



DIVISION OF
CORPORATION FINANCE

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

January 4, 2013

Via E-mail

Guy Macdonald
President and Chief Executive Officer
Tetraphase Pharmaceuticals, Inc.
480 Arsenal Street, Suite 110
Watertown, MA 02472

**Re: Tetraphase Pharmaceuticals, Inc.
Amendment No. 1 to
Confidential Draft Registration Statement on Form S-1
Submitted December 21, 2012
CIK No. 0001373707**

Dear Mr. Macdonald:

We have reviewed your amended confidential 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 confidential 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 confidential draft registration statement or filed registration statement, we may have additional comments.

Government Contracts, page 102

1. We note your response to our prior comment 14. Please expand your disclosure in the registration statement to reflect the discussion included in your response describing CUBRC and your decision to collaborate with CUBRC.

Executive Compensation, page 122

2. Please update your disclosure to include compensation paid during your fiscal year ended December 31, 2012.

Notes to Consolidated Financial Statements
Note 8. Stockholders' Equity
Conversion, page F-21

3. We acknowledge your response to comment 26. Please provide us with an analysis supporting your assertion that the embedded conversion option is not a derivative liability. Please include how the adjustment feature that changes the conversion price if you issue shares for consideration less than the original issue price of the preferred stock was considered in reaching your conclusion.

Note 12. Subsequent Events (Unaudited), page F-29

4. Please tell us how you intend to classify the warrants in your consolidated balance sheets, and your basis for such classification. Cite the provisions in your warrants that support your treatment.

General

If you intend to respond to these comments with an amended draft registration statement, please submit it and any associated correspondence in accordance with the guidance we provide in the Division's October 11, 2012 announcement on the SEC website at <http://www.sec.gov/divisions/corpfin/cfannouncements/drsfilingprocedures101512.htm>.

You may contact Tabatha Akins, Staff Accountant, at (202) 551-3658 or Joel Parker, Accounting Branch Chief, at (202) 551-3651 if you have questions regarding comments on the financial statements and related matters. Please contact Karen Ubell, Staff Attorney, at (202) 551-3873, Dan Greenspan, Legal Branch Chief, at (202) 551-3623 or me at (202) 551-3715 with any other questions.

Sincerely,

/s/ Daniel Greenspan for

Jeffrey P. Riedler
Assistant Director

cc: Via E-mail
Stuart M. Falber, Esq.
Wilmer Cutler Pickering Hale and Dorr LLP