

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

May 17, 2019

Sam Backenroth Chief Financial Officer Ohr Pharmaceutical, Inc. 800 Third Avenue, 11th Floor New York, NY 10022

Re: Ohr Pharmaceutical, Inc.
Amendment No. 2 to Registration Statement on Form S-4
Filed May 7, 2019
File No. 333-230168

Dear Mr. Backenroth:

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. Unless we note otherwise, our references to prior comments are to comments in our May 1, 2019 letter.

Amendment No. 2 to Form S-4

Summary, page 15

1. We acknowledge your revised disclosures in response to prior comment 1. Please further revise your disclosures to remove the statement that the PATrol platform enables rapid drug development, as drug development encompasses the regulatory approval process. We will not object to a statement that the platform allows for a more efficient discovery of drug product candidates, if accurate.

Opinion of Ohr's Financial Advisor
Discounted Cash Flow Analysis, page 158

2. As previously noted in prior comment 9, please further revise your disclosure to

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clarify whether all INDs for neurology and rare diseases was considered in calculating the 100% or a subset of all product candidates, as your disclosure appears to imply that 100% of product candidates under development for neurological and rare diseases between 2005 and 2016 successfully advanced through preclinical trials to Phase 1.

NeuBase's Business

License Agreement with Carnegie Mellon University, page 265

3. We acknowledge your response to prior comment 15. However, as previously noted, please revise your disclosure to include all payments made to date under the agreement. For example, it appears that certain payments have been made pursuant to Section 9.2 of the agreement. In addition, please clarify that your exclusive right is subject to Carnegie Mellon's right to grant nonexclusive licenses to third parties as a means to resolve disputes or settle claims, as described in Section 2.6 of the agreement.

You may contact Ibolya Ignat at 202-551-3636 or Angela Connell at 202-551-3426 if you have questions regarding comments on the financial statements and related matters. Please contact Dorrie Yale at 202-551-8776 or Suzanne Hayes at 202-551-3675 with any other questions.

Sincerely,

Division of Corporation Finance Office of Healthcare & Insurance

cc: Joseph Walsh, Esq. - Troutman Sanders LLP