United States securities and exchange commission logo

May 1, 2020

Lloyd M. Segal

Chief Executive Officer

Repare Therapeutics Inc.

7210 Frederick-Banting, Suite 100

St-Laurent, Qu bec, Canada H4S 2A1

Re: Repare Therapeutics

Inc.

Draft Registration

Statement on Form S-1

Submitted April 6,

2020

CIK No. 0001808158

Dear Mr. Segal:

We have reviewed your draft registration statement and have the following comments. In

some of our comments, we may ask you to provide us with information so we may better

understand your disclosure.

Please respond to this letter by providing the requested information and either submitting

an amended draft registration statement or publicly filing your registration statement on

EDGAR. If you do not believe our comments apply to your facts and circumstances or do not

believe an amendment is appropriate, please tell us why in your response.

After reviewing the information you provide in response to these comments and your

amended draft registration statement or filed registration statement, we may have additional

comments.

Draft Registration Statement submitted April 6, 2020

Prospectus Summary, page 1

1. Based on your

disclosure under "Intellectual Property" on page 124, it does not appear

that you currently have

patent protection for your leading product candidate or for any

aspect of your SNIPRx

platform. Please include a brief disclosure regarding the current

status of your

intellectual property rights in your prospectus summary and enhance the

risk factor disclosure

in the last bullet point on page 8 to more prominently disclose the

risks to your business

if you are not able to obtain such rights.

Our Clinical Program, RP-3500, page 5

2. Please revise your

statements in your prospectus that RP-3500 has the potential to be a Lloyd M. Segal

FirstName LastNameLloyd M. Segal

Repare Therapeutics Inc.

Comapany NameRepare Therapeutics Inc.

May 1, 2020

May 1, 2020 Page 2

Page 2

FirstName LastName

"best-in-class" inhibitor. These statements could be interpreted as implying an

expectation of regulatory approval and, if approved, favorable comparability to

competitive products in terms of safety and efficacy, which would appear to be premature

given the length of time and uncertainty with respect to securing marketing approval.

Risks Associated with Our Business, page 7

1. If you believe that you will be classified as a passive foreign investment company, or

PFIC, for the taxable year ending December 31, 2020, please revise the summary to

briefly indicate your anticipated PFIC status and the risks to U.S. investors, including the

adverse U.S. federal income tax consequences disclosed on page 70 such as ineligibility

for any preferential tax rates for individuals on capital gains. Use of Proceeds, page 79

1. Please expand your disclosure regarding the proceeds to be used for your leading product

candidate to describe how far in the development process you estimate the allocated

proceeds from this offering will enable you to reach. Critical Accounting Policies and Significant Judgments and Estimates Share-Based Compensation, page 99

1. Once you have an estimated offering price or range, please explain to us how you

determined the fair value of the common stock underlying your equity issuances and the

reasons for any differences between the recent valuations of your common stock leading

up to the initial public offering and the estimated offering price. This information will

help facilitate our review of your accounting for equity issuances including stock

compensation and beneficial conversion features. Our Corporate History and Team, page 106

1. Please clarify, here or in the appropriate section of your filing, how members of the

scientific advisory board are compensated. Mechanism of Action, page 113

1. Given your disclosure that "[w]hen ATR is inhibited, cells with DNA

damage or

incomplete DNA replication can undergo cell division," please expand your disclosure to

clarify how ATR inhibition leads to cell death as shown in your illustration on page 114.

Preclinical Data: Monotherapy, page 117

1. We note your disclosure that you observed RP-3500 to have a favorable safety profile in

your preclinical studies. Since this disclosure may imply that your

product

candidate is safe, and safety determinations are solely within the authority of the U.S.

Food and Drug Administration and comparable regulatory bodies, please revise your

disclosure to remove this implication. Lloyd M. Segal

FirstName LastNameLloyd M. Segal Repare Therapeutics Inc.

Comapany NameRepare Therapeutics Inc. May 1, 2020

May 1, 2020 Page 3 Page 3 FirstName LastName

Proposed Design of Phase 1/2 Clinical Trial of RP-3500, page 121

1. Please define the term ORR which is indicated as one of your key endpoints for your

Phase 1/2 clinical trials. Intellectual Property, page 124

1. Please briefly explain the process for a PCT application and how that application can

mature into a patent application in the United States. Additionally, please discuss the

potential consequences for you if you are unable to obtain patent protection for RP-3500,

your lead product candidate.

1. Please clarify if any of the new SL pairs that you identify would be protectable through

intellectual property rights or otherwise. If competitors could

develop inhibitors based on

the SL pairs that you identify that would not be protected by any intellectual property

rights that you obtain, please include appropriate risk factor disclosure.

Research Services, License and Collaboration Agreement with Ono Pharmaceutical

Co., page

125

1. We note your reference in the third paragraph to "low double-digit" percentages. Please

revise your disclosure to narrow the royalty range to no more than a ten percentage point

range.

License Agreement with New York University, page 126

1. We note your disclosure in the fifth paragraph that you will be required to pay New York

University a "specified percentage" of any future milestone payments received under the

Ono Agreement from Ono for pre-IND development milestones, and a "specified

percentage" of any future milestone payments received from Ono for

post-IND

development, regulatory and commercial milestones. Please revise your disclosure to

narrow the specified percentages to no more than a ten percentage point range.

Potential Payments and Benefits upon Termination or Change in Control, page 154

1. Please file the change in control and severance agreements described in this section as

exhibits.

Principal Shareholders, page 168

1. Please ensure that you have identified the natural persons who have or share beneficial

ownership of the securities held by each of the entities listed in your table.

Description of Share Capital, page 170

1. We note your disclosure that you have an unlimited number of common shares and

an unlimited number of preferred shares. Please include risk factor disclosure addressing

the risks associated with your authorized capital or tell us why such disclosure would not

Lloyd M. Segal

Repare Therapeutics Inc. May 1, 2020

Page 4

be appropriate. Lock-Up Agreements, page 175

1. Given your disclosure on page 165 that the second amended and restated unanimous

shareholders' agreement will terminate upon the completion of your offering, please

clarify how the market-standoff provisions described in the second paragraph of this

section will apply for a period of 180 days following the date of your prospectus.

General

1. Please provide us with copies of all written communications, as defined in Rule 405 under

the Securities Act, that you, or anyone authorized to do so on your behalf, present to

potential investors in reliance on Section 5(d) of the Securities Act, whether or not they

retain copies of the communications.

You may contact Tracey McKoy at (202) 551-3772 or Kate Tillan at (202) 551-3604 if

you have questions regarding comments on the financial statements and related matters. Please

contact Tim Buchmiller at (202) 551-3635 or Celeste Murphy at (202) 551-3257 with any other

questions.

Sincerely,

FirstName LastNameLloyd M. Segal

Division of

Corporation Finance

Comapany NameRepare Therapeutics Inc.

Office of Life

Sciences

May 1, 2020 Page 4

1. Divakar Gupta, Esq. FirstName LastName