

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

August 23, 2022

Lee Buckler
Chief Executive Officer
Replicel Life Sciences Inc.
Suite 900 - 570 Granville Street
Vancouver, British Columbia
Canada V6C 3P1

Re: Replicel Life Sciences Inc. Form 20-F for the Fiscal Year Ended December 31, 2021

Filed June 29, 2022 File No. 000-50112

Dear Mr. Buckler:

We have limited our review of your filing to the financial statements and related disclosures 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 these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments.

## Form 20-F for the Fiscal Year Ended December 31, 2021

## Report of Independent Registered Public Accounting Firm, page 3

1. The audit report included in your filing is not signed by BDO Canada LLP, your former independent auditor as required by Rule 2-02 (a) of Regulation S-X. Please amend the filing to provide an audit report which is signed by your former independent auditor. Refer to Item 302 of Regulation S-T which provides guidance on including signatures in electronic filings. In addition, please ask your former independent auditor to address the following, or to explain to us why these changes are not required:

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- Revise the report to direct it to the shareholders as well as the board of directors in accordance with PCAOB AS 3101.07.
- Revise the basis for opinion paragraph to reference the standards (plural) of the PCAOB rather than the standard of the PCAOB, as required by AS 3101.09(c).
- Move the going concern paragraph and place it under an appropriate title immediately following the opinion paragraph as required by PCAOB AS 3101.18(a) and AS 2415.03(c), 12 and 13.
- Add an explanatory paragraph as required by PCAOB AS 3101.18(g).

## Notes to the Consolidated Financial Statements

- 2. Basis of Presentation, page 9
- 2. In your amended filing please clarify the date on which the consolidated financial statements were authorized for issue by the Board of Directors, as your disclosure currently reads "June XX, 2022."

Item 6. Directors, Senior Management and Employees

C. Board Practices

Audit Committee, page 42

3. Please explain to us your statement that the audit committee reviews the auditor's opinion on the adequacy of internal controls and quality of financial reporting given that, per the audit opinion included in your report, it appears that the auditor has not performed an audit of management's assessment of the effectiveness of internal control over financial reporting. Please clarify in your amended filing.

In closing, we remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

You may contact Li Xiao at 202-551-4391 or Ibolya Ignat at 202-551-3636 with any questions.

Sincerely,

Division of Corporation Finance Office of Life Sciences