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

DIVISION OF
CORPORATION FINANCE

October 23, 2020

Anthony Mack
Chief Executive Officer
Virpax Pharmaceuticals, Inc.
1554 Paoli Pike #279
West Chester, PA 19380

Re: Virpax Pharmaceuticals, Inc.
Registration Statement on Form S-1
Filed October 9, 2020
File No. 333-249417

Dear Mr. Mack:

We have reviewed your 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.

Registration Statement on Form S-1 filed October 9, 2020

Cover Page

1. We note that you have added a page of graphics after the cover page. We note your illustration of Epoladerm depicts products that are not your own and that each of your product candidates shown are in the early stages of development. Further, the information from your pipeline table and narrative disclosure is repeated in the Prospectus Summary and Business sections but is shown without the context of those sections. Please remove this page as its prominence is not appropriate. For guidance, refer to Securities Act Forms Compliance and Disclosure Interpretation 101.02.

Our Company, page 1

2. We note your disclosure that the Topical Spray Film Delivery Technology could potentially evolve into the preferred therapeutic treatment for topicals and transdermal deliveries. Given your limited preclinical data available to date, it is inappropriate for you to state or imply your product candidates may be a preferred therapeutic treatment. Please revise your disclosure accordingly.

Our Portfolio, page 1

3. We note your response to prior comment 3. In your pipeline table, please remove indications that the Phase 2 trial for Epoladerm and Phase 1 trial for Probudur are not applicable, as it appears premature and speculative. Additionally, please revise the references to six product candidates on pages 1, 5, and 61 to make it clear that you are developing product candidates for multiple indications. As an example, it should be clear when discussing your product candidate portfolio that OSF 200 will use the same formulation as Epoladerm but would applied twice daily.

Risks Related to Our Financial Position and Need for Additional Capital, page 11

4. We note your revised disclosure in response to prior comment 2. We also note that on page 11 you continue to state that your operations to date have been limited to, among other things, clinical studies of Epoladerm, Probudur and NES100. You also refer to the Company on page 11 as an early stage clinical pharmaceutical company and, on page 51, you refer to the Company as a clinical-stage pharmaceutical company. Given that you have not yet initiated clinical trials for any of your product candidates, please revise these statements.

Diclofenac Epolamine Metered-Dose Spray Film (Epoladerm), page 62

5. We note your response to prior comment 17. It appears from your revised disclosure that the pre-clinical studies of Epoladerm and OSF200 have not yet been completed. Accordingly, please remove statements that the studies will demonstrate drying times of between 60 and 90 seconds, as this appears premature and speculative. Alternatively, please provide a description of the study and the actual results observed.

6. Please expand your discussion of the results shown in the graphical illustrations on page 63 to more clearly explain how the study was conducted and how Epoladerm demonstrated comparable skin absorption to commercially-available Flector Patch at the same concentration.

Long-acting Bupivacaine Liposomal-gel 3.0% (LBL100 or ProbudurTM), page 64

7. We note your response to prior comments 5 and 17. Please revise your disclosure to limit your discussion of the animal studies involving Probudur to how the studies were conducted and the actual results observed. Please revise statements that present your conclusion, such as, Probudur may provide pain control for up to 96 hours, Probudor may be safely administered to humans in a planned Phase IIA study, and NES100 may have comparable preclinical activity to morphine in all animal pain models tested without the drug seeking, respiratory depression, and tolerance associated with opioids.

8. Please expand your discussion of the results shown in the graphical illustration on page 64 to more clearly explain how Probudur was shown to be superior to free Bupivacaine and Exparel at 96 hours, how Probudur has demonstrated higher peak activity compared to Exparel, and how Probudur peak achieved around 6 hours with persistent analgesia noted at 96 hours - 24 hours longer than competitor claims. Include in your discussion how pain control was measured.

Molecular Envelope Technology Enkephalin Intranasal Spray (NES100), page 65

9. We note your response to prior comment 17. Please disclose the results observed from the early animal studies that support your statements that the MET nanoparticles are well tolerated via the nasal route at the dose administered. Please also provide each of the doses administered. Additionally, please disclose the results observed from the early animal studies that support your statements that NES100 may have comparable preclinical activity to morphine.

LipoCureRx, Ltd. , page 72

10. We note your responses to prior comments 20, 21, 22 and 24. For each of your license agreements, please revise to disclose the royalty term with reference to the scheduled or expected expiry of the last to expire patent covered by the agreement.

NCATS-NIH Cooperative Research and Development Agreement, page 74

11. We note your disclosure that on August 25, 2020, the Company entered into a cooperative research and development agreement with the National Center for Advancing Translational Sciences. Please file such agreement as an exhibit pursuant to Item 601(b)(10) of Regulation S-K or tell us why you believe such filing is not required. To the extent applicable, please expand your summary to disclose any required milestone or royalty payments, including the royalty rates or range and the royalty term, pursuant to the commercialization license. Additionally, if there are any material march-in rights, address the portion of your business that would be affected by exercise of such rights, and describe the conditions which might prompt the U.S. government to exercise any such rights. Include risk factor disclosure, as appropriate.

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.

Refer to Rules 460 and 461 regarding requests for acceleration. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Tracey Houser at 202-551-3736 or Terence O'Brien at 202-551-3355 if you have questions regarding comments on the financial statements and related matters. Please contact Deanna Virginio at 202-551-4530 or Christine Westbrook at 202-551-5019 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Life Sciences

cc: Steven Skolnick, Esq.