



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

May 5, 2017

Paul Kinnon
President and Chief Executive Officer
Transgenomic, Inc.
12325 Emmet Street
Omaha, NE 68164

**Re: Transgenomic, Inc.
Amendment No. 1 to Preliminary Proxy Statement on Schedule 14A
Filed April 24, 2017
File No. 001-36439**

Dear Mr. Kinnon:

We have reviewed your April 24, 2017 response to our comment letter and your amended filing 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. Unless we note otherwise, our references to prior comments are to comments in our March 2, 2017 letter.

Proxy Statement Cover Page

1. For the issuance of the common and preferred stock to members of Precipio in the merger, please expand your response to prior comment 1 to indicate whether you intend to rely on Securities Act Rule 506(b) or (c). If you intend to rely on Rule 506(b), please tell us how you intend to comply with the specific conditions of clause (b)(2)(ii). Please also expand your response to prior comment 1 to provide us the information required by the last Instruction to Schedule 14A Item 10 with respect to the 2017 Stock Option and Incentive Plan.

Cautionary Statement, page 22

2. We note your revisions in response to prior comment 5; however, your disclosure continues to reference the Private Securities Litigation Reform Act of 1995. Please revise or advise.

Background of the Transaction, page 29

3. We note revisions in response to prior comment 7 and your disclosure regarding 62% to 80% of post-closing fully diluted shares in the sixth paragraph on page 34 and approximately 79% of the fully diluted shares in the first paragraph on page 36. Please revise your disclosure so that it is clear how these fully diluted percentages reconcile to the fully diluted percentages you have disclosed on the proxy statement cover page which indicates that the common stock and preferred stock holders of Precipio will own 52% and 8%, respectively, of the combined company on a fully-diluted basis.
4. We note your response to prior comment number 10. Please disclose the exchange ratio used by your financial advisor in rendering the fairness opinion and clarify how the board concluded that there was no need to update the opinion in light of your view that the new terms are more favorable to Transgenomic shareholders. For ease of comparison, please revise to disclose the initial exchange ratio under the merger agreement and the implied exchange ratio for the amended merger agreement in appropriate places, such as where you discuss the financial advisor's opinion and including where the board presents the opinion as a reason they are recommending the merger.

Comparable Public Company Analysis of Transgenomic, page 41

5. Disclose the substance of your response to prior comment 13 in your proxy statement.

Interests, page 56

6. We note your response to prior comment 15; however, when an acquirer is soliciting approval of a transaction such as you are seeking, Exchange Act Section 14A(b)(1) requires disclosure of arrangements between (1) the acquirer and (2)(a) the NEOs of the target and (2)(b) NEOs of the acquirer. Please note that Exchange Act Section 14A(b)(2) requires an advisory vote on each of the above. In addition, Regulation S-K Item 402(t) expands the disclosure obligation to also require disclosure of arrangements between (1) the target and (2)(a) the NEOs of the target and (2)(b) NEOs of the acquirer to the extent such arrangements are based on or otherwise relate to the merger. Since we note your disclosure of arrangements between Transgenomic and its NEO, please tell us if there are any arrangements between Transgenomic and any NEO of Precipio or Precipio and any NEO of Precipio or of Transgenomic and revise your disclosure as appropriate.

Conditions to Closing the Transaction, page 75

7. Given the waiver in Section 3 of the amendment to the merger agreement, please update the status of the condition related to Nasdaq listing described in clause (vii) of the first paragraph.

Proposal 4, page 89

8. We note the revisions you have made in response to prior comment 22, however from your disclosure it is still not clear how you reconcile the number of shares mentioned in the “Placement Warrants” and “Amended Warrant” sections of this proposal with (1) the numbers mentioned in the “Crede Warrants and “Third Security Investors Warrant” sections of this proposal, and (2) the 3,000,000 shares subject to this proposal. Please revise your disclosure for clarity.
9. As requested by prior comment 23, please tell us which exhibits to which of your filings include the warrants described in this proposal.

Summary Compensation Table, page 98

10. We note your response to prior comment 24, however, it is unclear how your table reflects any incremental fair value with respect to the modified option awards as required by Instruction 2 to Regulation S-K Item 402(n)(2)(v) and (n)(2)(vi). Please revise as appropriate.

Precipio Business Description, page 107

11. We note from your response to prior comment 25 that Precipio’s platform does not require FDA approval and that Precipio has not registered patents related to the platform itself, but that it has implemented strategies to ensure intellectual property protection for its technology, including the use of non-disclosure agreements. Please include the substance of your response in your proxy statement. Given that the Precipio diagnostic tests and related platform do not require FDA approval, please briefly describe the applicable regulatory requirements and how Precipio meets such requirements. For example, is Precipio’s laboratory certified under the Clinical Laboratories Improvements Act of 1988, or CLIA, to offer laboratory tests?
12. With regard to your revised disclosure that Precipio has partnered with Yale School of Medicine to capture the expertise, experience and technologies of that institution and that academic experts act as consultants for Precipio, please briefly disclose how that institution and those experts are compensated.
13. As requested by prior comment 24, please disclose what activities occur at the international locations mentioned on the Precipio website and clarify in your last

paragraph on page 107 why Precipio needs an “international sales team” to offer services around “the country.”

14. Please provide us support for your statement on page 107 that Precipio has been able to “achieve a superior level of diagnostic accuracy” and on page 108 that it provides a “high standard of cancer diagnostics.” If there are no studies or reports supporting those claims, please make that clear.

Precipio's Management's Discussion and Analysis of Financial Condition and Results of Operations, page 108

Results of Operations, Net Revenues, page 109

15. In your response to prior comment 28 you told us that 812 cases were processed in the year ended December 31, 2015, whereas your MD&A discussion indicates 1,039 cases were processed. Please revise the filing to reconcile this difference. Further, it appears that revenues per case decreased, which could be the result of a decreasing prevailing reimbursement rate. To the extent that you have material changes in net revenues, please revise the filing to provide a narrative discussion as to the extent to which the changes are attributable to such factors and their expected impact on future revenues. Refer to Item 303(a) (3) (iii) of Regulation S-K.

Unaudited Pro Forma Combined Financial Information of Transgenomic, Inc.

Note 2 Estimated Purchase Consideration, page 116

16. Please revise your disclosure to identify the nature and amount of each significant intangible asset being acquired similar to the information provided in your response to prior comment 33.

Paul Kinnon
Transgenomic, Inc.
May 5, 2017
Page 5

You may contact Dennis Hult, at (202) 551-3618 or Kate Tillan, Assistant Chief Accountant, 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 me at (202) 551-3412 with any other questions.

Sincerely,

/s/ Amanda Ravitz

Amanda Ravitz
Assistant Director
Office of Electronics and Machinery

cc: John Owen Gwathmey, Esq.
Troutman Sanders LLP