

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT3826091

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
HENRY ERLICH	11/11/2014
BRYAN HOGLUND	09/29/2014
CHERIE HOLCOMB	09/24/2014
PRISCILLA MOONSAMY	10/06/2014
NICK NEWTON	09/25/2014
MELINDA RASTROU	09/24/2014
NANCY SCHOENBRUNNER	03/24/2016
ALISON TSAN	11/17/2014
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	Roche Molecular Systems, Inc.
<b>Street Address:</b>	4300 Hacienda Drive
<b>City:</b>	Pleasanton
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	94588
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	14272752
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(925)225-1128
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Phone:</b>	925-730-8559
<b>Email:</b>	misty.prasad@roche.com
<b>Correspondent Name:</b>	MISTY PRASAD
<b>Address Line 1:</b>	4300 HACIENDA DRIVE
<b>Address Line 2:</b>	PATENT DEPARTMENT
<b>Address Line 4:</b>	PLEASANTON, CALIFORNIA 94588
<b>ATTORNEY DOCKET NUMBER:</b>	31598-US2
<b>NAME OF SUBMITTER:</b>	CHARLES M. DOYLE
<b>SIGNATURE:</b>	/Charles M Doyle/39175/

PATENT

<b>DATE SIGNED:</b>	04/12/2016
<b>Total Attachments: 10</b> source=31598_US2_Executed_Assignment_Inventors_to_RMS#page1.tif source=31598_US2_Executed_Assignment_Inventors_to_RMS#page2.tif source=31598_US2_Executed_Assignment_Inventors_to_RMS#page3.tif source=31598_US2_Executed_Assignment_Inventors_to_RMS#page4.tif source=31598_US2_Executed_Assignment_Inventors_to_RMS#page5.tif source=31598_US2_Executed_Assignment_Inventors_to_RMS#page6.tif source=31598_US2_Executed_Assignment_Inventors_to_RMS#page7.tif source=31598_US2_Executed_Assignment_Inventors_to_RMS#page8.tif source=31598_US2_Executed_Assignment_Inventors_to_RMS#page9.tif source=31598_US2_Executed_Assignment_Inventors_to_RMS#page10.tif	

**ASSIGNMENT**

Assignment Effective As Of May 8, 2013

WHEREAS, WE, **HENRY ERLICH** of Oakland, California, **BRYAN HOGLUND**, of Pleasanton, California, **CHERIE HOLCOMB** of Oakland, California, **PRISCILLA MOONSAMY**, of Pleasanton, California, **NICK NEWTON**, of Oakland, California, **MELINDA RASTROU**, of Oakland, California, **NANCY SCHOENBRUNNER**, of Moraga, California, and **ALISON TSAN**, of Danville, 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

**NON-INVASIVE EARLY DETECTION OF SOLID ORGAN TRANSPLANT REJECTION BY  
QUANTITATIVE ANALYSIS OF MIXTURES BY DEEP SEQUENCING OF HLA GENE  
AMPLICONS USING NEXT GENERATION SYSTEMS**

and identified by Serial No: 14/272,752

Filing Date: May 8, 2014

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**:

Henry Erlich  
HENRY ERLICH

Nov 11, 2014  
Date

---

WITNESSES

[Signature]  
Signature

Melinda Rastrow  
Signature

Bryan Hoglund  
Printed Name

MELINDA RASTROW  
Printed Name

---

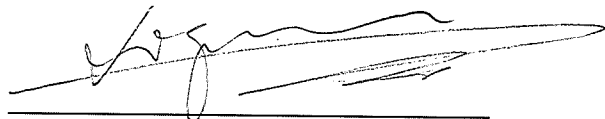


**BRYAN HOGLUND**

092914  
Date


---

WITNESSES



Signature

XIAOJU MAX MA  
Printed Name



Signature

ELLEN ORDINARIO  
Printed Name

---

Cherie Holcomb

CHERIE HOLCOMB

9/24/14

Date

---

WITNESSES

[Signature]

Signature

[Signature]

Signature

Jeff Gpton

Printed Name

William Yee

Printed Name

---

---

  
PRISCILLA MOONSAMY

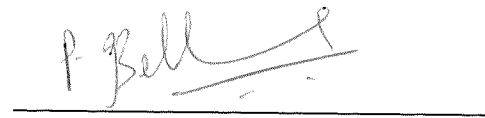
10/6/14  
Date

---

WITNESSES

  
Signature

Sha Coleman  
Printed Name

  
Signature

PRIYA BELLARE  
Printed Name



---

N. Newton  
NICK NEWTON

9/25/14  
Date

---

WITNESSES

Megan Crask  
Signature

[Signature]  
Signature

Megan Crask  
Printed Name

Jeff Upton  
Printed Name

---

Melinda Rastrou  
MELINDA RASTROU

24 Sept 2014  
Date

---

WITNESSES

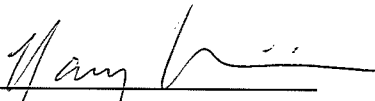
T Post  
Signature

Sima Bahadori  
Signature

Tett Post  
Printed Name

Sima Bahadori  
Printed Name

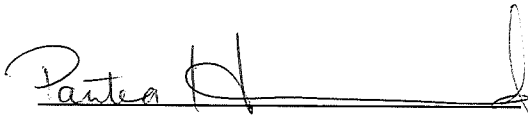
---

  
NANCY SCHOENBRUNNER

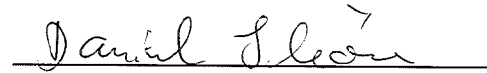
3.24.16  
Date

---

WITNESSES

  
Signature

PANTEA HOUSHMAND  
Printed Name

  
Signature

DANIEL SCHOENER  
Printed Name

---



ALISON TSAN

11/17/14

Date

---

WITNESSES

Paul Q. Ouyf

Signature

C. Li

Signature

RAVALL R. OUYF

Printed Name

Christina Ngo

Printed Name