loss) for the period	$ 2,611	$ (78,618)
Adjustments to reconcile net income (loss) to net cash used in operating activities:		
Share-based compensation expense	14,553	8,933
Depreciation expense	1,523	1,103
Non-cash lease expense	1,643	1,248
Foreign exchange (gain) loss	(230)	10
Net (accretion)/amortization of marketable securities	(733)	85
Deferred tax	(3,857)	(1,431)
Changes in operating assets and liabilities:		
Prepaid expenses	676	(2,425)
Research and development tax credits receivable	(340)	(295)
Collaboration revenue receivable	(9,626)	—
Other receivables	(831)	3,429
Other non-current assets	89	(616)
Accounts payable	7,066	(295)
Accrued expenses and other current liabilities	(1,291)	5,166
Operating lease liability, current portion	536	(174)
Income taxes	(1,152)	129
Operating lease liability, net of current portion	(1,672)	(584)
Deferred revenue	20,994	(723)
Net cash provided by (used in) operating activities	29,959	(65,058)
Cash Flows From Investing Activities:		
Purchases of property and equipment	(2,322)	(1,525)
Proceeds from maturities of marketable securities	6,400	5,450
Purchase of marketable securities	(213,914)	(5,203)
Net cash used in investing activities	(209,836)	(1,278)
Cash Flows From Financing Activities:		
Proceeds from exercise of stock options	283	712
Proceeds from issuance of common stock under the 2020 Employee Share Purchase Plan	432	283
Net cash provided by financing activities	715	995
Effect of exchange rate fluctuations on cash held	(74)	(60)
Net Decrease In Cash And Cash Equivalents	**(179,236)**	**(65,401)**
Cash and cash equivalents at beginning of period	334,427	326,396
Cash and cash equivalents at end of period	**$ 155,191**	**$ 260,995**
Supplemental Disclosure Of Cash Flow Information:		
Property and equipment purchases incurred but not yet paid	$ —	$ 13
Right-of-use asset obtained in exchange for new operating lease liability	$ 56	$ 3,827
Deferred financing costs in accruals and other current liabilities	$ —	$ 104

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements

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 for patients with cancer. The Company was incorporated under the *Canada Business Corporations Act* on September 6, 2016. On June 23, 2020, immediately prior to the completion of its initial public offering (the "IPO"), the Company was continued as a corporation under the *Business Corporations Act (Québec)*. The Company's common shares are listed on the Nasdaq Global Select Market under the ticker symbol "RPTX".

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying unaudited condensed 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").

The unaudited condensed consolidated financial statements have been prepared on the same basis as the audited annual consolidated financial statements as of and for the year ended December 31, 2021, and, in the opinion of management, reflect all adjustments, consisting of normal recurring adjustments, necessary for the fair presentation of the Company's consolidated financial position as of September 30, 2022, the consolidated results of its operations for the three and nine months ended September 30, 2022 and 2021, its statements of shareholders' equity for the three and nine months ended September 30, 2022 and 2021 and its consolidated cash flows for the nine months ended September 30, 2022 and 2021.

These unaudited condensed consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements and the accompanying notes for the year ended December 31, 2021 included in the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission (the "SEC") on March 1, 2022 (the "Annual Report"). The condensed consolidated balance sheet data as of December 31, 2021 presented for comparative purposes was derived from the Company's audited consolidated financial statements but does not include all disclosures required by U.S. GAAP. The results for the three and nine months ended September 30, 2022 are not necessarily indicative of the operating results to be expected for the full year or for any other subsequent interim period.

The Company's significant accounting policies are disclosed in the audited consolidated financial statements for the year ended December 31, 2021 included in the Annual Report. There have been no changes to the Company's significant accounting policies since the date of the audited consolidated financial statements for the year ended December 31, 2021 included in the Annual Report, except as noted under "Recently Adopted Accounting Pronouncements".

Principles of Consolidation

These unaudited condensed 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, income, and expenses are eliminated in full upon consolidation.

Smaller Reporting Company

The Company qualifies as a "smaller reporting company" under the Exchange Act as of September 30, 2022 because the market value of its common shares held by non-affiliates was less than $560 million as of June 30, 2022 and its revenue for the year ended December 31, 2021 was less than $100 million. As a smaller reporting company, the Company may rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. For so long as the Company remains a smaller reporting company, it is permitted and the Company intends to rely on such exemptions from certain disclosure and other requirements that are applicable to other public companies that are not smaller reporting companies.

Recently Adopted Accounting Pronouncements

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments (ASU 2016-13). Certain amendments thereto were also issued by the FASB. ASU 2016-13 and the related amendments implement an impairment model, known as the current expected credit loss model, that is based on expected losses rather than incurred losses. Under the new guidance, we will recognize our estimate of current expected credit losses as an allowance on financial assets measured at amortized cost for investments classified as available for sale. The Company adopted ASU 2016-13 and the related amendments thereto on January 1, 2022. The adoption of ASU 2016-13 and the related amendments thereto did not have a material impact on the Company's condensed consolidated financial statements or disclosures as of and for the three months and nine months ended September 30, 2022.

Recently Issued Accounting Pronouncements Not Yet Adopted

There were no new accounting pronouncements issued since the filing of the Annual Report, which could have a significant impact on the Company's condensed consolidated financial statements.

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 unaudited condensed consolidated financial statements include, but are not limited to, estimates related to revenue recognition, accrued research and development expenses, share-based compensation, right-of-use assets and lease liabilities and income taxes. Estimates are periodically reviewed in light of changes in circumstances, facts and experience. The Company bases its estimates on historical experience and other market specific or other relevant assumptions that it believes to be reasonable under the circumstances. Actual results could materially differ from those estimates. Changes in estimates are recorded in the period in which they become known.

COVID-19 Pandemic

In connection with the COVID-19 pandemic, the Company previously established a cross-functional task force and has implemented business continuity plans designed to address and mitigate the impact of COVID-19 on its employees and its business, including its preclinical studies and its ongoing and planned clinical trials. The Company has taken measures to secure its research and development activities, while work in its laboratories and facilities has been re-organized to reduce risk of COVID-19 transmission. While the Company is experiencing limited financial impacts at this time, given the global economic slowdown, the overall disruption of global healthcare systems and the other risks and uncertainties associated with the COVID-19 pandemic, the Company's business, financial condition, and results of operations could be materially adversely affected. The Company cannot predict the ultimate impact, if any, of the COVID-19 pandemic related to both known and unknown risks, including future quarantines, closures and other restrictions resulting from the pandemic. The Company continues to monitor the COVID-19 pandemic as it evolves its business continuity plans, clinical development plans and response strategy.

There is a possibility that the Company's current or future clinical trial sites may be affected by the COVID-19 pandemic due to prioritization of hospital resources toward the COVID-19 pandemic, as well as the inability to access sites for initiation, patient enrollment and monitoring. As a result, patient screening, new patient enrollment, monitoring and data collection may be affected or delayed. The Company is aware that several clinical sites involved in its clinical trials have in the past temporarily stopped or delayed enrolling new patients, with exemptions if appropriate, and it is possible that these or other clinical sites may be similarly affected in the future. These developments may delay or extend the Company's projected clinical trial timelines. Some of the Company's third-party manufacturers, which it uses for the supply of materials for product candidates or other materials necessary to manufacture product to conduct preclinical tests and clinical trials, and contract research organizations may be impacted by the COVID-19 pandemic. Should they experience disruptions, such as temporary closures or suspension of services, the Company would likely experience delays in advancing its current or planned clinical trials. As of the date of these financial statements, the Company is not aware of any specific event or circumstance that would require the Company to update its estimates, assumptions and judgments or revise the carrying value of its assets or liabilities. Actual results could differ from these estimates, and any such differences may be material to the Company's consolidated financial statements.

3. Fair Value Measurements

The following table presents information about the Company's financial assets 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 September 30, 2022 and December 31, 2021:

Description	Financial Assets	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Other Observable Inputs (Level 3)
		(in thousands)		
As of September 30, 2022				
Assets				
Cash equivalents				
Money market funds	$ 10,510	$ 10,510	$ —	$ —
Marketable securities				
U.S. Treasury notes	111,547	—	111,547	—
U.S. Treasury bills	103,615	—	103,615	
Total financial assets	$ 225,672	$ 10,510	$ 215,162	$ —
As of December 31, 2021				
Assets				
Cash equivalents				
Money market funds	$ 2,535	$ 2,535	$ —	$ —
Marketable securities				
U.S. Treasury notes	7,439	7,439	—	—
Total financial assets	$ 9,974	$ 9,974	$ —	$ —

When developing fair value estimates, the Company maximizes the use of observable inputs and minimizes the use of unobservable inputs. When available, the Company uses quoted market prices to measure the fair value. The valuation technique used to measure fair value for the Company's marketable securities is a market approach, using prices and other relevant information generated by market transactions involving identical or comparable assets. If market prices are not available, the fair value measurement is based on models that use primarily market-based parameters including yield curves, volatilities, credit ratings and currency rates. In certain cases where market rate assumptions are not available, the Company is required to make judgements about assumptions market participants would use to estimate the fair value of a financial instrument.

During the nine months ended September 30, 2022, there were no transfers between fair value measure levels.

4. Cash and Cash Equivalents and Marketable Securities

As of September 30, 2022 and December 31, 2021, cash and cash equivalents and marketable securities were comprised of the following:

	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
		(in thousands)		
As of September 30, 2022				
Money market funds included in cash and cash equivalents	$ 10,510	$ —	$ —	$ 10,510
Marketable securities:				
U.S. Treasury notes	111,891	—	(344)	111,547
U.S. Treasury bills	103,795	7	(187)	103,615
Total	$ 226,196	$ 7	$ (531)	$ 225,672
As of December 31, 2021				
Money market funds included in cash and cash equivalents	$ 2,535	$ —	$ —	$ 2,535
Marketable securities:				
U.S. Treasury notes	7,439	—	—	7,439
Total	$ 9,974	$ —	$ —	$ 9,974

Interest receivable was $0.3 million and nil as of September 30, 2022 and December 31, 2021, respectively, and is included in other receivables.

Pursuant to the Company's adoption of ASU 2016-13 and the related amendments thereto on January 1, 2022, the Company reviews investments whenever the fair value of an investment is less than the amortized cost and evidence indicates that an investment's carrying amount is not recoverable within a reasonable period of time. In connection therewith, the Company evaluates whether the decline in fair value has resulted from credit losses or other factors, considering the extent to which fair value is less than amortized cost, any changes to the rating of the security by a rating agency, and adverse conditions specifically related to the security, among other factors. If this assessment indicates that a credit loss exists, the present value of cash flows expected to be collected from the security is compared to the amortized cost basis of the security. If the present value of cash flows expected to be collected is less than the amortized cost basis, a credit loss exists and an allowance for credit losses is recorded for the credit loss on the condensed consolidated balance sheet, limited by the amount that the fair value is less than the amortized cost basis. Any impairment that is not related to credit is recognized in other comprehensive loss. Changes in the allowance for credit losses are recorded as a provision for (or reversal of) credit loss expense in general and administrative expenses within the condensed consolidated statement of operations. Losses are charged against the allowance when the Company believes the uncollectability of an available-for-sale security is confirmed or when either of the criteria regarding intent or requirement to sell is met.

The Company held marketable securities with an aggregate fair value of $194.8 million and nil that were in an unrealized loss position as of September 30, 2022 and December 31, 2021, respectively. These marketable securities have been in an unrealized loss position for less than twelve months. The unrealized losses as of September 30, 2022 were not attributed to credit risk but were primarily associated with changes in interest rates and market liquidity. The Company does not intend to sell these securities and it is more likely than not that it will hold these investments for a period of time sufficient to recover the amortized cost. As a result, the Company did not record an allowance for credit losses or other impairment charges for its marketable securities for the three and nine months ended September 30, 2022 and 2021.

The Company recognized $0.5 million in net unrealized losses in other comprehensive loss in the three and nine months ended September 30, 2022 (nil in the three and nine months ended September 30, 2021).

The maturities of the Company's money market funds included in cash and cash equivalents, and marketable securities is less than one year.

5. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities as of September 30, 2022 and December 31, 2021 consisted of the following:

	September 30, 2022	December 31, 2021
	(in thousands)	
Accrued compensation and benefits	$ 4,479	$ 4,867
Accrued research and development expense	10,265	11,272
Accrued professional services	616	387
Accrued property and equipment purchases	—	1,719
Other	255	377
Total accrued expenses and other current liabilities	$ 15,615	$ 18,622

6. Collaboration and License Agreements

(a) Roche Collaboration and License Agreement

In June 2022, the Company entered into a collaboration and license agreement (the "Roche Agreement") with Hoffmann-La Roche Inc. and F. Hoffmann-La Roche Ltd (collectively, "Roche") regarding the development and commercialization of the Company's product candidate camonsertib (also known as RP-3500) and specified other Ataxia-Telangiectasia and Rad3-related protein kinase ("ATR") inhibitors (the "Licensed Products"). The transaction was subject to clearance under the Hart-Scott-Rodino Antitrust Improvements Act of 1976 and other customary closing conditions, which were met on July 13, 2022 ("Effective Date"). Pursuant to the Roche Agreement, the Company granted Roche a worldwide, perpetual, exclusive, sublicensable license to develop, manufacture, and commercialize the Licensed Products, as well as a non-exclusive, sublicensable license to certain related companion diagnostics. The Company has agreed to complete specified ongoing clinical trials in accordance with the development plan in the Roche Agreement, as well as ongoing investigator sponsored trials (together, the "Continuing Trials") at the Company's expense. Roche will assume all subsequent development of camonsertib with the potential to expand development into additional tumors and multiple combination studies. The Company retained the right to conduct specified clinical trials (the "Repare Trials") of camonsertib in combination with the Company's PKMYT1 compound (also known as RP-6306). The Roche Agreement also provides the Company, at its sole discretion, with the ability to opt-in to a 50/50 U.S. co-development and profit share arrangement, including participation in U.S. co-promotion if U.S. regulatory approval is received. If the Company chooses to exercise its co-development and profit share option, it will continue to be eligible to receive certain clinical, regulatory, commercial and sales milestone payments, in addition to full ex-U.S. royalties.

The Roche Agreement was subsequently amended in October 2022 to extend the timeline to negotiate in good faith the parties' rights and obligations with respect to the Repare Trials, as defined in the Roche Agreement, and to clarify indications included in the development plan that are subject to milestones.

Under the terms of the Roche Agreement, the Company received an upfront, nonrefundable payment of $125.0 million in July 2022. The Company is also entitled to an additional payment of $4.0 million negotiated with Roche for revisions to the clinical development plan under the Roche Agreement as agreed to by the parties at the time of the Effective Date. The Company is further entitled to receive $5.6 million for the transfer of clinical trial material on hand to Roche, as agreed to pursuant to the Roche Agreement. As of September 30, 2022, the additional payment of $4.0 million and the clinical trial materials transfer of $5.6 million are recorded as collaboration revenue receivable. The $5.6 million receivable for the transfer of clinical trial materials was collected in October 2022. The Company is eligible to receive up to $1.172 billion in potential clinical, regulatory, commercial and sales milestones, as well as royalties on global net sales ranging from high-single-digits to high-teens, subject to certain specified reductions. Royalties are payable by Roche on a product by product and country by country basis until the later of 12 years following the first commercial sale of a licensed product in such country or the expiration of certain exclusivity rights.

The Roche Agreement will expire upon the last to expire royalty term or, as applicable, the end of the U.S. co-development and profit share arrangement. Additionally, Roche may terminate the agreement for convenience in its entirety or on a product by product or country by country basis subject to certain notice periods. Either party may terminate earlier upon the other party's uncured material breach of the agreement or insolvency. Subject to the terms of the Roche Agreement, effective upon termination of the Roche Agreement, the Company is entitled to retain specified licenses to be able to continue to exploit the Licensed Products.

The Company assessed the Roche Agreement in accordance with ASC 606, Revenue from Contracts with Customers, and concluded that Roche is a customer within the context of the agreement. At inception, the Company identified several performance obligations under the agreement, being (i) the combination of the exclusive perpetual license to the Licensed Products and the non-exclusive license to certain companion diagnostics, (ii) the research and development activities related to the completion of the

Continuing Trials, as well as (iii) the transfer of clinical trial materials on hand. The Company determined that the exclusive license to the Licensed Products and the non-exclusive license to certain companion diagnostics should be combined into one distinct performance obligation as they were not capable of being distinct from each other within the context of the agreement given both are highly interdependent of each other. The Company determined that the combined licenses, the completion of the Continuing Trials and the transfer of clinical trial materials were all capable of being distinct and were distinct within the context of the Roche Agreement given such activities are independent of each other and Roche could benefit from either separately.

The Company determined that the transaction price at the onset of the agreement is $134.6 million, being the total non-refundable upfront payment received of $125.0 million, the additional $4.0 million payment receivable and the $5.6 million receivable for the transfer of clinical trial materials. Additional consideration is to be paid to the Company upon the achievement of multiple clinical, regulatory and sales milestones. The Company utilized the most likely method approach and concluded that these amounts were constrained based on the probability of achievement. As such, the Company excluded this additional consideration from the transaction price.

The Company has allocated the transaction price of $134.6 million to each performance obligation based on the relative stand-alone selling price of each performance obligation at inception. The Company has determined the estimated stand-alone selling price at contract inception of the combined licenses by applying a probability adjusted discounted cashflow model which forecasts future cash flows related to the licenses. The Company considered applicable market conditions and relevant entity-specific factors, including those factors contemplated in negotiating the agreement, probability of success and the time needed to commercialize a product pursuant to the license. The Company has determined the estimated stand-alone selling price at contract inception of the research and development activities required to complete the Continuing Trials based on internal estimates of the costs to perform the services, inclusive of a reasonable profit margin. Significant inputs used to determine the total costs to complete the Continuing Trials included the length of time required, the internal hours as well as external costs expected to be incurred, the number patients and the number of clinical and investigator sponsored trials. The Company has determined the stand-alone selling price of the clinical trial materials transferred based on the purchase price from external vendors, without applying a markup as the materials have a built-in margin from the external vendors. Based on the relative stand-alone selling price, the allocation of the transaction price to the separate performance obligations was as follows:

Performance obligation	**Transaction price (in thousands)**
Combined licenses	$ 105,327
Completion of Continuing Trials	26,585
Transfer of clinical trial materials	2,714
Total transaction price	$ 134,626

Revenue associated with the combined licenses was recognized at a point in time upon the transfer of the licenses to Roche on the effective date of the Roche Agreement as the Company concluded that the combined licenses were a functional intellectual property license that Roche could benefit from as of the time of grant. Revenue associated with the completion of the Continuing Trials has been deferred and will be recognized on a proportional performance basis over the period of time to complete the Continuing Trials, being estimated at within 24 months of the effective date, using input-based measurements of total costs of research and development incurred to estimate the proportion performed. Progress towards completion is remeasured at the end of each reporting period. Revenue associated with the transfer of clinical trial materials was recognized at a point in time upon delivery of the clinical trial materials to Roche in the third quarter of 2022.

The Company recognized $112.3 million for the three and nine months ended September 30, 2022 as revenue associated with the Roche Agreement, of which $105.3 million related to the grant of the combined licenses, $2.7 million related to the clinical trial materials transferred, and $4.3 million related to the partial recognition of deferred revenue for research and development services performed towards the completion of the Continuing Trials during the period.

As of September 30, 2022, there was $22.3 million (December 31, 2021 - nil) of deferred revenue related to the Roche Agreement, of which $16.7 million (December 31, 2021 - nil) was classified as current and $5.6 million (December 31, 2021 - nil) was classified as non-current in the condensed consolidated balance sheet based on the period the services to complete the Continuing Trials are expected to be performed.

We do not expect the upfront payment made with respect to the Roche Agreement to trigger cash tax obligations due to our accumulated tax losses available.

(b) Bristol-Myers Squibb Collaboration and License Agreement

In May 2020, the Company entered into a collaboration and license agreement with Bristol-Myers Squibb Company ("Bristol Myers Squibb"), pursuant to which the Company and Bristol Myers Squibb have agreed to collaborate in the research and development of potential new product candidates for the treatment of cancer (the "BMS Agreement"). The Company is providing Bristol Myers Squibb access to a selected number of its existing screening campaigns and novel campaigns. The Company is responsible for carrying out early-stage research activities directed to identifying potential targets for potential licensing by Bristol Myers Squibb, in accordance with a mutually agreed upon research plan, and will be solely responsible for such costs. The collaboration consists of programs directed to both druggable targets and to targets commonly considered undruggable to traditional small molecule approaches. Upon Bristol Myers Squibb's election to exercise its option to obtain exclusive worldwide licenses for the subsequent development, manufacturing and commercialization of a program, Bristol Myers Squibb will then be solely responsible for all such worldwide activities and costs.

The collaboration term will expire 42 months after the effective date of the BMS Agreement. The BMS Agreement will expire, assuming that Bristol Myers Squibb has exercised at least one option for a program, on a licensed product-by-licensed product and country-by-country basis on expiration of the applicable royalty term and in its entirety upon expiration of the last royalty term. Either party may terminate earlier upon an uncured material breach of the agreement by the other party, or the insolvency of the other party. Additionally, Bristol Myers Squibb may terminate the BMS Agreement for any or no reason on a program-by-program basis upon specified written notice.

Under the terms of the BMS Agreement, Bristol Myers Squibb paid the Company an initial nonrefundable upfront fee of $50.0 million in June 2020. The Company is also entitled to receive up to $301.0 million in total milestones on a program-by-program basis, consisting of $176.0 million in the aggregate for certain specified research, development and regulatory milestones and $125.0 million in the aggregate for certain specified commercial milestones. The Company is further entitled to a tiered percentage royalty on annual net sales ranging from high-single digits to low-double digits, subject to certain specified reductions.

The Company assessed the BMS Agreement in accordance with ASC 606, Revenue from Contracts with Customers, and concluded that Bristol Myers Squibb is a customer based on the agreement structure. At inception, the Company identified several performance obligations under the BMS Agreement, being (i) research activities for each campaign over the collaboration term, as well as (ii) a selected number of material rights associated with options to obtain exclusive development, manufacturing, and commercial licenses to targets identified. The Company determined that the options to obtain the exclusive development, manufacturing and commercialization licenses were material rights under ASC 606 because there are minimal amounts to be paid to the Company upon exercise of such options.

The Company determined that the transaction price at the onset of the BMS agreement is the total non-refundable upfront payment received of $50.0 million. Additional consideration is to be paid to the Company upon the exercise of options to license targets and future milestone payments. The Company utilized the most likely method approach and concluded that these amounts were constrained as they represent option fees and milestone payments that can only be achieved subsequent to option exercises. As such, the Company excluded this additional consideration from the transaction price.

The Company has allocated the transaction price of $50.0 million to each performance obligation based on the relative stand-alone selling price of each performance obligation at inception, which was determined based on each performance obligation's estimated stand-alone selling price. The Company has determined the estimated stand-alone selling price at contract inception of the research activities based on internal estimates of the costs to perform the services, inclusive of a reasonable profit margin. Significant inputs used to determine the total costs to perform the research activities included the length of time required, the internal hours expected to be incurred on the services and the number and costs of various studies that will be performed to complete the research plan. The Company determined the estimated stand-alone selling price at contract inception of the material rights associated with options to obtain exclusive licenses to druggable targets and undruggable targets based on the fees Bristol Myers Squibb would pay to exercise these options, the probability-weighted value of expected future cash flows associated with each license related to each target and the probability that these options would be exercised by Bristol Myers Squibb. In developing such estimates, the Company also considered applicable market conditions and relevant entity-specific factors, including those factors contemplated in negotiating the agreement, probability of success and the time needed to commercialize a product candidate pursuant to the associated license. Based on the relative stand-alone selling price, the allocation of the transaction price to the separate performance obligations was as follows:

Performance obligation	Transaction price (in thousands)
Research services	$ 6,405
Options to license druggable target lesions	31,148
Options to license undruggable targets	12,447
Total transaction price	$ 50,000

Revenue associated with the options has been deferred and will be recognized at the point in time when options to license are exercised by Bristol Myers Squibb or upon expiry of such options. Revenue associated with the research activities has been deferred and will be recognized on a proportional performance basis over the period of service for research activities, being the collaboration term, using input-based measurements of total costs of research incurred to estimated proportion performed. Progress towards completion is remeasured at the end of each reporting period.

The Company recognized $0.2 million and $0.3 million for the three months ended September 30, 2022 and 2021, respectively, and $1.3 million and $0.7 million for the nine months ended September 30, 2022 and 2021, respectively, as revenue associated with the BMS Agreement in relation to research activities performed.

In October 2021, the Company received notification from Bristol Myers Squibb of their option exercise for two druggable targets directed at a single synthetic lethal lesion, pursuant to the terms of the BMS Agreement. As a result, the Company recognized $6.5 million as revenue in the fourth quarter of 2021 with regards to the achievement of the performance obligation from Bristol Myers Squibb and the related option fees received. No amounts were recognized in the three and nine months ended September 30, 2022 and 2021.

As of September 30, 2022, there was $41.2 million (December 31, 2021 - $42.5 million) of deferred revenue related to the BMS Agreement, of which $9.1 million (December 31, 2021 - $2.9 million) was classified as current and $32.1 million (December 31, 2021 - $39.6 million) was classified as non-current in the condensed consolidated balance sheet based on the period the services are expected to be performed and the expected timing of potential option exercises.

7. Leases

The Company has historically entered into lease arrangements for its facilities. As of September 30, 2022, the Company had four operating leases with required future minimum payments. The Company's leases generally do not include termination or purchase options.

Operating Leases

The following tables contain a summary of the lease costs recognized under ASC 842 and other information pertaining to the Company's operating leases for the three and nine months ended September 30, 2022 and 2021:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
	(in thousands)			
Operating Leases				
Lease Costs				
Operating lease costs	$ 614	$ 563	$ 1,845	$ 1,406
Short-term lease costs	9	22	24	27
Variable lease costs	32	20	132	130
Total lease costs	$ 655	$ 605	$ 2,001	$ 1,563

	Nine Months Ended September 30,	
	2022	2021
	(in thousands, except as specified otherwise)	
Other Operating Lease Information		
Operating cash flows used for operating leases	$ 1,334	$ 913
Right-of-use assets obtained in exchange for new operating lease liability	$ 56	$ 3,827
Weighted-average remaining lease term (in years)	2.67	3.51
Weighted-average discount rate	4.0%	4.0%

8. Share-Based Compensation

2020 Employee Share Purchase Plan

In June 2020, the Company's board of directors adopted, and the Company's shareholders approved the 2020 Employee Share Purchase Plan (the "ESPP"). The maximum number of common shares that may be issued under the ESPP was initially 327,000. Additionally, the number of shares reserved and available for issuance under the ESPP automatically increases each January 1, beginning on January 1, 2021 and each January 1 thereafter through January 31, 2030, by the lesser of (1) 1.0% of the total number of common shares outstanding on December 31 of the preceding calendar year, (2) 3,300,000 common shares, or (3) such smaller number of common shares as the Company's board of directors may designate. As of September 30, 2022, the total number of common shares that may be issued under the ESPP is 1,066,673.

The ESPP enables eligible employees to purchase common shares of the Company at the end of each offering period at a price equal to 85% of the fair market value of the shares on the first business day or the last business day of the offering period, whichever is lower. Participation in the ESPP is voluntary. Eligible employees become participants in the ESPP by enrolling in the plan and authorizing payroll deductions. At the end of each offering period, accumulated payroll deductions are used to purchase the Company's shares at the discounted price. The Company makes no contributions to the ESPP. A participant may withdraw from the ESPP or suspend contributions to the ESPP. If the participant elects to withdraw during an offering, all contributions are refunded as soon as administratively practicable. If a participant elects to withdraw or suspend contributions, they will not be able to re-enroll in the current offering but may elect to participate in future offerings. The ESPP purchases only whole shares of the Company's shares. ESPP offering periods occur on a rolling six-month basis.

The Company issued 37,915 common shares under the ESPP during the nine months ended September 30, 2022 at a weighted-average price per share of $11.43. Cash received from purchases under the ESPP for the nine months ended September 30, 2022 was $0.4 million.

Option Plan and 2020 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 share options and other share-based awards to directors, officers, employees or consultants. The Option Plan authorized up to 4,074,135 shares of the Company's common shares to be issued.

In June 2020, the Company's board of directors adopted, and the Company's shareholders approved the 2020 Equity Incentive Plan (the "2020 Plan"). The 2020 Plan became effective on the effective date of the IPO, at which time the Company ceased granting awards under the Option Plan. The 2020 Plan allows the Company's compensation committee to grant equity-based and cash-based incentive awards to the Company's officers, employees, directors and consultants. A total of 3,600,000 common shares were initially reserved for issuance under the 2020 Plan, plus the number of shares (not to exceed 3,807,448 shares) consisting of (i) 298,605 common shares that were available for the issuance of awards under the Option Plan at the time the 2020 Plan became effective, which ceased to be available for future issuance under the Option Plan at such time and (ii) any shares subject to outstanding options or other share awards that were granted under the Option 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 shares reserved and available for issuance under the 2020 Plan automatically increases each January 1, beginning on January 1, 2021 and each January 1 thereafter through January 1, 2030, by 5% of the outstanding number of common shares on the immediately preceding December 31, or such lesser number of shares as determined by the Company's board of directors. As of September 30, 2022, the total number of common shares that may be issued under the 2020 Plan is 7,923,715.

Total outstanding stock options as of September 30, 2022 was as follows:

	2022	
	Number of shares	Weighted average exercise price
Outstanding at beginning of period	5,322,591	$ 14.76
Granted	3,213,667	$ 14.29
Exercised	(73,433)	$ 3.85
Cancelled or forfeited	(399,648)	$ 20.78
Outstanding at end of period	8,063,177	$ 14.37

During the nine months ended September 30, 2022, an aggregate of 73,433 options were exercised at a weighted-average exercise price of $3.85 per share, for aggregate proceeds of $0.3 million. As a result, an amount of $0.2 million previously included in additional paid-in capital related to the exercised options has been credited to common shares and deducted from additional paid-in capital.

The fair value of stock options, and the assumptions 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:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Fair value of stock options	$ 8.45	$ 21.99	$ 9.40	$ 23.29
Risk-free interest rate	2.89%	0.98%	2.09%	0.73%
Expected terms (in years)	6.08	5.85	5.98	5.99
Expected volatility	81.20%	76.10%	78.82%	75.61%
Expected dividend yield	0.00%	0.00%	0.00%	0.00%

Share-Based Compensation

Share-based compensation expense was allocated as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
	(in thousands)			
Research and development	$ 2,600	$ 1,557	$ 7,351	$ 3,985
General and administrative	2,453	2,136	7,202	4,948
Total share-based compensation expense	$ 5,053	$ 3,693	$ 14,553	$ 8,933

Share-based compensation expense by type of award was as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
	(in thousands)			
Stock options	$ 4,969	$ 3,636	$ 14,376	$ 8,784
ESPP	84	57	177	149
Total share-based compensation expense	$ 5,053	$ 3,693	$ 14,553	$ 8,933

As of September 30, 2022, there was $46.3 million of unrecognized share-based compensation expense related to unvested stock options to be recognized over a weighted average period of 2.0 years.

9. Net Income (Loss) per Share

The following table summarizes the computation of basic and diluted net income (loss) per share attributable to common shareholders of the Company:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
	(in thousands, except share and per share amounts)			
Numerator:				
Net income (loss)	$ 75,461	$ (30,892)	$ 2,611	$ (78,618)
Denominator:				
Weighted-average common shares outstanding — basic	41,945,617	37,122,668	41,902,554	37,026,116
Dilutive impact of outstanding stock options and shares issuable under the ESPP	2,231,759	—	2,257,927	—
Weighted-average common shares outstanding — diluted	44,177,376	37,122,668	44,160,481	37,026,116
Net income (loss) per share				
Basic	$ 1.80	$ (0.83)	$ 0.06	$ (2.12)
Diluted	$ 1.71	$ (0.83)	$ 0.06	$ (2.12)

The Company excluded the following potential common shares, presented based on amounts outstanding at each period end, from the computation of diluted net income (loss) per share attributable to common shareholders for the periods indicated because including them would have had an anti-dilutive effect:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Options to purchase common shares	5,255,255	5,256,353	5,255,255	5,256,353
Estimated shares issuable under the ESPP	—	3,286	—	3,286

Item 2. 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 our unaudited condensed consolidated financial statements and related notes, appearing elsewhere in this Quarterly Report on Form 10-Q and (ii) the audited consolidated financial statements and related notes and management's discussion and analysis of financial condition and results of operations for the fiscal year ended December 31, 2021 included in our Annual Report on Form 10-K, or the Annual Report, filed with the Securities and Exchange Commission, or the SEC, on March 1, 2022. Some of the information contained in this discussion and analysis or set forth elsewhere in this Quarterly Report on Form 10-Q, 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 Quarterly Report on Form 10-Q, 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 clinical-stage 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 an 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 initial product candidate, camonsertib (also known as RP-3500), a potent and selective oral small molecule inhibitor of ATR (Ataxia-Telangiectasia and Rad3-related protein kinase) for the treatment of solid tumors with specific DNA damage repair-related genomic alterations, including those in the ATM gene (ataxia telangiectasia mutated kinase). In June 2022, we entered into a worldwide license and collaboration agreement with Hoffmann-La Roche Inc. and F. Hoffmann-La Roche Ltd, collectively referred to as Roche, for the development and commercialization of camonsertib. In July 2020, we began dosing patients in our Phase 1/2 TRESR (Treatment Enabled by SNIPRx) clinical trial of camonsertib in advanced solid tumors and, in August 2021, we began dosing patients in our Phase 1b/2 ATTACC clinical trial of camonsertib to evaluate the safety and efficacy of camonsertib in combination with approved poly (ADP-ribose) polymerase, or PARP, inhibitors, olaparib and niraparib, in patients with molecularly selected cancers.

In April 2021, we initiated our Phase 1 MYTHIC clinical trial for RP-6306, our PKMYT1 (Protein Kinase Membrane-associated Tyrosine- and Threonine- specific cdc-2 inhibitory kinase) SL inhibitor, in advanced solid tumors. In December 2021, we enrolled the first patient in our Phase 1 MAGNETIC clinical trial to evaluate the safety and tolerability of RP-6306 in combination with gemcitabine and, in January 2022, we initiated patient recruitment in our MINOTAUR clinical trial to evaluate the safety and tolerability of RP-6306 in combination with FOLFIRI. In May 2022, we initiated patient recruitment in a new arm of our Phase 1 MYTHIC clinical trial designed to evaluate the safety and tolerability of RP-6306 in combination with camonsertib in patients with advanced solid tumors.

In 2022, we initiated IND-enabling studies for our polymerase theta, or Polθ, inhibitor, now designated as RP-2119, and plan to initiate clinical trials in the summer of 2023. We also expect to initiate IND-enabling studies in the first half of 2023 for an additional small molecule against an undisclosed target.

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. On June 23, 2020, we completed our initial public offering, or IPO, whereby we issued an aggregate of 12,650,000 common shares, which includes the exercise in full of the underwriters' option to purchase up to an additional 1,650,000 common shares, at a public offering price of $20.00 per share. The aggregate net proceeds received by us from the IPO were approximately $232.0 million, after deducting underwriting commissions and offering expenses of $3.2 million. On November 1, 2021, we completed a follow-on offering, or the 2021 Offering, whereby we issued 4,600,000 common shares, including the exercise in full by the underwriters of their option to purchase up to 600,000 additional common shares, at a public offering price of $22.00 per share, for net proceeds of $94.3 million, after deducting underwriting commissions and offering expenses of $0.8 million. Prior to our IPO, we had funded our operations primarily through equity financings, having raised an aggregate of approximately $135.2 million of gross proceeds from the sale of our preferred shares and $15.0 million of gross proceeds from the issuance of a warrant to acquire our common shares. As of September 30, 2022, we had cash and cash equivalents and marketable securities on hand of $370.4 million.

Since inception, we have incurred significant operating losses. Our net losses were $106.9 million and $53.4 million for the years ended December 31, 2021 and 2020, respectively, and we generated net income of $2.6 million for the nine months ended September 30, 2022. As of September 30, 2022, we had an accumulated deficit of $207.7 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-6306, 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 SEC requirements, directors and officers, or D&O, 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, our expenditures on other research and development activities, and our revenue and expenses recognized from collaboration and license agreements.

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 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.

COVID-19 Business Update

In connection with the COVID-19 pandemic, we previously established a cross-functional task force and have implemented business continuity plans designed to address and mitigate the impact of COVID-19 on our employees and our business, including our preclinical studies and ongoing and planned clinical trials. We have taken measures to secure our research and development activities, while work in laboratories and facilities has been re-organized to reduce risk of COVID-19 transmission. While we are experiencing limited financial impacts at this time, given the global economic slowdown, the overall disruption of global healthcare systems and the other risks and uncertainties associated with the pandemic, our business, financial condition, and results of operations could be materially adversely affected. We cannot predict the ultimate impact, if any, of the COVID-19 pandemic related to both known and unknown risks, including future quarantines, closures and other restrictions resulting from the pandemic. We continue to closely monitor the COVID-19 pandemic as we evolve our business continuity plans, clinical development plans and response strategy.

As of the date of this Quarterly Report on Form 10-Q, the COVID-19 pandemic continues to have a modest impact on our business operations. There is the possibility that our current or future clinical trial sites may be affected by the COVID-19 pandemic due to prioritization of hospital resources toward the COVID-19 pandemic, as well as, the inability to access sites for initiation, patient enrollment and monitoring. As a result, patient screening, new patient enrollment, monitoring and data collection may be affected or delayed. We are aware that several clinical sites involved in our clinical trials have in the past temporarily stopped or delayed enrolling new patients, with exemptions if appropriate, and it is possible that these or other clinical sites may be similarly affected in the future. These developments may delay or extend our projected clinical trial timelines. Some of our third-party manufacturers, which we use for the supply of materials for product candidates or other materials necessary to manufacture product to conduct preclinical tests and clinical trials, and contract research organizations may be impacted by the COVID-19 pandemic. Should they experience disruptions, such as temporary closures or suspension of services, we would likely experience delays in advancing our current or planned clinical trials.

Recent Developments

- **Evaluating RP-6306, a first-in-class, oral PKMYT1 inhibitor as a monotherapy and in combinations in multiple Phase 1 studies.**
  - We continue to advance Phase 1 clinical trials evaluating RP-6306 as a monotherapy (MYTHIC), as well as in combinations with gemcitabine (MAGNETIC), FOLFIRI (MINOTAUR), and camonsertib (MYTHIC), each for the treatment of molecularly selected advanced solid tumors.
  - Initial Phase 1 clinical data readout for RP-6306 is expected in the first half of 2023.
  - Based on promising preclinical data released at the 34th EORTC-NCI-AACR Symposium in October 2022, we are working with clinical investigators to initiate clinical testing of a new carboplatin combination with RP-6306 in 2023.

We demonstrated that the PKMYT1 inhibitor RP-6306 synergized with carboplatin in multiple CCNE1 high/amplified cellular models to induce an increase in DNA damage, which led to increased cell death compared to either agent alone. The combination of RP-6306 and carboplatin induced profound tumor regression in the OVCAR3 xenograft model and was well tolerated with no additional suppression of red blood cells or neutrophils.

- Preclinical data from RP-6306 was published in *Journal of Medicinal Chemistry* in July 2022. The article, entitled "Discovery of an Orally Bioavailable and Selective PKMYT1 Inhibitor, RP-6306" is available on our website under Scientific References.

- **Advancing camonsertib, a potent and selective oral small molecule inhibitor of ATR (Ataxia-Telangiectasia and Rad3-related protein kinase) for the treatment of tumors with specific synthetic-lethal genomic alterations, in partnership with Roche.**
  - Under the agreement with Roche, Roche assumed the development of camonsertib with the potential to expand development into additional tumor indications and multiple combination studies.
  - Repare will continue to provide ongoing support for the TRESR and ATTACC trials into 2023.
  - In connection with this agreement, we received a $125 million upfront payment in July 2022. We are eligible to receive up to an additional $1.172 billion in potential development, regulatory, commercial and sales milestones, including up to $55 million in potential near-term payments, and royalties on global net sales ranging from high-single-digits to high-teens.
- **Advancing IND-enabling studies for RP-2119, our Polθ inhibitor, and plan to initiate clinical trials in the summer of 2023.**
- **We also expect to initiate IND-enabling studies in the first half of 2023 for an additional small molecule against an undisclosed target.**

Components of Results of Operations

Revenue

To date, we have not recognized any revenue 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 and License Agreement with Hoffmann-La Roche Inc. and F. Hoffmann-La Roche Ltd

On June 1, 2022, we entered into a collaboration and license agreement, or the Roche Agreement, with Hoffmann-La Roche Inc. and F. Hoffmann-La Roche Ltd, or collectively, Roche, regarding the development and commercialization of our product candidate camonsertib (also known as RP-3500) and specified other ATR (Ataxia-Telangiectasia and Rad3-related protein kinase) inhibitors, which we refer to as the Licensed Products. The transaction was subject to clearance under the Hart-Scott-Rodino Antitrust Improvements Act of 1976 and other customary closing conditions, which were met on July 13, 2022.

Under the Roche Agreement, we granted Roche a worldwide, perpetual, exclusive, sublicensable license to develop, manufacture, and commercialize the Licensed Products. Roche will assume development of camonsertib with the potential to expand development into additional tumors and multiple combination studies. We have agreed to complete specified ongoing clinical trials at our expense. We also retained the right to conduct specified clinical trials of camonsertib in combination with our PKMYT1 compound (also known as RP-6306).

The Roche Agreement was subsequently amended in October 2022 to extend the timeline to negotiate in good faith the parties' rights and obligations with respect to the Repare Trials, as defined in the Roche Agreement, and to clarify indications included in the development plan that are subject to milestones.

Under the terms of the Roche Agreement, we received an upfront payment of $125 million in July 2022, and are eligible to receive up to $1.172 billion in potential clinical, regulatory, commercial and sales milestones, including up to $55 million in potential near-term payments, and royalties on global net sales ranging from high-single-digits to high-teens. The Roche Agreement also provides us with the ability to opt-in to a 50/50 U.S. co-development and profit share arrangement, including participation in U.S. co-promotion if U.S. regulatory approval is received. If we choose to exercise its co-development and profit share option, we will continue to be eligible to receive certain clinical, regulatory, commercial and sales milestone payments, in addition to full ex-U.S. royalties.

The Company determined that the transaction price at the onset of the Roche Agreement was $134.6 million, being (i) the total non-refundable upfront payment received of $125.0 million, (ii) the additional $4.0 million payment receivable, negotiated with Roche for revisions to the clinical development plan under the Roche Agreement, and (iii) the $5.6 million receivable for the transfer of clinical trial materials.

Performance obligation	Transaction price (in thousands)
Combined licenses	$ 105,327
Completion of Continuing Trials	26,585
Transfer of clinical trial materials	2,714
Total transaction price	$ 134,626

The Company recognized $112.3 million for the three and nine months ended September 30, 2022 as revenue associated with the Roche Agreement, of which $105.3 million related to the grant of the combined licenses, $2.7 million related to the clinical trial materials transferred, and $4.3 million related to the partial recognition of deferred revenue for research and development services performed towards the completion of the Continuing Trials during the period.

As of September 30, 2022, there was $22.3 million (December 31, 2021 - nil) of deferred revenue related to the Roche Agreement, of which $16.7 million (December 31, 2021 - nil) was classified as current and $5.6 million (December 31, 2021 - nil) was classified as non-current in the condensed consolidated balance sheet based on the period the services to complete the Continuing Trials are expected to be performed.

We do not expect the upfront payment made with respect to the Roche Agreement to trigger cash tax obligations due to our accumulated tax losses available.

Collaboration and License Agreement with Bristol-Myers Squibb Company

In May 2020, we entered into a collaboration and license agreement, or the BMS Agreement, with the Bristol Myers Squibb Company, or Bristol Myers Squibb, pursuant to which we and Bristol Myers Squibb have agreed to collaborate in the research and development of potential new product candidates for the treatment of cancer. We are providing Bristol Myers Squibb access to a selected number of our existing screening campaigns and novel campaigns. We are responsible for carrying out early-stage research activities directed to identifying potential targets for potential licensing by Bristol Myers Squibb. The collaboration consists of programs directed to both druggable targets and to targets commonly considered undruggable to traditional small molecule approaches. In the event that Bristol Myers Squibb elects to obtain an exclusive license for the subsequent development, manufacturing and commercialization of a program, Bristol Myers Squibb will then be solely responsible for all such worldwide activities.

The BMS Agreement was subsequently amended in July, September and November 2020 to include additional campaigns to the list of existing campaigns from which Bristol Myers Squibb may select campaigns under the BMS Agreement and to enable unblinding of a Bristol Myers Squibb alliance manager in order to streamline the collaboration process.

As part of the BMS Agreement, Bristol Myers Squibb paid us an initial upfront fee of $50.0 million and made an equity investment of $15.0 million in our company. We will also be eligible to receive up to $3.0 billion in total milestones across all potential programs. Such milestones consist of $301.0 million in total milestones per program subject upon the achievement of certain specified research, development, regulatory and commercial milestones.

The $50.0 million upfront payment was recorded as deferred revenue on our consolidated balance sheet and is expected to be partially recognized at the point in time when option licenses are exercised by Bristol Myers Squibb, with the remainder being recognized on a proportional performance basis over the period of service for research services.

Performance obligation	Amount (in thousands)
Research services	$ 6,405
Option to license druggable target lesions	31,148
Option to license undruggable targets	12,447
Total transaction price	$ 50,000

In October 2021, we received notification from Bristol Myers Squibb of their option exercise for druggable targets directed at a synthetic lethal lesion, pursuant to the terms of the BMS Agreement. As a result, we recognized $6.5 million as revenue in the fourth quarter of 2021 with regards to the achievement of the performance obligation from Bristol Meyers Squibb and the related option fees received. No amounts were recognized in the three and nine months ended September 30, 2022 and 2021.

As of September 30, 2022, there was $41.2 million (December 31, 2021 - $42.5 million) of deferred revenue related to the BMS Agreement, of which $9.1 million (December 31, 2021 - $2.9 million) was classified as current and $32.1 million (December 31, 2021 - $39.6 million) was classified as non-current on the consolidated balance sheet based on the period the services are expected to be performed and the expected timing of potential option exercises.

In the three months ended September 30, 2022 and 2021, we recognized $0.2 million and $0.3 million, respectively, and in the nine months ended September 30, 2022 and 2021, we recognized $1.3 million and $0.7 million, respectively, as revenue associated with the BMS Agreement in relation to research activities performed to date.

Collaboration Agreement with Ono Pharmaceutical Company Ltd.

In January 2019, we entered into a research services, license and collaboration agreement, or the Ono 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 Polθ and the development of our small molecule Polθ 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 consolidated balance sheet 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.

In October 2021, upon the occurrence of a specified research trigger, we became eligible to receive a portion, amounting to ¥100 million ($0.9 million), of the research service payments provided for in the Ono Agreement. We received this amount in November 2021 and added it to the transaction price as the consideration was no longer constrained.

As of September 30, 2022 and December 31, 2021 we classified $9.0 million as current deferred revenue related to the Ono Agreement as we consider the completion of our performance obligation under the Ono Agreement to be probable with the advancement of a development candidate and initiation of IND-enabling studies under the program in 2022.

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, partially offset by fully refundable Canadian research and development tax credits. 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, and 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 contract manufacturing organizations, or 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 studies or other services performed. Significant judgment and estimates are made in determining the accrued expense or prepaid balances at the end of any reporting period.

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:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
	(in thousands)			
Discovery costs				
Direct external costs	$ 2,428	$ 2,890	$ 7,763	$ 7,910
Laboratory supplies and research materials	1,134	1,119	3,541	3,580
Personnel related costs	3,664	2,883	12,120	8,171
Facilities related costs	322	367	1,101	1,103
Other costs	1,235	960	3,525	2,629
	8,783	8,219	28,050	23,393
Development				
Direct external costs				
Camonsertib program	6,415	8,069	19,433	17,102
RP-6306 program	6,387	4,805	18,457	10,117
RP-2119 program	2,179	—	3,198	—
Personnel related costs	5,695	3,651	16,533	10,192
Facilities related costs	200	217	606	427
Other costs	1,892	636	3,933	1,707
	22,768	17,378	62,160	39,545
R&D tax credits	(309)	(236)	(1,035)	(863)
Total research and development costs	$ 31,242	$ 25,361	$ 89,175	$ 62,075

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;
- 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 U.S. Food and Drug Administration, or the FDA, the European Medicines Agency, or 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 ongoing and 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, D&O insurance expenses, investor and public relations expenses 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 D&O insurance costs as well as investor and public relations expenses associated with operating as a public company.

Other Income (Expense), Net

Other income (expense), net consists primarily of realized and unrealized gains and losses on foreign exchange, interest income earned on our cash and cash equivalents and marketable securities, and other expenses such as interest and bank charges.

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

Results of Operations

Comparison of the Three Months Ended September 30, 2022 and 2021

The following table summarizes our results of operations for the three months ended September 30, 2022 and 2021:

	Three Months Ended September 30,		
	2022	2021	Change
		(in thousands)	
Revenue:			
Collaboration agreements	$ 112,545	$ 278	$ 112,267
Operating expenses:			
Research and development, net of tax credits	31,242	25,361	5,881
General and administrative	7,904	6,596	1,308
Total operating expenses	39,146	31,957	7,189
Income (loss) from operations	73,399	(31,679)	105,078
Other income (expense), net:			
Realized and unrealized gain (loss) on foreign exchange	126	33	93
Interest income	2,027	53	1,974
Other expense	(37)	(7)	(30)
Total other income, net	2,116	79	2,037
Income (loss) before income taxes	75,515	(31,600)	107,115
Income tax recovery (expense)	(54)	708	(762)
Net income (loss)	$ 75,461	$ (30,892)	$ 106,353

Revenue

We recognized revenue of $112.3 million for the three months ended September 30, 2022 in connection with our entry into the Roche Agreement, of which $105.3 million related to the satisfaction of our performance obligation for the combined licenses, $2.7 million related to the transfer of clinical trial materials as delivery has occurred, and $4.3 million related to the partial recognition of deferred revenue for research and development services performed to complete Continuing Trials during the period.

We also recognized $0.2 million and $0.3 million for the three months ended September 30, 2022 and 2021, respectively, as a result of partial revenue recognition of the deferred revenue from the BMS Agreement, in proportion to the level of research and development services performed during the period.

Research and Development Expenses, Net of Tax Credits

Research and development expenses were $31.2 million for the three months ended September 30, 2022, compared to $25.4 million for the three months ended September 30, 2021. The increase of $5.8 million was primarily due to:

- a $1.6 million increase in direct external costs related to the advancement of the RP-6306 program and the advancement of RP-2119 into IND-enabling studies, offset by lower direct external costs for camonsertib following the transfer of CMC related activities to Roche pursuant to the collaboration agreement;
- a $2.8 million increase in personnel-related costs, including a $1.0 million increase in share-based compensation, primarily related to increased headcount in support of our discovery and development activities; and
- a $1.4 million increase in other research and material expense mostly for external costs not involved in the camonsertib, RP-6306 or RP-2119 programs.

General and Administrative Expenses

General and administrative expenses were $7.9 million for the three months ended September 30, 2022, compared to $6.6 million for the three months ended September 30, 2021. The increase of $1.3 million in general and administrative expenses consisted of:

- a $0.8 million increase in personnel related costs, including a $0.3 million increase in share-based compensation, primarily related to increased headcount as we scale the organization;

- a $0.9 million increase in professional fees associated with the Roche collaboration agreement and the establishment of our at-the-market offering with Cowen and Company, LLC, as well as timing of audit and Sarbanes-Oxley Act of 2002 related compliance efforts;
- a $0.2 million increase in other general and administrative expenses; and
- a $0.6 million decrease in our D&O insurance premium.

Other Income (Expense), Net

Other income, net was $2.1 million and $0.1 million for the three months ended September 30, 2022 and 2021, respectively. The increase of $2.0 million was primarily attributable to higher sums invested in cash and cash equivalents and marketable securities as well as higher interest rates.

Income Tax Recovery (Expense)

The income tax expense of $0.1 million for the three months ended September 30, 2022 primarily reflected taxable income in our U.S. subsidiary. Our taxable profit in the United States is expected to be higher than in prior years as a result of amendments to Internal Revenue Code Section 174, which took effect January 1, 2022 pursuant to the 2017 Tax Cuts and Jobs Act, that prescribe U.S.-based research and experimental expenditures be capitalized and amortized ratably over a five-year period instead of being deductible in the year incurred. Absent a change in law, this provision is expected to increase our 2022 cash payments of income taxes significantly as compared to 2021. Our year to date fiscal 2022 tax installment by our U.S. subsidiary was $4.6 million for the nine months ended September 30, 2022 as compared to $0.6 million of installments made for the full fiscal year 2021.

The income tax recovery of $0.7 million for the three months ended September 30, 2021 primarily reflected U.S. federal and state research and development tax credits generated, offset by taxable income in our U.S. subsidiary.

Comparison of the Nine Months Ended September 30, 2022 and 2021

The following table summarizes our results of operations for the nine months ended September 30, 2022 and 2021:

	Nine Months Ended September 30,		
	2022	2021	Change
		(in thousands)	
Revenue:			
Collaboration agreements	$ 113,632	$ 723	$ 112,909
Operating expenses:			
Research and development, net of tax credits	89,175	62,075	27,100
General and administrative	24,621	18,574	6,047
Total operating expenses	113,796	80,649	33,147
Income (loss) from operations	(164)	(79,926)	79,762
Other income (expense), net:			
Realized and unrealized gain (loss) on foreign exchange	250	(92)	342
Interest income	2,700	155	2,545
Other expense	(56)	(21)	(35)
Total other income, net	2,894	42	2,852
Income (loss) before income taxes	2,730	(79,884)	82,614
Income tax recovery (expense)	(119)	1,266	(1,385)
Net income (loss)	$ 2,611	$ (78,618)	$ 81,229

Revenue

We recognized revenue of $112.3 million for the nine months ended September 30, 2022 in connection with our entry into the Roche Agreement, of which $105.3 million related to the satisfaction of our performance obligation for the combined licenses, $2.7 million related to the transfer of clinical trial materials as delivery has occurred, and $4.3 million related to the partial recognition of deferred revenue for research and development services performed to complete Continuing Trials during the period.

We also recognized $1.3 million and $0.7 million for the nine months ended September 30, 2022 and 2021, respectively, as a result of partial revenue recognition of the deferred revenue from the BMS Agreement, in proportion to the level of research and development services performed during the period.

Research and Development Expenses, Net of Tax Credits

Research and development expenses were $89.2 million for the nine months ended September 30, 2022, compared to $62.1 million for the nine months ended September 30, 2021. The increase of $27.1 million was primarily due to:

- a $13.7 million increase in direct external costs related to the advancements of the RP-6306 and camonsertib programs, and the advancement of RP-2119 into IND-enabling studies;
- a $10.3 million increase in personnel-related costs, including a $3.4 million increase in share-based compensation, primarily related to increased headcount in support of our discovery and development activities; and
- a $3.1 million increase in other research and development costs, including travel, depreciation, facilities, and external costs not involved in the camonsertib, RP-6306 or RP-2119 programs.

General and Administrative Expenses

General and administrative expenses were $24.6 million for the nine months ended September 30, 2022, compared to $18.6 million for the nine months ended September 30, 2021. The increase of $6.0 million in general and administrative expenses consisted of:

- a $3.6 million increase in personnel related costs, including a $2.3 million increase in share-based compensation, primarily related to increased headcount as we scale the organization;
- a $2.2 million increase in professional fees associated with the Roche collaboration agreement and the establishment of our at-the-market offering with Cowen and Company, LLC, as well as timing of audit and Sarbanes-Oxley Act of 2002 related compliance efforts;
- a $0.8 million increase in other general and administrative expenses mainly related to facilities and IT costs; and
- a $0.6 million decrease in our D&O insurance premium.

Other Income (Expense), Net

Other income, net was $2.9 million and nil for nine months ended September 30, 2022 and 2021, respectively. The increase of $2.9 million was primarily attributable to higher sums invested in cash and cash equivalents and marketable securities as well as higher interest rates.

Income Tax Recovery (Expense)

The income tax expense of $0.1 million for the nine months ended September 30, 2022 primarily reflected taxable income in our U.S. subsidiary. Our taxable profit in the United States is expected to be higher than in prior years as a result of amendments to Internal Revenue Code Section 174, which took effect January 1, 2022 pursuant to the 2017 Tax Cuts and Jobs Act, that prescribe U.S.-based research and experimental expenditures be capitalized and amortized ratably over a five-year period instead of being deductible in the year incurred. Absent a change in law, this provision is expected to increase our 2022 cash payments of income taxes significantly as compared to 2021. Our year to date fiscal 2022 tax installment by our U.S. subsidiary was $4.6 million for the nine months ended September 30, 2022 as compared to $0.6 million of installments made for the full fiscal year 2021.

The income tax recovery of $1.3 million for the nine months ended September 30, 2021 primarily reflected U.S. federal and state research and development tax credits generated, offset by taxable income in our U.S. subsidiary.

Liquidity and Capital Resources

Since our inception, we have not recognized any revenue from product sales 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. In June 2020, we completed our IPO whereby we issued an aggregate of 12,650,000 common shares, which includes the exercise in full of the underwriters' option to purchase up to an additional 1,650,000 common shares, at a public offering price of $20.00 per share. The aggregate net proceeds received by us from the IPO were $232.0 million, after deducting underwriting commissions, and offering expenses of $3.2 million. In November 2021, we completed a follow-on offering whereby we issued 4,600,000 common shares, including the exercise in full by the underwriters of their option to purchase up to 600,000 additional common shares, at a public offering price of $22.00 per share, for net proceeds of $94.3 million, after deducting underwriting commissions and offering expenses of $0.8 million.

In August 2022, we entered into a Common Shares Sale Agreement, or the Sales Agreement, with Cowen and Company, LLC as sales agent, pursuant to which we may issue and sell common shares from time to time, or the ATM Shares. The ATM Shares to be sold under the Sales Agreement, if any, will be issued and sold pursuant to our shelf registration statement on Form S-3 (File No. 333-257668), up to a maximum aggregate amount of $125.0 million. No shares have been issued under the Sales Agreement as of the date of this Quarterly Report on Form 10-Q.

Prior to our IPO, we had funded our operations primarily through equity financings, having raised an aggregate of approximately $135.2 million of gross proceeds from the sale of our preferred shares and $15.0 million of gross proceeds from the issuance of a warrant to acquire our common shares. We have also partnered with Ono for our Polθ inhibitor program and Bristol Myers Squibb for research and development of potential new product candidates for the treatment of cancer and received initial upfront payments of approximately $59.0 million in the aggregate. In 2022 we entered into a collaboration and license agreement with Roche for camonsertib and have received initial payments of $130.6 million.

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 and we will continue to incur additional costs associated with operating as a public company. We expect that our research and development and general and administrative costs will increase in connection with our planned research and development activities.

Beginning in 2022, the Tax Cuts and Jobs Act of 2017 eliminates the option to deduct U.S.-based research and development expenditures in the current fiscal year and requires taxpayers to amortize them over five years pursuant to Internal Revenue Code Section 174. Absent a change in law, this provision is expected to increase our 2022 cash payments of income taxes significantly as compared to 2021. Although Congress is considering legislation that would defer the amortization requirement to later years, we have no assurance that the provision will be repealed or otherwise modified. If the requirement is not modified, it will materially reduce our cash flows beginning in 2022. Changes in our tax provisions or an increase in our tax liabilities, whether due to changes in applicable laws and regulations or our interpretation or application thereof, could have a material adverse effect on our financial position, results of operations and/or cash flows.

As of September 30, 2022, our cash and cash equivalents and marketable securities on hand was $370.4 million. We believe that our existing cash and cash equivalents and marketable securities on hand will be sufficient to fund our anticipated operating and capital expenditure requirements into 2026. 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 product candidates, including our ongoing Phase 1 clinical trials of RP-6306;
- 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, including the Roche Agreement;
- 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 or our collaborators 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;
- 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 camonsertib, RP-6306 and any future product candidates for which we or our collaborators 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 Nine Months Ended September 30, 2022 and 2021

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

	Nine Months Ended September 30,		
	2022	2021	Change
	(in thousands)		
Net cash provided by (used in) operating activities	$ 29,959	$ (65,058)	$ 95,017
Net cash used in investing activities	(209,836)	(1,278)	(208,558)
Net cash provided by financing activities	715	995	(280)
Effect of exchange rate fluctuations on cash held	(74)	(60)	(14)
Net Decrease In Cash And Cash Equivalents	$ (179,236)	$ (65,401)	$ (113,835)

Operating Activities

Net cash provided by operating activities was $30.0 million for the nine months ended September 30, 2022, reflecting a net income of $2.6 million, a net change of $14.4 million in our net operating assets and non-cash charges of $13.0 million. The non-cash charges primarily consist of share-based compensation for option grants to employees, as well as depreciation expense, and non-cash lease expense offset by deferred taxes. The change in our net operating assets was primarily due to a net increase of $11.4 million related to balances in deferred revenues and collaboration revenue receivable from the Roche Agreement.

Net cash used in operating activities was $65.1 million for the nine months ended September 30, 2021, reflecting a net loss of $78.6 million, offset by a net change of $3.6 million in our net operating assets and non-cash charges of $9.9 million. The non-cash charges primarily consist of share-based compensation for option grants to employees, as well as depreciation expense, and non-cash lease expense offset by deferred taxes. The change in our net operating assets was due to a decrease of $3.4 million in other receivables, as well as an increase of $5.3 million in accrued expenses and other current liabilities and income taxes, offset by an increase of $3.3 million in prepaid expenses, research and development tax credits receivable and other non-current assets, as well as a $1.8 million decrease in accounts payable, operating lease liabilities and deferred revenue.

The $95.0 million increase in cash provided by operating activities for the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 is primarily due to the $125.0 million upfront payment under the Roche Agreement offset by an increase in operating expenses, specifically direct external costs and personnel-related costs, as we advance the development of our product candidates.

Investing Activities

Net cash used in investing activities was $209.8 million for the nine months ended September 30, 2022 and resulted primarily from purchases of marketable securities.

Net cash used in investing activities was $1.3 million for the nine months ended September 30, 2021 and resulted primarily from purchases of property and equipment.

Financing Activities

Net cash provided by financing activities was $0.7 million consisting of net proceeds from the exercise of stock options and issuance of common shares under the ESPP for the nine months ended September 30, 2022.

Net cash provided by financing activities was $1.0 million consisting of net proceeds from the exercise of stock options and issuance of common shares under the ESPP for the nine months ended September 30, 2021.

Material Cash Requirements

In June 2022, we procured a D&O liability insurance policy for a total aggregate premium of $4.3 million, including excise tax. The premium of $4.3 million was paid in the quarter ended September 30, 2022.

In July 2022, we entered into an agreement with The Broad Institute, Inc., or Broad, under which Broad will perform specialty screening services at our request over the course of a three-year term in exchange for payments of approximately $0.8 million per year, beginning in July 2022, totaling $2.3 million in the aggregate. The initial $0.8 million was paid in the quarter ended September 30, 2022.

Other than the changes described above, there were no material changes to our material cash requirements during the nine months ended September 30, 2022 from those described under “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the Annual Report.

Critical Accounting Estimates

This management’s discussion and analysis is based on our unaudited condensed consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these unaudited condensed 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 unaudited condensed 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.

There have been no significant changes to our critical accounting estimates from those described in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” included in the Annual Report.

Recently Adopted Accounting Pronouncements

See Note 2 to our annual consolidated financial statements included in the Annual Report and Note 2 to our unaudited condensed consolidated financial statements included in this Quarterly Report on Form 10-Q for a description of recent accounting pronouncements applicable to our financial statements.

Item 3. Quantitative and Qualitative 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. In the nine months ended September 30, 2022, we earned $2.7 million in interest income from cash balances held in interest bearing bank accounts and marketable securities. As of September 30, 2022, we have a balance of $215.2 million in short-term U.S. Treasury bills and U.S. Treasury notes. We do not enter into investments for trading or speculative purposes. The objective of holding marketable securities is to invest our excess cash resources in investment vehicles that diversify our cash holdings and provide a guaranteed rate of return, with limited risk to the principal amount invested. We do not have in place any tools to manage our interest rate risk. The risk of a sudden, significant change in market interest rates relative to the interest rates earned on our bank accounts and marketable securities having an impact on our results of operations or cash flows is limited owing to the relative short-term nature of these investments. In addition, we have the ability to hold our investments until maturity, and therefore, we would not expect our operating results or cash flows to be affected to any significant degree by a change in market interest rates on our marketable securities.

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, other receivables, accounts payable, accrued expenses and other current liabilities, and operating lease liabilities denominated in Canadian dollars. Based on our Canadian dollar net exposure as of September 30, 2022, 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 $0.1 million on our net income (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.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

We maintain “disclosure controls and procedures,” as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act, that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC’s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to our management, including our principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of September 30, 2022. Based on the evaluation of our disclosure controls and procedures as of September 30, 2022, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the period covered by this Quarterly Report on Form 10-Q that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Controls

Our disclosure controls and procedures and internal control over financial reporting are designed to provide reasonable assurance of achieving the desired control objectives. Our management recognizes that any control system, no matter how well designed and operated, is based upon certain judgments and assumptions and cannot provide absolute assurance that its objectives will be met. Similarly, an evaluation of controls cannot provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been detected.

PART II—OTHER INFORMATION

Item 1. 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.

Item 1A. 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 Quarterly Report on Form 10-Q, including our unaudited condensed 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 clinical-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 clinical development, including continuing our open-label Phase 1/2 clinical trials of camonsertib and our ongoing Phase 1 clinical trials of RP-6306, 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 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 camonsertib and RP-6306, as well as to enhancing our SNIPRx platform. To date, we have primarily funded our operations through sales of equity securities, including our IPO in June 2020 and our follow-on offering in November 2021, as well as upfront payments from collaboration and research agreements.

We have incurred significant operating losses since our inception in 2016. Our net income was $2.6 million for the nine months ended September 30, 2022 and a net loss of $106.9 million and $53.4 million for the years ended December 31, 2021 and 2020, respectively. As of September 30, 2022, we had an accumulated deficit of $207.7 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 our product candidates, including our ongoing Phase 1 clinical trials of RP-6306;
- 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 any 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 any 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 any product candidates that we may pursue, obtaining regulatory approval, procuring commercial-scale manufacturing, marketing, and selling any 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. 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-6306 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.

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 sales of equity securities, including our IPO in June 2020 and our follow-on offering in November 2021, as well as upfront payments from collaboration and research agreements. 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, 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, we have incurred and will continue 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 September 30, 2022, our cash and cash equivalents and marketable securities on hand was $370.4 million. We believe that our existing cash on hand, will enable us to fund our operating expenses and capital expenditure requirements into 2026. 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 continuation of our ongoing and planned development of our product candidates, including our ongoing Phase 1 clinical trials of RP-6306;
- the timing, costs, progress and results of our ongoing clinical trials of RP-6306;
- 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, including the Roche Agreement;
- our election to opt-in to the co-development and profit share arrangement of camonsertib pursuant to the Roche Agreement;
- 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;
- 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 camonsertib, RP-6306 and any future product candidates for which we or our collaborators receive marketing approval;
- the addition of 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, camonsertib, RP-6306 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, 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. If we are unable to advance our product candidates into and through clinical development, obtain regulatory approval and ultimately commercialize any of our product candidates, or experience significant delays in doing so, our business will be materially harmed.

We have no products approved for sale and our initial clinical product candidates, camonsertib and RP-6306, are still in the early stages of clinical development and will require additional clinical 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, by us or our collaborators, of camonsertib, RP-6306 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 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 ongoing open-label Phase 1/2 clinical trials of camonsertib, our ongoing Phase 1 clinical trials of RP-6306 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 initial product candidates, camonsertib and RP-6306. If we or our collaborators 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 initial clinical product candidates, camonsertib and RP-6306, were 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 development of camonsertib or RP-6306 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 camonsertib or RP-6306 shows unexpected adverse events or a lack of efficacy in the indications they are intended to treat, or if we or our collaborators experience other regulatory or developmental issues, our development plans and business could be significantly harmed.

We have limited experience as a company in conducting clinical trials.

We have limited experience as a company in conducting clinical trials. We began our first clinical trial of camonsertib in July 2020 and our first clinical trial of RP-6306 in April 2021. In part because of this lack of experience, we cannot be certain that our 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. There can be no assurance that we will be able to negotiate and enter into any master services agreement with 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 have filed INDs for camonsertib and RP-6306, 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 ongoing COVID-19 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, including variants of COVID-19, could materially affect our operations, including at our offices in Montréal and in the Boston Metro Area, 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.

The ongoing COVID-19 pandemic resulted in many state, local and foreign governments, including the Québec provincial government and the Governor of the Commonwealth of Massachusetts, implementing significant measures, including closures,

quarantines, travel restrictions, occupancy limits and other social distancing directives. Because of the nature of our operations, we have been, and are currently, considered to be an essential business so, to date, our operations have only been partially affected by these orders. While the situation continues to evolve and certain locations have reduced or removed the restrictions initially adopted in response to the pandemic, new restrictions could be implemented, or prior restrictions reinstated in order to address any resurgences in cases of COVID-19, including those related to newer strains such as the Delta and Omicron variants. If new variants of COVID-19 appear and cause case levels to rise, mask mandates, social-distancing, travel restrictions and stay-at-home orders could be reinstated.

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, during periods where this has been advised by local government authorities, while work in laboratories and facilities has been re-organized to reduce the risk of COVID-19 transmission. Business travel has been limited, and online and teleconference technology is used to meet virtually rather than in person.

The effects of any current or future regulatory measures and our work-from-home policies may negatively impact productivity, disrupt our business, and delay our clinical programs and timelines, 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, occupancy limits, 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. For example, we have contracts with multiple suppliers and CROs in China whose productivity may be impacted by ongoing COVID restrictions.

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

- delays or difficulties in enrolling and retaining 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;
- increased rates of patients withdrawing from our clinical trials following enrollment as a result of contracting COVID-19, being forced to quarantine or being unable to visit clinical trial locations or otherwise comply with clinical trial protocols;
- 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, including supply chain interruptions caused by ongoing restrictions for the supply of materials for product candidates or other materials necessary to manufacture product to conduct preclinical tests; 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.

For our ongoing and planned clinical trials that we expect to conduct at sites outside the United States, particularly in countries which experience heightened impact from COVID-19 and variants of COVID-19, 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 related to the COVID-19 pandemic 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, EMA or Health Canada to accept data from clinical trials in these affected geographies.

The impact of the COVID-19 pandemic and any variants continue to 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, the results of vaccination efforts, resurgences of the virus, 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 will eventually provide validation of our SNIPRx platform, we have not, to date, sought regulatory approval for 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;
- 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 or our collaborators 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 camonsertib, RP-6306 and any future product candidates, including:

- delays in reaching a consensus with regulatory authorities on design or implementation of our clinical trials;
- 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 COVID-19 pandemic;
- 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;
- 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 camonsertib, RP-6306 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 initiated our first clinical trial, an open-label Phase 1/2 clinical trial of camonsertib, in the third quarter of 2020 and initiated a Phase 1 clinical trial of RP-6306 in the second quarter of 2021. 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.

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. The changing regulatory landscape may require larger and randomized trials that will take a longer time to perform.

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 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. Further, as our trials are in patients who encountered multiple therapy failures previously, interpretation of results may be biased both towards lesser activity and at the same time towards a population that is able to tolerate and possibly benefit from novel therapies. Hence interpretation of any results from this population may not directly translate to our eventual pivotal trial population that will likely be more homogenous and less pretreated.

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 of 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 ongoing and 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 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.

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 small molecule inhibitor therapeutics for SL in DNA damage 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 STEP^2 screens to expand the potential patient populations that can be treated with our product candidates.

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 STEP^2 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 ongoing and planned clinical trials with the genomic alterations that these trials are 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 identified by our STEP^2 screens, our ability to enroll eligible patients may be limited or may result in slower enrollment than we anticipate. Certain genes identified by our STEP^2 screens may not yet be included in commercially available panels or CLIA-validated panels used in large academic centers. We cannot be certain how many patients will have each of the genomic alterations that the applicable product candidate 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 trials.

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 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.

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 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 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, the genomic alterations our compounds are addressing, such as ATM loss and CCNE1 amplification, are uncommon genetic alterations in tumors, or their subsets and their prognostic significance has not been fully 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 alterations 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 may explore the use of our product candidates in combination with other therapies, including those that are not yet approved. For example, pursuant to the terms of the Roche Agreement, we have retained the right to conduct specified clinical trials of camonsertib in combination with RP-6306. 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 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 or adequate reimbursement 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, 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 a larger research and development team 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 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. (now a division of Eli Lilly and Company), Blueprint Medicines Corporation, Agios Pharmaceuticals, Inc., SpringWorks Therapeutics, Inc., Black Diamond Therapeutics, Inc., Deciphera Pharmaceuticals, Inc., Tango Therapeutics, Inc., Zentalis Pharmaceuticals, Inc., Turning Point Therapeutics, Inc., and Exelixis, 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., IDEAYA Biosciences, Inc., Impact Therapeutics, Inc., Atrin Pharmaceuticals LLC., Antengene Corporation, Schrodinger, Inc., Cyteir Therapeutics, Inc., Acrivon Therapeutics, Inc., and Debiopharm Group.

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, export controls, sanctions, 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, such as the Russia invasion of Ukraine, 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;
- 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 our 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. 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.

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 any product candidates that we develop.

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 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 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, transparency, 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 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 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 Health Insurance Portability and Accountability Act, 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, 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 and their business associates, independent contractors of a covered entity that perform certain services involving the use or disclosure of individually identifiable health information, as well as their covered subcontractors. 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 other transfers of value to physicians (currently defined to include doctors, dentists, optometrists, podiatrists and chiropractors), other healthcare professionals (such as physicians assistants and nurse practitioners), and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members;
- 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. For example, in March 2010, the Patient Protection and Affordable Care Act, or 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 have been judicial, Congressional and executive branch challenges to certain aspects of the ACA. For example, on June 17, 2021, the U.S. Supreme Court dismissed a challenge on procedural grounds that argued the ACA is unconstitutional in its entirety because the "individual mandate" was repealed by Congress. Moreover, prior to the U.S. Supreme Court ruling, on January 28, 2021, President Biden issued an executive order that initiated a special enrollment period for purposes of obtaining health insurance coverage through the ACA marketplace. The executive order also instructed certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, reexamining Medicaid demonstration projects and waiver programs that include work requirements, and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the ACA. Further, on August 16, 2022, President Biden signed the Inflation Reduction Act of 2022, or IRA, into law, which among other things, extends enhanced subsidies for individuals purchasing health insurance coverage in ACA marketplaces through plan year 2025. The IRA also eliminates the "donut-hole" under the Medicare Part D program beginning in 2025 by significantly lowering the beneficiary maximum out-of-pocket cost through a newly established manufacturer discount program. It is possible that the ACA will be subject to judicial or Congressional challenges in the future. It is also unclear how any such challenges and other litigation, and further healthcare reform measures of the Biden administration 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 until 2031 unless additional action is taken by Congress. These Medicare sequester reductions had been suspended from May 1, 2020 through March 31, 2022 due to the COVID-19 pandemic. Under current legislation, the actual reduction in Medicare payments will vary from 1% in 2022 to up to 4% in the final fiscal year of this sequester. On March 11, 2021, President Biden signed the American Rescue Plan Act of 2021 into law, which eliminates the statutory Medicaid drug rebate cap, currently set at 100% of a drug's average manufacturer price, for single source and innovator multiple source drugs, beginning January 1, 2024. 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. For example, in July 2021, the Biden administration released an executive order, "Promoting Competition in the American Economy," with multiple provisions aimed at prescription drugs. In response to Biden's executive order, on September 9, 2021, the U.S. Department of Health and Human Services, or HHS released a Comprehensive Plan for Addressing High Drug Prices that outlines principles for drug pricing reform and sets out a variety of potential legislative policies that Congress could pursue as well as potential administrative actions HHS can take to advance these principles. In addition, the IRA, among other things, (1) directs HHS to negotiate the price of certain single source drugs and biologics covered under Medicare and (2) imposes rebates under Medicare Part B and Medicare Part D to penalize price increases that outpace inflation. These provisions will take effect progressively starting in fiscal year 2023, although they may be subject to legal challenges. It is currently unclear how the IRA will be implemented, but it is likely to have a significant impact on the pharmaceutical industry. Further, the Biden administration released an additional executive order on October 14, 2022, directing HHS to submit a report within 90 days on how the Center for Medicare and Medicaid Innovation can be further leveraged to test new models for lowering drug costs for Medicare and Medicaid beneficiaries. 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.

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.

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. 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 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. Trade controls may restrict or prohibit altogether the sale or supply of certain products and services to certain governments, persons, entities, countries, and territories, including those that are the target of comprehensive sanctions, unless there are license exceptions that apply or specific licenses are obtained. 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.

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. Reliance on third-party providers may expose 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, war, 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, the COVID-19 pandemic has impacted our supply chain, and may in the future impact our manufacturing activities.

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 ongoing and 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 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 Polθ and the development of our small molecule Polθ inhibitor program. Similarly, in May 2020, we entered into a collaboration and license agreement with Bristol Myers Squibb pursuant to which we and Bristol Myers Squibb have agreed to collaborate in the research and development of potential new product candidates for the treatment of cancer. In June 2022, we entered into a collaboration and license agreement with Roche regarding the development and commercialization of our product candidate camonsertib and other specified ATR inhibitors. These 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 research funding or milestone or royalty payments under such collaboration. Moreover, we may not receive all of the milestone or royalty payments we are entitled to receive under our current and future collaboration agreements. For example, pursuant to the terms of our collaboration and license agreement with Bristol Myers Squibb, we are entitled to receive up to $301.0 million in total milestones per each program subject to the agreement. However, given the overlapping nature of the triggers for these milestone payments, as well as the uncertainty associated with achieving any of such milestones, it is unlikely that we will receive the entire $301.0 million in milestone payments with respect to each program subject to the agreement.

All of the risks relating to product development, regulatory approval and commercialization described in this Quarterly Report on Form 10-Q 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 obtain intellectual property rights for our proprietary technologies and product candidates, as well as 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. Moreover, we may not be able to obtain intellectual property protection with respect to the SL pairs that we identify which are the targets of our current and future product candidates. Although we expect that the compounds underlying our product candidates will be protectable through intellectual property rights, our competitors could develop their own inhibitors based on the SL pairs we identify that might not be protected by our intellectual property rights.

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.

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.

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.

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 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-6306 and have not yet begun the process of applying to register trademarks for RP-6306 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-6306 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 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 our 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 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. 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 October 31, 2022, we had 168 full-time employees, including 136 employees engaged in research and development and 32 engaged in management or general and administrative activities. As our clinical development and commercialization plans and strategies develop, 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 ongoing Phase 1 clinical trials of RP-6306, 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 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. 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. We do, however, keep expected Canadian dollar cash requirements in Canadian dollars to form a natural hedge.

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 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 violate 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 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 Ownership of Our Common Shares

Prior to our initial public offering in June 2020, there was no established public market for our common shares and a public market may not be sustained or may be illiquid and, therefore, you may have difficulty selling your shares.

Prior to our IPO in June 2020, there was no public market for our common shares. Although our common shares are listed on The Nasdaq Global Select Market, we cannot assure you that an active trading market will be sustained or that any trading market will be liquid. If an active trading market for our common shares does not continue to develop or is not sustained, it may be difficult for investors to sell shares quickly or without depressing the market price of our common shares or to sell the shares at all. 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 companies or technologies by using our common shares as consideration.

The trading price of our common shares has been and is likely to continue to be volatile and fluctuate substantially.

The trading price of our common shares has been and is likely to continue to be highly volatile. Furthermore, 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, our shareholders may not be able to sell their common shares at or above the price they paid for their common shares. The market price of our common shares may be influenced by many factors, including:

- the ongoing COVID-19 pandemic and its impact on the global markets;
- the commencement, enrollment, timing and results of our ongoing clinical trials of RP-6306 and any future product candidates or those of our competitors;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for any of our product candidates for which we or our collaborators receive marketing approval;

- 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 camonsertib, RP-6306 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;
- 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 Quarterly Report on Form 10-Q.

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 September 30, 2022, our executive officers, directors, and shareholders who owned more than 5% of our outstanding common shares beneficially own shares, in the aggregate, representing approximately 67% of our 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 will not have any control over these equity research 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.

The sale of a substantial number of our common shares in the public market 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 perceived that our shareholders intend to sell, substantial amounts of our common shares in the public market, the market price of our common shares could decline significantly.

We have filed registration statements on Form S-8 to register our common shares that are issuable pursuant to 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, as well as, in the case of our affiliates, the restrictions of Rule 144 under the Securities Act. Furthermore, in August 2022, we entered into the Sales Agreement with Cowen and Company, LLC as sales agent, pursuant to which we may issue and sell from time to time common shares up to a maximum aggregate amount of $125.0 million in sales deemed to be an “at the market offering,” as defined by the Securities Act.

Additionally, as of September 30, 2022, certain holders of our common shares, or their transferees, 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.

Our articles of continuance permit us to issue an unlimited number of common shares and preferred shares without additional shareholder approval.

Our articles of continuance permit us to issue an unlimited number of common shares. We anticipate that we will, from time to time, issue additional common shares in the future. Any further issuances of common shares will result in immediate dilution to existing shareholders and may have an adverse effect on the value of their holdings.

Our articles of continuance also permit us to issue an unlimited number of preferred shares, issuable in one or more series and, subject to the provisions of the Business Corporations Act (Québec), or QBCA, having such designations, rights, privileges, restrictions and conditions, including dividend and voting rights, as our board of directors may determine and which may be superior to those of the common shares. The issuance of preferred shares, while providing flexibility in connection with possible acquisitions, financings, and other corporate purposes, could, among other things, have the effect of delaying, deferring, or preventing a change in control of Repare 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 or immediate plans to issue any preferred shares.

Subject to Nasdaq listing rules, we will not be required to obtain the approval of shareholders for the issuance of additional common shares and preferred shares.

We are a "smaller reporting company" and we cannot be certain if the reduced reporting requirements applicable to smaller reporting companies will make our common shares less attractive to investors.

Because the market value of our common shares held by non-affiliates was less than $560 million as of June 30, 2022 and our revenue for the year ended December 31, 2021 were less than $100 million, we qualify as a "smaller reporting company" under the Exchange Act as of June 30, 2022. 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 $100.0 million during the most recently completed fiscal year and the market value of our common shares held by non-affiliates is less than $700.0 million. As a smaller reporting company, we may 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 our periodic reports and proxy statements. For so long as we remain a smaller reporting company, we are permitted and intend to rely on such 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 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.

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.

We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act, the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, as amended and the rules and regulations of The Nasdaq Global Market. Pursuant to Section 404 of the Sarbanes-Oxley Act, we are now required to perform system and process evaluation and testing of our internal control over financial reporting to allow our management to report on the effectiveness of our internal control over financial reporting. Furthermore, if at such time we no longer qualify as a "smaller reporting company", our independent registered public accounting firm will be required to issue an annual report that attests the effectiveness of our internal control over financial reporting.

During the evaluation and testing process, if we identify one or more material weaknesses in our internal control over financial reporting, we will be unable to assert that our internal control over financial reporting is effective. Further, we may in the future discover weaknesses in our system of internal financial and accounting controls and procedures that could result in a material misstatement of our financial statements. Moreover, our internal controls over financial reporting will not prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected. Moreover, we are aware that the remote working arrangements implemented in connection with the COVID-19 pandemic potentially present new areas of risk, and we are carefully monitoring any impact to our internal controls and procedures.

If we are unable to assert that our internal control over financial reporting is effective, investors could lose confidence in the reliability of our financial statements, the market price of our common shares could decline and we could be subject to sanctions or investigations by The Nasdaq Global Market, the SEC or other regulatory authorities.

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

We are 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, 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 the nature of our activities and the composition of our income and assets, we believe we were not classified as a PFIC for the taxable year ended December 31, 2021. We have not yet assessed our 2022 PFIC status and cannot provide an expectation as to whether we will be a PFIC for the taxable year ended December 31, 2022 or any future taxable year. 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. Accordingly, our U.S. counsel expresses no opinion with respect to our PFIC status.

If we are a PFIC, a U.S. Holder (as defined below) 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. 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. A "U.S. Holder" is a holder who, for U.S. federal income tax purposes, is a beneficial owner of our common shares and is:

(1) a citizen or individual resident of the United States;

(2) a corporation, or other 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;

(3) an estate, the income of which is subject to U.S. federal income taxation regardless of its source; or

(4) a trust that (a) is subject to the primary supervision of a U.S. court and the control of one or more "United States persons" (within the meaning of Section 7701(a)(30) of the Code) or (b) has a valid election in effect to be treated as a United States person for U.S. federal income tax purposes.

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.

If a U.S. Holder is treated as owning (directly, indirectly or constructively) at least 10% of the value or voting power of our common shares, such U.S. Holder may be treated as a "United States shareholder" with respect to each "controlled foreign corporation" in our group (if any) as such term is defined in the Code. We refer to this holder as a "Ten Percent Shareholder".

Each "Ten Percent Shareholder" 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.

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.

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, 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.

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, our ability to utilize non-capital losses could be limited by subsection 111(5) of the Canadian Tax Act. As of December 31, 2021, we had Canadian federal and provincial non-capital loss carry forwards of $113.2 million, which expire beginning in 2037 through 2041. In addition, we also have scientific research and experimental development expenditures of approximately $40.5 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 $6.6 million for Canadian federal income tax purposes, which expire beginning in 2036 through 2041. 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.

Our United States deferred tax assets may not be realized.

As of December 31, 2021, we had U.S. federal research and development credit carryforwards of approximately $1.7 million, which begin to expire in 2041. There is a risk that our existing carryforwards could expire unused and be unavailable to offset future income tax liabilities. As of December 31, 2021, we also had U.S. state research and development credit carryforwards of approximately $0.3 million, which expire in 2036. We may also be unable to use our existing carryforwards if they are successfully challenged by the U.S. Internal Revenue Service, or the law related to research and development tax credits changes. For these reasons, our ability to utilize our research and development tax credit carryforwards and other tax attributes to reduce future tax liabilities may be limited, which would have a material adverse effect on our cash flows and results of operations.

Changes to the tax treatment of research and experimental expenditures as a result of U.S. federal tax reform could increase our tax burden and adversely affect our business and financial condition.

In December 2017, the U.S. government enacted comprehensive tax legislation, the Tax Cuts and Jobs Act of 2017, or TCJA, significantly reformed the Internal Revenue Code of 1986, as amended. As a result of this legislation beginning in 2022, our research and experimental expenditures are no longer deductible in the year they are incurred for US tax purposes. Instead, US-based research and experimental expenditures are required to be capitalized and amortized ratably over a five-year period. Any such expenditures attributable to research conducted outside the United States must be capitalized and amortized over a 15-year period. Although Congress is considering legislation that would defer the amortization requirement to later years, we have no assurance that the provision will be repealed or otherwise modified. If the requirement is not modified, it will materially reduce our cash flows beginning in 2022. Changes in our tax provisions or an increase in our tax liabilities, whether due to changes in applicable laws and regulations or our interpretation or application thereof, could have a material adverse effect on our financial position, results of operations and/or 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 Canada 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 have and will continue to 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, we have and will continue to 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 and maintain 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. 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.

Our amended and restated bylaws designate specific courts in Canada and the United States as the exclusive forum for certain litigation that may be initiated by our shareholders, which could limit our shareholders' ability to obtain a favorable judicial forum for disputes with us.

Pursuant to our amended and restated bylaws, unless we consent in writing to the selection of an alternative forum, the courts of the Province of Québec and the appellate courts therefrom shall, to the fullest extent permitted by law, be the sole and exclusive forum for: (a) any derivative action or proceeding brought on our behalf; (b) any action or proceeding asserting a claim for breach of fiduciary duty owed to us by any of our directors, officers or other employees; (c) any action or proceeding asserting a claim arising out of any provision of the Business Corporations Act (Québec) or the articles or our bylaws (as either may be amended from time to time); or (d) any action or proceeding asserting a claim otherwise related to our affairs, or the Canadian Forum Provision. The Canadian Forum Provision will not apply to any causes of action arising under the Securities Act or the Exchange Act. Our amended and restated bylaws further provide that unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act, or the U.S. Federal Forum Provision. In addition, our amended and restated bylaws provide that any person or entity holding, owning, or otherwise acquiring any interest in any of our securities is deemed to have notice of and consented to the Canadian Forum Provision and the U.S. Federal Forum Provision.

The Canadian Forum Provision and the U.S. Federal Forum Provision in our amended and restated bylaws may impose additional litigation costs on shareholders in pursuing any such claims. Additionally, the forum selection clauses in our amended and restated bylaws may limit our shareholders' ability to bring a claim in a judicial forum that they find favorable for disputes with us or our directors, officers or employees, which may discourage the filing of lawsuits against us and our directors, officers and employees, even though an action, if successful, might benefit our shareholders. In addition, while the Delaware Supreme Court ruled in March 2020 that federal forum selection provisions purporting to require claims under the Securities Act be brought in federal court are "facially valid" under Delaware law, there is uncertainty as to whether other courts, including courts in Canada and other courts within the United States, will enforce our U.S. Federal Forum Provision. If the U.S. Federal Forum Provision is found to be unenforceable, we may incur additional costs associated with resolving such matters. The U.S. Federal Forum Provision may also impose additional litigation costs on shareholders who assert that the provision is not enforceable or invalid. The courts of the Province of Québec and the federal district courts of the United States of America may also reach different judgments or results than would other courts, including courts where a shareholder considering an action may be located or would otherwise choose to bring the action, and such judgments may be more or less favorable to us than our shareholders.

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 Québec, 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 Québec, which in some cases have a different effect on shareholders than the corporate laws of Delaware.

We are governed by the QBCA 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 QBCA 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 QBCA generally requires a two-thirds majority vote by shareholders, whereas the DGCL generally only requires a majority vote; and (ii) under the QBCA, a holder of 10% or more of our common shares can requisition a special meeting of shareholders, whereas such right does not exist under the DGCL.

Our amended and restated bylaws 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 and certain Canadian legislation, together or separately, could discourage or delay certain change in control transactions or shareholder proposals.

Our amended and restated bylaws contain provisions that establish certain advance notice procedures for nomination of candidates for election as directors at shareholders' meetings. The QBCA 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.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

(a) Recent Sales of Unregistered Securities

None.

(b) Use of Proceeds

On June 23, 2020, we closed our IPO, in which we issued and sold an aggregate of 12,650,000 common shares, including the exercise in full of the underwriters' option to purchase up to an additional 1,650,000 common shares, at a public offering price of $20.00 per share, resulting in gross proceeds of $253.0 million. All of the common shares issued and sold in our IPO were registered under the Securities Act pursuant to a registration statement on Form S-1 (File No. 333-238822), which was declared effective by the SEC on June 18, 2020.

There has been no material change in the use of proceeds from our IPO from those disclosed in the final prospectus for our IPO dated June 18, 2020 and filed with the SEC pursuant to Rule 424(b)(4) of the Securities Act on June 19, 2020.

(c) Issuer Purchases of Equity Securities

None.

Item 3. Defaults Upon Senior Securities.

None.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Other Information.

None.

Item 6. Exhibits.

Exhibit Number	Description	Incorporated by Reference			
		Schedule Form	File Number	Exhibit	Filing Date
3.1	Articles of Continuance of Repare Therapeutics Inc.	8-K	001-39335	3.1	June 23, 2020
3.2	Amended and Restated Bylaws of Repare Therapeutics Inc.	8-K	001-39335	3.2	June 23, 2020
10.1*†	First Amendment to Collaboration and License Agreement by and between the registrant, Repare Therapeutics Inc. and Hoffmann-La Roche Inc. and F. Hoffmann-La Roche Ltd. dated October 7, 2022.				
10.2*†	Second Amendment to Collaboration and License Agreement by and between the registrant, Repare Therapeutics Inc. and Hoffmann-La Roche Inc. and F. Hoffmann-La Roche Ltd. dated October 7, 2022.				
31.1*	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
31.2*	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
32.1+	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				
32.2+	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				
101.INS*	Inline XBRL Instance Document				
101.SCH*	Inline XBRL Taxonomy Extension Schema Document				
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document				
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document				
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document				
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document				
104	Inline Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)				

* Filed herewith.

† Certain portions of this exhibit (indicated by asterisks) have been omitted because they are not material and are the type that the registrant treats as private or confidential.

+ This certification is being furnished solely to accompany this Quarterly Report on Form 10-Q pursuant to 18 U.S.C. Section 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference into any filing of the registrant under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

REPARE THERAPEUTICS INC.

Date: November 9, 2022

By: /s/ Lloyd M. Segal
Lloyd M. Segal
President and Chief Executive Officer
(Principal Executive Officer)

Date: November 9, 2022

By: /s/ Steve Forte
Steve Forte
Executive Vice President, Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

Exhibit 10.1

[***] Certain information in this document has been omitted from this exhibit because it is both (i) not material and (ii) customarily and actually treated by the registrant as private or confidential.

FIRST AMENDMENT TO COLLABORATION AND LICENSE AGREEMENT

This First Amendment to Collaboration and License Agreement (this "Amendment") amends the Collaboration and License Agreement dated June 1, 2022, by and between Repare Therapeutics Inc., a Canadian corporation, on the one hand, and Hoffmann-La Roche Inc., a New Jersey corporation, and F. Hoffmann-La Roche Ltd, a Swiss company, on the other hand (the "Agreement"). This Amendment is made and entered into as of October 7, 2022 (the "Amendment Date"). Capitalized terms used herein and not defined herein shall have the meanings ascribed to them in the Agreement.

INTRODUCTION

WHEREAS, in Section 11.2(a)(i) of the Agreement, the Parties agreed on a certain development milestone event and associated one-time development milestone payment [***] under the Agreement;

WHEREAS, the Parties, by mutual agreement through the Joint Steering Committee, [***];

WHEREAS, [***], the Parties have agreed to amend Section 11.2(a)(i) as set forth herein; and

WHEREAS, the Parties [***] desire to amend Section 12.1(e) of the Agreement [***];

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the PARTIES agree as follows:

1. Section 1.33x "[***]" is hereby added to the Agreement and shall read as follows:

Section 1.33x [***].

2. Section 11.2(a)(i) of the Agreement is hereby amended and restated in its entirety to read as follows:

"(i) Roche shall notify Repare within [***] of the [***], for any Licensed Product for the [***] , and, within [***] after receipt of a corresponding invoice, Roche shall pay Repare a one-time, non- refundable, non-creditable milestone payment of [***]."

3. Section 12.1(e) of the Agreement is hereby amended and restated in its entirety to read as follows:

"(e) Repare Development Intellectual Property. Irrespective of inventorship, Repare shall own all right, title, and interest in and to all Repare Development Intellectual Property, and Roche hereby assigns, and agrees to assign, to Repare all of Roche's right, title, and interest in and to any Repare Development Intellectual Property."

4. As amended by this Amendment, the Agreement remains in full force and effect.

5. This Amendment may be executed in any number of counterparts (either manually or by facsimile), each of which shall be deemed to be an original, and all of which taken together shall be deemed to constitute one and the same instrument.

IN WITNESS WHEREOF, the Parties have executed this Amendment as of the Amendment Date.

REPARE THERAPEUTICS INC.

By: /s/ Steve Forte
Name: Steve Forte
Title: EVP, Chief Financial Officer

By: /s/ Lloyd M. Segal
Name: Lloyd M. Segal
Title: President and CEO

HOFFMANN-LA ROCHE INC.

By: /s/ John Parise
Name: John Parise
Title: Authorized Signatory

F. HOFFMANN-LA ROCHE LTD

By: /s/ Claire Steers
Name: Claire Steers
Title: Global Asset and Alliance Management Director

By: /s/ Hannah Boehm
Name: Hannah Boehm
Title: Legal Counsel

[***] Certain information in this document has been omitted from this exhibit because it is both (i) not material and (ii) customarily and actually treated by the registrant as private or confidential.

SECOND AMENDMENT TO COLLABORATION AND LICENSE AGREEMENT

This Second Amendment to Collaboration and License Agreement (this "Second Amendment") amends the Collaboration and License Agreement dated June 1, 2022, by and between Repare Therapeutics Inc., a Canadian corporation, on the one hand, and Hoffmann-La Roche Inc., a New Jersey corporation, and F. Hoffmann-La Roche Ltd, a Swiss company, on the other hand (the "Agreement"), as previously amended on October 7, 2022. This Amendment is made and entered into as of October 7, 2022 (the "Second Amendment Date"). Capitalized terms used herein and not defined herein shall have the meanings ascribed to them in the Agreement.

INTRODUCTION

WHEREAS, in Section 5.1(d)(i) of the Agreement, the Parties agreed to negotiate and enter into the Repare Trial Collaboration Agreement within [***] of the Effective Date of the Agreement.

WHEREAS, the Parties, by mutual agreement, now wish [***];

NOW, THEREFORE, in consideration of the premises and the mutual covenants

1. Section 5.1(d)(i) of the Agreement is hereby amended and restated in its entirety to read as follows:

"(i) No later than [***], the Parties shall negotiate in good faith and enter into an agreement governing the Parties' rights and obligations with respect to Repare Trials, [***] (such data, "Repare Trial Data," and such agreement, the "Repare Trial Collaboration Agreement"). To the extent there is any conflict between the terms of any executed Repare Trial Collaboration Agreement and the terms of this Agreement, the Repare Trial Collaboration Agreement shall control with respect to the rights and obligations of the Parties with respect to Repare Trials. However, no failure by the Parties to enter into a Repare Trial Collaboration Agreement will limit Repare's right to conduct Repare Trials in accordance with the terms of this Agreement."

2. As amended by the Second Amendment, The Agreement remains un full force and effect.

3. This Second Amendment may be executed in any number of counterparts (either manually or by facsimile), each of which shall be deemed to be an original, an all of which taken together shall be deemed to constitute one and the same instrument.

IN WITNESS WHEREOF, the Parties have executed this Second Amendment as of the Second Amendment Date.

REPARE THERAPEUTICS INC.

By: /s/ Steve Forte
Name: Steve Forte
Title: EVP, Chief Financial Officer

By: /s/ Lloyd M. Segal
Name: Lloyd M. Segal
Title: President and CEO

HOFFMANN-LA ROCHE INC.

By: /s/ John Parise
Name: John Parise
Title: Authorized Signatory

F. HOFFMANN-LA ROCHE LTD

By: /s/ Claire Steers
Name: Claire Steers
Title: Global Asset and Alliance Management Director

By: /s/ Hannah Boehm
Name: Hannah Boehm
Title: Legal Counsel

Exhibit 31.1

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Lloyd M. Segal, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Repare Therapeutics Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13(a)-15(f) and 15(d)-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 9, 2022

By: /s/ Lloyd M. Segal
Lloyd M. Segal
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Steve Forte, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Repare Therapeutics Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13(a)-15(f) and 15(d)-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 9, 2022

By: /s/ Steve Forte
Steve Forte
Executive Vice President, Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Repare Therapeutics Inc. (the "Company") on Form 10-Q for the period ended September 30, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Lloyd M. Segal, President and Chief Executive Officer of the Company, hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 9, 2022

/s/ Lloyd M. Segal
Lloyd M. Segal
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Repare Therapeutics Inc. (the "Company") on Form 10-Q for the period ended September 30, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Steve Forte, Chief Financial Officer of the Company, hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 9, 2022

/s/ Steve Forte
Steve Forte
Executive Vice President, Chief Financial Officer
(*Principal Financial Officer)*