

**PATENT ASSIGNMENT**

Electronic Version v1.1  
 Stylesheet Version v1.1

| SUBMISSION TYPE:   | NEW ASSIGNMENT                          |               |                |                |            |             |            |                 |            |              |            |             |            |
|--|---|---------------|----------------|----------------|------------|-------------|------------|-----------------|------------|--------------|------------|-------------|------------|
| NATURE OF CONVEYANCE:  | ASSIGNMENT                              |               |                |                |            |             |            |                 |            |              |            |             |            |
| <b>CONVEYING PARTY DATA</b>  |   |               |                |                |            |             |            |                 |            |              |            |             |            |
| <table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Roger B. Clark</td> <td>02/28/2011</td> </tr> <tr> <td>Minsheng He</td> <td>02/28/2011</td> </tr> <tr> <td>Louis Plamondon</td> <td>02/28/2011</td> </tr> <tr> <td>Xiao-Yi Xiao</td> <td>02/28/2011</td> </tr> <tr> <td>Magnus Ronn</td> <td>02/28/2011</td> </tr> </tbody> </table> |   | Name          | Execution Date | Roger B. Clark | 02/28/2011 | Minsheng He | 02/28/2011 | Louis Plamondon | 02/28/2011 | Xiao-Yi Xiao | 02/28/2011 | Magnus Ronn | 02/28/2011 |
| Name   | Execution Date                          |               |                |                |            |             |            |                 |            |              |            |             |            |
| Roger B. Clark   | 02/28/2011                              |               |                |                |            |             |            |                 |            |              |            |             |            |
| Minsheng He  | 02/28/2011                              |               |                |                |            |             |            |                 |            |              |            |             |            |
| Louis Plamondon  | 02/28/2011                              |               |                |                |            |             |            |                 |            |              |            |             |            |
| Xiao-Yi Xiao   | 02/28/2011                              |               |                |                |            |             |            |                 |            |              |            |             |            |
| Magnus Ronn  | 02/28/2011                              |               |                |                |            |             |            |                 |            |              |            |             |            |
| <b>RECEIVING PARTY DATA</b>  |   |               |                |                |            |             |            |                 |            |              |            |             |            |
| Name:  | Tetraphase Pharmaceuticals, Inc.        |               |                |                |            |             |            |                 |            |              |            |             |            |
| Street Address:  | 480 Arsenal Street                      |               |                |                |            |             |            |                 |            |              |            |             |            |
| Internal Address:  | Suite 110                               |               |                |                |            |             |            |                 |            |              |            |             |            |
| City:  | Watertown                               |               |                |                |            |             |            |                 |            |              |            |             |            |
| State/Country:   | MASSACHUSETTS                           |               |                |                |            |             |            |                 |            |              |            |             |            |
| Postal Code:   | 02472                                   |               |                |                |            |             |            |                 |            |              |            |             |            |
| <b>PROPERTY NUMBERS Total: 1</b>   |   |               |                |                |            |             |            |                 |            |              |            |             |            |
| <table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>PCT Number:</td> <td>US1001348</td> </tr> </tbody> </table>   |   | Property Type | Number         | PCT Number:    | US1001348  |             |            |                 |            |              |            |             |            |
| Property Type  | Number                                  |               |                |                |            |             |            |                 |            |              |            |             |            |
| PCT Number:  | US1001348                               |               |                |                |            |             |            |                 |            |              |            |             |            |
| <b>CORRESPONDENCE DATA</b>   |   |               |                |                |            |             |            |                 |            |              |            |             |            |
| Fax Number:  | (978)341-0136                           |               |                |                |            |             |            |                 |            |              |            |             |            |
| <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>   |   |               |                |                |            |             |            |                 |            |              |            |             |            |
| Phone:   | 978-341-0036                            |               |                |                |            |             |            |                 |            |              |            |             |            |
| Email:   | kellie.varno@hbsr.com                   |               |                |                |            |             |            |                 |            |              |            |             |            |
| Correspondent Name:  | Susan M. Abelleira, Esq.                |               |                |                |            |             |            |                 |            |              |            |             |            |
| Address Line 1:  | 530 Virginia Road, P.O. Box 9133        |               |                |                |            |             |            |                 |            |              |            |             |            |
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| Address Line 4:  | Concord, MASSACHUSETTS 01742-9133       |               |                |                |            |             |            |                 |            |              |            |             |            |
| ATTORNEY DOCKET NUMBER:  | 4142.1019-001                           |               |                |                |            |             |            |                 |            |              |            |             |            |

CH \$40.00 US1001348

**501453943**

**PATENT  
 REEL: 025886 FRAME: 0212**

NAME OF SUBMITTER:

Kellie J. Varno

**Total Attachments: 4**

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JointASSIGNMENT

WHEREAS, we, **Roger B. Clark, Minsheng He, Louis Plamondon, Xiao-Yi Xiao and Magnus Rönn**, have invented a certain improvement in **8-AZA Tetracycline Compounds** described in an application for Patent,

- the specification of which is about to be filed in the United States Patent Office (*use for utility (37 CFR § 1.53(b)) and design filings only*);
- is about to be filed in the United States Patent Office as a Provisional Application;
- the specification of which is United States Application No. [    ], filed [    ];
- the specification of which is a Patent Cooperation Treaty Application, International Application No. PCT/US2010/001348, filed May 7, 2010, which designates the United States of America;
- which was patented under United States Patent No. [    ].

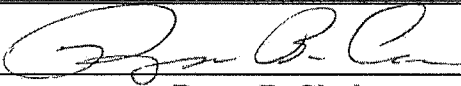
WHEREAS, **Tetraphase Pharmaceuticals, Inc.** (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the **State of Delaware**, and having a usual place of business at **480 Arsenal Street, Suite 110, Watertown, Massachusetts 02472** desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue on said invention; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein; we hereby expressly authorize the filing of an International Patent Application under the Patent Cooperation Treaty which corresponds to and claims the priority of the above-identified application;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of any future applications including substitution, reissue, divisional or continuation applications, and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request each Patent Office and the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said invention to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature:   
**Roger B. Clark**

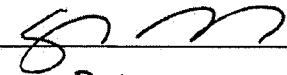
State/Commonwealth  
of Massachusetts  
County of Middlesex

On this 28<sup>th</sup> day of February 2011, before me, the undersigned notary public, personally appeared **Roger B. Clark,**

- personally known to me, or
- proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.



Notary Public   
Shana Dobson (print name)  
My Commission expires 04/01/2016

Inventor's Signature: 

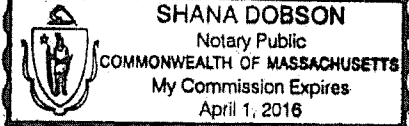
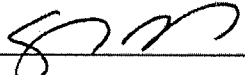
**Minsheng He**

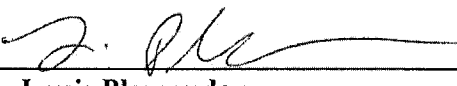
State/Commonwealth  
of Massachusetts  
County of Middlesex

On this 28<sup>th</sup> day of February 2011, before me, the undersigned notary public, personally appeared **Minsheng He**,

- personally known to me, or
- proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)  Notary Public   
Shana Dobson (print name)  
 My Commission expires 04 / 01 / 2016

Inventor's Signature: 

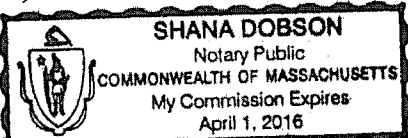
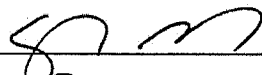
**Louis Plamondon**

State/Commonwealth  
of Massachusetts  
County of Middlesex

On this 28<sup>th</sup> day of February 2011, before me, the undersigned notary public, personally appeared **Louis Plamondon**,

- personally known to me, or
- proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)  Notary Public   
Shana Dobson (print name)  
 My Commission expires 04 / 01 / 2016

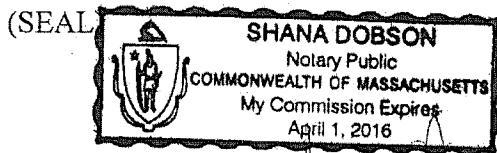
Inventor's Signature: [Signature]  
**Xiao-Yi Xiao**

State/Commonwealth  
of Massachusetts  
County of Middlesex

On this 28<sup>th</sup> day of February 2011, before me, the undersigned notary public, personally appeared **Xiao-Yi Xiao**,

- personally known to me, or
- proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.



Notary Public [Signature]  
Shana Dobson (print name)  
My Commission expires 04/01/2016

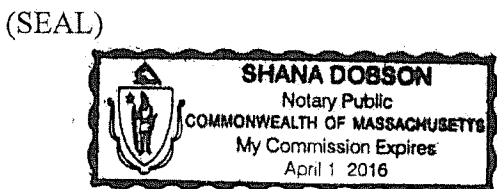
Inventor's Signature: [Signature]  
**Magnus Rönn**

State/Commonwealth  
of Massachusetts  
County of Middlesex

On this 28<sup>th</sup> day of February 2011, before me, the undersigned notary public, personally appeared **Magnus Rönn**,

- personally known to me, or
- proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.



Notary Public [Signature]  
Shana Dobson (print name)  
My Commission expires 04/01/2016