

## PATENT ASSIGNMENT

Electronic Version v1.1  
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT												
NATURE OF CONVEYANCE:	ASSIGNMENT												
CONVEYING PARTY DATA													
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Xiaoying Chen</td> <td>04/05/2013</td> </tr> <tr> <td>Yan Li</td> <td>04/04/2013</td> </tr> <tr> <td>Wei-Min Liu</td> <td>04/08/2013</td> </tr> <tr> <td>Xiaoju (Max) Ma</td> <td>04/05/2013</td> </tr> <tr> <td>Sim-Jasmine Truong</td> <td>04/05/2013</td> </tr> </tbody> </table>		Name	Execution Date	Xiaoying Chen	04/05/2013	Yan Li	04/04/2013	Wei-Min Liu	04/08/2013	Xiaoju (Max) Ma	04/05/2013	Sim-Jasmine Truong	04/05/2013
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<table border="1"> <tr> <td>Name:</td> <td>Roche Molecular Systems, Inc.</td> </tr> <tr> <td>Street Address:</td> <td>4300 Hacienda Drive</td> </tr> <tr> <td>City:</td> <td>Pleasanton</td> </tr> <tr> <td>State/Country:</td> <td>CALIFORNIA</td> </tr> <tr> <td>Postal Code:</td> <td>94588</td> </tr> </table>		Name:	Roche Molecular Systems, Inc.	Street Address:	4300 Hacienda Drive	City:	Pleasanton	State/Country:	CALIFORNIA	Postal Code:	94588		
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CORRESPONDENCE DATA													
<p>Fax Number: 9252251128  <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 925-730-8559        Email: misty.prasad@roche.com        Correspondent Name: Misty Prasad        Address Line 1: 4300 Hacienda Drive        Address Line 2: Patent Department        Address Line 4: Pleasanton, CALIFORNIA 94588</p>													
ATTORNEY DOCKET NUMBER:	31345-US												
NAME OF SUBMITTER:	Charles M. Doyle												

Signature:	/Charles M Doyle/39175/
Date:	04/09/2013
<b>Total Attachments: 7</b> source=31345_US_Executed_Assignment_Inventors_to_RMS#page1.tif source=31345_US_Executed_Assignment_Inventors_to_RMS#page2.tif source=31345_US_Executed_Assignment_Inventors_to_RMS#page3.tif source=31345_US_Executed_Assignment_Inventors_to_RMS#page4.tif source=31345_US_Executed_Assignment_Inventors_to_RMS#page5.tif source=31345_US_Executed_Assignment_Inventors_to_RMS#page6.tif source=31345_US_Executed_Assignment_Inventors_to_RMS#page7.tif	

**ASSIGNMENT**

Assignment Effective As Of November 29, 2012

WHEREAS, WE, **XIAOYING CHEN**, of Alameda, California, **YAN LI**, of Palo Alto, California, **WEI-MIN LIU**, of Dublin, California, **XIAOJU (MAX) MA**, of San Carlos, California, and **SIM-JASMINE TRUONG**, of Union City, California, hereinafter referred to as **ASSIGNORS**, have invented certain new and useful improvements, which are described and claimed in an application, provisional or otherwise, for United States Letters Patent entitled

**"ACCURATE AND FAST MAPPING OF READS TO GENOME"**

and identified by Serial No: **13/689,314**      Filing Date: **November 29, 2012**

WHEREAS, **ROCHE MOLECULAR SYSTEMS, INC. of 4300 Hacienda Drive, Pleasanton, California, 94588**, a company organized under the Laws of the State of Delaware, hereinafter referred to as **ASSIGNEE**, is desirous of acquiring the entire right, title and interest in and to the said invention and application and in any Letters of Patent which may be granted on the same in the United States or in any foreign country.

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for valuable consideration, receipt of which is hereby acknowledged, **ASSIGNORS** have sold, assigned and transferred, and by these presents do sell, assign and transfer unto said **ASSIGNEE**, and **ASSIGNEE'S** successors and assigns, all right, title and interest in and to the said invention, said application(s), and any Letters of Patent which may hereafter be granted on the same in the United States or in any foreign country or countries, including any application claiming priority under 35 U.S.C. §119(e), divisions, renewals, continuations in whole or in part, substitutions, conversions, reissues, reexaminations, prolongations or extensions thereof, the said interest to be held and enjoyed by said **ASSIGNEE** as fully and exclusively as it would have been held and enjoyed by said **ASSIGNORS** had this assignment and transfer not been made, to the full end and term of any Letters Patent.

UPON said consideration, **ASSIGNORS** do hereby covenant and agree with the said **ASSIGNEE** that **ASSIGNORS** will not execute any writing or do any act whatsoever conflicting with these presents. **ASSIGNOR** further agrees that they will, without charge to said **ASSIGNEE**, but at **ASSIGNEE'S** expense, cooperate with **ASSIGNEE** in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as **ASSIGNEE** lawfully may request, to obtain or maintain Letters Patent for said invention and improvement in any and all countries, in enforcing any rights or choses in action accruing as a result of such applications or patents, including but not limited to, giving testimony in any proceedings or transactions involving such applications or patents and executing preliminary statements and other affidavits, it being understood that the foregoing covenant and agreement shall bind and inure to the benefit of the assigns and legal representatives of all parties hereto.

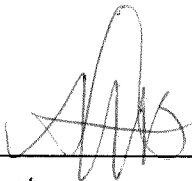
IN TESTIMONY WHEREOF, this assignment has been executed by the **ASSIGNORS**:

  
\_\_\_\_\_  
XIAOYING CHEN

04/05/2013  
Date

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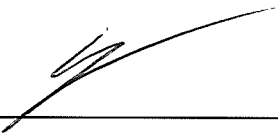
WITNESSES

  
\_\_\_\_\_  
Signature

  
\_\_\_\_\_  
Signature

Misgana Bogale  
\_\_\_\_\_  
Printed Name

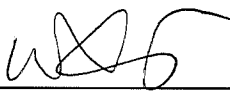
Timothy Williams  
\_\_\_\_\_  
Printed Name

  
\_\_\_\_\_  
YAN LI

4/4/2013  
\_\_\_\_\_  
Date

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WITNESSES

  
\_\_\_\_\_  
Signature

XIAONING Wu  
\_\_\_\_\_  
Printed Name

Chitra F. Manohar  
\_\_\_\_\_  
Signature

CHITRA F. MANOHAR  
\_\_\_\_\_  
Printed Name



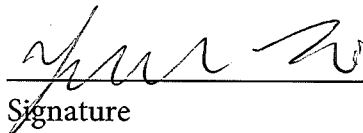
WEI-MIN LIU

4/8/2013

Date

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WITNESSES



Signature

Yu Chuan Tai

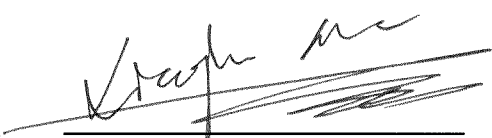
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Signature

AARTHI BALASUBRAMANYAM

Printed Name

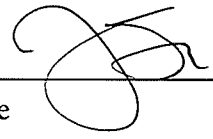
  
\_\_\_\_\_  
XIAOJU (MAX) MA

April 5<sup>th</sup>, 2013  
\_\_\_\_\_  
Date

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WITNESSES

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Signature

MINET NEGASH  
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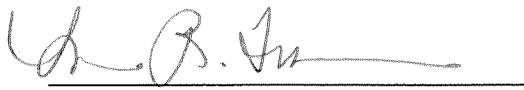
Jeffray Fu  
\_\_\_\_\_  
Printed Name



  
SIM-JASMINE TRUONG

05 APR 2013  
Date

WITNESSES

  
Signature

Linda R. Tsuchiyama  
Printed Name

  
Signature

Mintt Cao  
Printed Name