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

DIVISION OF
CORPORATION FINANCE

May 11, 2022

Mark Hilz
Chief Executive Officer
Heart Test Laboratories, Inc.
550 Reserve St.
Suite 360
Southlake, Texas 76092

Re: Heart Test Laboratories, Inc.
Amended Draft Registration Statement on Form S-1
Submitted April 20, 2022
CIK 0001468492

Dear Mr. Hilz:

We have reviewed your amended 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 on Form S-1 submitted April 20, 2022

Prospectus Summary, page 1

1. We have reviewed your revisions in response to prior comment 6 and reissue. Your summary should provide a brief and balanced discussion of the most material aspects of your company and your offering. Please either revise the discussion of your competitive advantages on page 8 to eliminate the details and information that is repeated in other parts of your summary or provide a similarly detailed discussions of the fact that your candidate has not been approved, including the steps remaining for approval, fact that it might not be approved and consequences if it is not; there is no certainty that physicians, hospitals, clinics, and other intended users will adopt your

technology; there is no guarantee that third party payers will provide adequate coverage and reimbursement; there are other parties engaged in developing competing products and your Glasgow license is non-exclusive; and you have received a going concern opinion, have a history of losses and will need to raise substantial additional revenues even if this offering is successful.

Even if this offering is successful, we will need to raise substantial additional funding, page 20

2. We note your revisions in response to our prior comment 10 and reissue in part. Please provide a quantified estimate of the amount of additional funding you estimate you will need in order to commercialize MyoVista or tell us why you are unable to do so.

Previous FDA De Novo Submission, page 25

3. We note your response to our prior comment 17. Given the disclosure that modifications were made to the device hardware and software, a new pivotal validation study was required at institutions independent of those involved in collecting data used in the algorithm development process and that the results of the 343 patient clinical validation dataset will not be included in your new De Novo submission, it is unclear why you believe these results should be included in this registration statement. We note your disclosure that the results are "important to an understanding of our Company and device." However, it is not clear why you believe the results are important, why it is appropriate to include data that raises independence concerns and how investors should consider this data given that it will not be included in the De Novo submission and raised independence concerns. Please remove these results or provide a thorough explanation of how they should be considered, the concerns about independence and that they will not be included in the De Novo submission.

Use of Proceeds, page 57

4. We have reviewed your revisions in response to our prior comment 11. Please revise your disclosure to state the estimated amount of proceeds from this offering that you expect to use to complete the testing and development of MyoVista.

Managment's Discussion and Analysis
Critical Accounting Policies
Inventory, page 80

5. We note your response to prior comment 14 and have the following comments:
   - As previously requested, address the risks and uncertainties surrounding market acceptance of the MyoVista product if approved and how this will affect the realization of your inventory;
   - As previously requested, disclose the specific assumptions and estimates used to determine net realizable value, including how you have determined sales prices;
   - We note that you reserve for inventory obsolescence and/or device development

changes based on an annual accrual rate of approximately 10% of net inventory and expect to continue to do so at least until FDA clearance is achieved. Please explain how the use of set accrual rate of 10% of net inventory results in an appropriate lower of cost or net realizable valuation for your inventory; and

- Discuss whether there is any shelf-life associated with your devices and how your expected approval date is considered when evaluating the realizability of your inventory.

Clinical Studies , page 93

6. We note your response to comment 19 and reissue the comment. Please note that we disagree with your narrow interpretation of "expert" and do not agree that the term is limited to an accountant, engineer or appraiser and cannot be applied to a medical expert. We also note your disclosure that you participated in or conducted the trials that served as the basis for the articles and are now using summaries of these articles to support your approach. Given that these are summaries from medical journals, authored by medical experts, based on studies that you participated in, we believe that consents are appropriate.

   Additionally, provide further discussion explaining your participation in each of the trials and provide a brief explanation of "area under the curve" and the "p-value" at their first use and how the p-value is used to measure statistical significance.

7. We have reviewed your revisions in response to our prior comment 20, and we reissue the comment. Please revise the study outcome descriptions to disclose objective observations from the trials without concluding that the product candidate was effective or had an impact on the observed results. While we note that the conclusions cited are the conclusions of the identified experts, conclusions regarding efficacy are within the sole authority of the FDA. Please remove these and similar statements/inferences throughout your prospectus:

   - Any statements implying that your products cause a certain effect, such as "Results . . . demonstrated that the Myovista can detect", and "Integration of ewECG . . would reduce the need for echocardiography by 45% . . ."
   - Any conclusory statements comparing the MyoVista's efficacy in head-to-head trials, such as "Conventional methods . . . had inferior screening capabilities."

Glasglow Licensing Agreement, page 105

8. We have reviewed your response to our prior comment 24. Please revise this section to disclose that the flat licensing fee and the royalty rates will increase by 3% per year.

You may contact Tara Harkins at 202-551-3639 or Jeanne Baker at 202-551-3691 if you have questions regarding comments on the financial statements and related matters. Please contact Jordan Nimitz at 202-551-5831 or Suzanne Hayes at 202-551-3675 with any other

questions.

Sincerely,

Division of Corporation Finance
Office of Life Sciences