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

DIVISION OF
CORPORATION FINANCE

February 2, 2022

Howard J. Weisman
Chief Executive Officer
PaxMedica, Inc.
303 South Broadway, Suite 125
Tarrytown, NY 10591

Re: PaxMedica, Inc.
Amendment No. 7 to Registration Statement on Form S-1
Filed January 4, 2022
File No. 333-239676

Dear Mr. Weisman:

We have reviewed your amended 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 amending your registration statement and providing the requested information. 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 any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

Amendment No. 7 to Registration Statement on Form S-1

Prospectus Summary, page 1

1. We note your revised disclosure on page 1 that your "exclusively licensed clinical data from certain academic or international government institutions" will "potentially accelerate PAX-101's development plans in the United States through [the Tropical Disease Priority Voucher Program] and gain approval in the United States for the treatment of East African HAT . . . as early as 2023." Please revise your disclosure here and throughout the registration statement to remove statements that imply your product candidate is likely to be approved or that you will be successful in securing marketing approval in an accelerated manner as such statements are speculative. Address in your revisions the statement below the pipeline table on page 2 that your NDA will be filed "for approval" in early 2023.

2. Please revise to disclose in the summary that your patent portfolio is limited to patent applications.

Development Pipeline, page 2

3. Please revise the pipeline table here and on page 70 to remove FXTAS as an indication for PAX-101. Alternatively, please provide us with your analysis as to why this indication is material to your business and appropriate for inclusion in the pipeline table.

Risk Factors
It is difficult and costly to protect our intellectual property rights, and we cannot ensure the protection of these rights., page 32

4. We note your disclosure on page 32 that you are "not aware of any existing contested proceedings or third-party claims against [y]our pending PCT international patent application." We also note your revised disclosure on page 77 where you reference multiple pending PCT international patent applications. Please revise your disclosure to clarify which of your pending PCT international patent applications, if any, are the subject of contested proceedings or third-party claims.

We have identified material weaknesses in our internal control over financial reporting..., page 42

5. We note your revised disclosure on pages 42-43 stating that you have identified "material weaknesses in [y]our internal control over financial reporting relating to the evaluation of complex financial instruments" and that "management has concluded that [y]our control around the interpretation and accounting for certain complex instruments issued by the Company was not effectively designed or maintained." Please describe the material weakness in more detail. For example, please describe the processes or systems that were not implemented and what accounting policies or reconciliations lacked sufficient oversight, if any. Disclose in the risk factor what measures, if any, you are undertaking to address the material weakness, the timetable for remediation, and whether there are any associated material costs.

Use of Proceeds, page 48

6. We refer to comment 7 in our letter dated June 11, 2020. Please specifically disclose how far you expect the proceeds from the offering to allow you to proceed in the development of PAX-101 for the indications specified. Additionally, explain what you mean by your allocating funds to research and development activities as distinct from clinical and regulatory development activities.

Capitalization, page 50

7. Please revise to incorporate indebtness, including the SAFE liability and Warrant liability, as part of your capitalization as of September 30, 2021.

Emerging Growth Company and Smaller Reporting Status, page 63

8. You disclose here that you have elected to avail yourself of the extended transition period. This is inconsistent with your risk factor on page 41 and election made by check mark on the cover page. Please clarify and/or revise accordingly.

Pax-102 (intranasal suramin), page 74

9. We note your revised disclosure on page 74 stating that PAX-102 has the potential to "better target the suramin molecule to the CNS, which may potentially allow for [you] to deliver similar efficacy to that achieved using PAX-101 and reduce the dose needed and improve the tolerability profile of the drug[.]" Because a determination of efficacy is solely within the authority of FDA and comparable regulators, please revise this disclosure to remove the implication that any of your product candidates are effective.

Manufacturing Activities, page 75

10. We note your disclosure that you are working with third-party manufacturers to develop your own commercial supply of suramin. Please expand your disclosure to briefly discuss the steps you have taken to date, steps that remain, and associated costs.

Note 2. Significant accounting policies
Loss Per Share, page F-29

11. Please tell us how you calculated 414,808 shares of common stock for the SAFE investment as of September 30, 2021.

Note 3. Fair Value Measurements, page F-30

12. You note that the fair value of the SAFE has been estimated using the Backsolve method which utilizes the Option Pricing Method. Please expand your disclosures for the SAFE agreement to include a summary of the significant unobservable inputs used in measuring the fair value. If the same inputs are used as the warrants, expand your disclosure accordingly.

Note 11. Subsequent events, page F-33

13. Please revise your disclosure here and on page F-20 regarding the conversion of the notes payable to clarify that $3.4 million is not the fair value of the shares of common stock issued but rather the carrying value of the notes with the number of shares issued calculated based on the conversion price stated in the agreement.

14. Please disclose the material terms of the 1,342,667 restricted stock units granted on January 1, 2022, including the grant-date fair value.

You may contact Tracey Houser at 202-551-3736 or Sasha Parikh at 202-551-3627 if you have questions regarding comments on the financial statements and related matters. Please contact Joshua Gorsky at 202-551-7836 or Christine Westbrook at 202-551-5019 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Life Sciences

cc: David S. Rosenthal, Esq.