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

DIVISION OF
CORPORATION FINANCE

August 6, 2018

Ken Song, M.D.
Chief Executive Officer
Metacrine, Inc.
3985 Sorrento Valley Blvd., Suite C
San Diego, CA 92121

Re: Metacrine, Inc.
Draft Registration Statement on Form S-1
Submitted July 12, 2018
CIK No. 0001634379

Dear Mr. Song:

We have reviewed your 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

Prospectus Summary
Overview, page 1

1. Prominently disclose at the outset that only your lead product candidate, MET409, is in the early clinical development stage and that your other research and development programs are currently in the discovery stage.

2. We note your disclosure that you "have leveraged [y]our chemistry and biology platform to internally discover a proprietary portfolio of non-bile acid FXR agonists." Describe in greater detail what you mean by your chemistry and biology platform.

3. We note your statement that you believe MET409 "has the potential to be a best-in-class NASH drug with a key differentiated safety and efficacy profile from other FXR agonists in development." Given that safety and efficacy determinations are solely within the FDA's authority, please remove or further qualify this statement.

Our Approach, page 2

4. We note your assertions that you are focused on innovative drug discovery and development and that your capabilities enable you to "quickly and purposefully design drugs." Revise to balance the discussion of your approach to clarify that you currently have one product candidate in the early clinical stage.

Risk Factors
MET409 is an FXR agonist, a class of drugs from which there are no approved therapies..., page 11

5. Consider including risk factor disclosure here to reflect how the numerous other companies that are focused on developing treatments for NASH could impact the regulatory approval process for your FXR agonists.

Risks Related to our Common Stock and this Offering, page 47

6. Provide risk factor disclosure discussing the provision in your amended and restated certificate of incorporation that the company has renounced any interest or expectancy in certain corporate opportunities.

Use of Proceeds, page 55

7. In your use of proceeds disclosure, you should disclose an estimate of the portions of the proceeds that will be allocated to fund research and development activities for MET409 as well as the expansion of your pipeline in FXR and other drug targets. Specifically, please disclose your estimate of how the allocated proceeds from the offering will be used to advance the clinical development pipeline for each target.

Management's Discussion and Analysis of FInancial Condition and Results of Operations
Financial Operations Overview
Research and Development Expenses, page 65

8. Provide more details about the breakdown of your research and development expenses between MET409 and your other product candidates.

Contractual Obligations and Commitments, page 69

9. Provide greater detail regarding the certain clinical and regulatory milestone payments that you are required to make to The Salk Institute under the FXR License Agreement. Similarly, describe the nature of the royalty percentage that is based upon net sales of your products.

Critical Accounting Policies and Significant Judgments and Estimates
Stock-Based Compensation Expense , page 71

10. Once you have an estimated offering price or range, please explain to us how you determined the fair value of the common stock underlying your equity issuances and the reasons for any differences between the recent valuations of your common stock leading up to the IPO and the estimated offering price. This information will help facilitate our review of your accounting for equity issuances including stock compensation and beneficial conversion features.

Company Overview, page 76

11. We note your disclosure that you have no significant product candidates in your pipeline other than MET409. Accordingly, you should remove the references to the inflammation and fibrosis "new targets" that are included in the table depicting your development pipeline. Research and discovery activities that precede the identification of a product candidate are too remote to be highlighted in the pipeline table.

Business
Our Approach to Drug Discovery and Development
Our Solution MET409 a Non-Bile Acid FXR Agonist for the Treatment of NASH, page 79

12. With respect to your discussion of statistical significance for each of the studies and preclinical testings you reference, revise to include more detail about how you determined the data is statistically significant (e.g., the use of a p-value).

Competition, page 87

13. Consider refining your discussion here to focus on the pipeline of various drugs being developed with the goal of treating NASH by numerous companies. Disclose how the company plans to differentiate itself from other companies pursuing treatment options.

Intellectual Property, page 88

14. We note your disclosure that you own seven patent families relating to additional FXR agonists. Provide more detail about these patents, including the type of protection (e.g., composition of matter, use, or process).

15. Clarify here that you do not own any issued patents directed to your FXR therapeutic research program.

Certain Relationships and Related Party Transactions, page 127

16. We note your license agreements with The Salk Institute for Biological Studies that require you to pay up to $6.5 million in milestone payments and a royalty percentage on future net sales. You state that your future capital requirements will, at least in part, depend on the timing of any milestone and royalty payments made to The Salk. We further note that each of your co-founders (who both serve on your board of directors) are employed by and/or serve on the board of trustees of The Salk. Provide us with your analysis and considerations as to why no related party disclosure is required for the agreements with The Salk.

General

17. Your material collaboration and license agreements should be filed as exhibits. Refer to Item 601(b)(10) of Regulation S-K.

18. Please supplementally provide us with copies of all written communications, as defined in Rule 405 under the Securities Act, that you, or anyone authorized to do so on your behalf, present to potential investors in reliance on Section 5(d) of the Securities Act, whether or not they retain copies of the communications.

You may contact Joseph Cascarano, Staff Accountant, at (202) 551-3376 or Robert S. Littlepage, Accounting Branch Chief, at (202) 551-3361 if you have questions regarding comments on the financial statements and related matters. Please contact Joshua Shainess, Attorney-Adviser, at (202) 551-7951 or Celeste M. Murphy, Legal Branch Chief, at (202) 551-3257 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Telecommunications