

## PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT2958177

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
MARK G. CURRIE	02/05/2014
DANIEL P. ZIMMER	01/17/2014
ANGELIKA FRETZEN	01/29/2014
MARCO KESSLER	01/23/2014
BRIAN M. CALI	01/22/2014
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	IRONWOOD PHARMACEUTICALS, INC.
<b>Street Address:</b>	301 BINNEY STREET
<b>City:</b>	CAMBRIDGE
<b>State/Country:</b>	MASSACHUSETTS
<b>Postal Code:</b>	02142
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14124282
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<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>Email:</b>	patents@honigman.com
<b>Correspondent Name:</b>	KELLY T. MURPHY
<b>Address Line 1:</b>	350 EAST MICHIGAN AVE.
<b>Address Line 2:</b>	SUITE 300
<b>Address Line 4:</b>	KALAMAZOO, MICHIGAN 49007-3800
<b>ATTORNEY DOCKET NUMBER:</b>	223355/106PCT1US1/349423
<b>NAME OF SUBMITTER:</b>	KELLY T. MURPHY
<b>SIGNATURE:</b>	/Kelly T. Murphy/
<b>DATE SIGNED:</b>	07/29/2014
<b>Total Attachments: 8</b>	
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**ASSIGNMENT**

I/We,

(1) Mark G. Currie (US Citizen), of 18 Hall Avenue, Sterling, MA, 01564, US;

(2) Daniel P. Zimmer (US Citizen), of 453 Broadway Unit #2, Somerville, MA, 02145,  
US;

(3) Angelika Fretzen (DE Citizen), of 7 Avon Street, Somerville, MA, 02143, US;

(4) Marco Kessler (US Citizen), of 35 Collins Street Unit #13, Danvers, MA, 01923, US;

(5) Brian M. Cali (US Citizen), of 100 Hillside Avenue, Arlington, MA, 02476, US;

for good and valuable consideration, receipt of which is hereby acknowledged, have assigned, sold and transferred to, and do hereby assign, sell and transfer to, Ironwood Pharmaceuticals, Inc., a corporation organized and existing under the laws of the State of Delaware and having an office and a place of business at 301 Binney Street, Cambridge, Massachusetts, 02142, USA, its successors and assigns, all hereinafter referred to as the ASSIGNEE:

(1) the entire right, title and interest in the United States and in all countries throughout the world in and to any and all of my/our inventions and discoveries disclosed in:

(a) the application for United States Letters Patent entitled "TREATMENTS FOR GASTROINTESTINAL DISORDERS", filed in the United States Patent and Trademark Office on December 6, 2013, under Application Number 14/124,282, and including any renewals, revivals, reissues, reexaminations, extensions, continuations and divisions thereof, and any substitute applications there from;

(b) the International Patent Application entitled "TREATMENTS FOR GASTROINTESTINAL DISORDERS", filed under the Patent Cooperation Treaty in the United States Receiving Office on June 8, 2012, under Application Number PCT/2012/041476, and including any renewals, revivals, reissues, reexaminations, extensions, continuations and divisions thereof, and any substitute applications there from;

(2) the full and complete right to file patent applications in the name of the ASSIGNEE, its designee, or in my/our names at the election of the ASSIGNEE or its designee, on the aforesaid inventions, discoveries and applications in the United States and in any other country of the world;

(3) the entire right, title and interest in and to any Letters Patent which may issue thereon in the United States or in any other country of the world, and in and to any renewals, revivals, reissues, reexaminations, extensions, continuations and divisions thereof; and

(4) the entire right, title and interest in all Convention and Treaty Rights of all kinds thereon, including without limitation all rights of priority in any country of the world, in and to the above inventions, discoveries and applications including, but not limited to, the following priority application(s):

61/494,685	US	June 8, 2011
Application No.	Country	Filing Date

and all rights of priority in any country of the world deriving from the above-identified International Patent Application.

I/We hereby authorize and request the competent authorities to grant and to issue any and all such Letters Patent in the United States and throughout the world to the ASSIGNEE of the entire right, title and interest therein, as fully and entirely as the same would have been held and enjoyed by me/us had this assignment, sale and transfer not been made.

I/We agree, at any time, upon the request of the ASSIGNEE to execute and to deliver to the ASSIGNEE any additional applications for patents for said inventions and discoveries, or any part or parts thereof, and any applications for patents of confirmation, registration and importation based on any Letters Patent issuing on said inventions, discoveries or applications, and divisions, continuations, renewals, revivals, reissues, reexaminations and extensions thereof.

I/We further agree at any time to execute and to deliver upon request of the ASSIGNEE such additional documents, if any, as are necessary or desirable to secure patent protection on said inventions, discoveries and applications throughout all countries of the world, and otherwise to do the necessary to give full effect to and to perfect the rights of the ASSIGNEE under this Assignment, including the execution, delivery and procurement of any and all further documents evidencing this assignment, transfer and sale as may be necessary or desirable.

Mark Currie  
**MARK G. CURRIE**

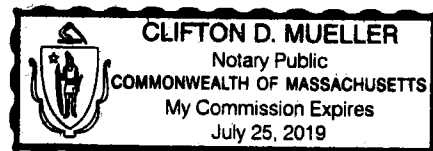
Date: 5 February 2014

Commonwealth of Massachusetts

County of Middlesex

On this 5<sup>th</sup> day of February, 2014, before me, the undersigned notary public, personally appeared **MARK G. CURRIE**, proved to me through satisfactory evidence of identification which were personal knowledge, to be the person whose name is signed on this document and who swore or affirmed to me the contents of the document are truthful and accurate to the best of his/her knowledge and belief.

Clifton D. Mueller  
Notary Public  
My Commission Expires: 25 July 2019.



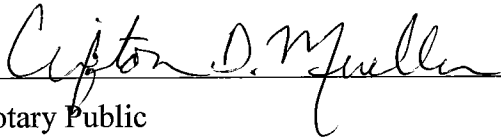
  
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**DANIEL P. ZIMMER**

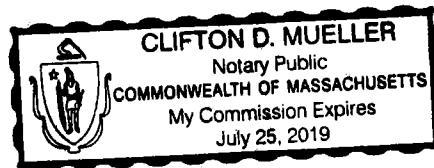
Date: 1/17/2014

Commonwealth of Massachusetts

County of Middlesex

On this 17<sup>th</sup> day of January, 20 14, before me, the undersigned notary public, personally appeared **DANIEL P. ZIMMER**, proved to me through satisfactory evidence of identification which were personal knowledge, to be the person whose name is signed on this document and who swore or affirmed to me the contents of the document are truthful and accurate to the best of his/her knowledge and belief.

  
\_\_\_\_\_  
Notary Public  
My Commission Expires: 25 July 2019.



Angelika Fretzen  
**ANGELIKA FRETZEN**

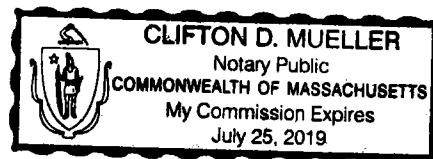
Date: 29<sup>th</sup> Jan 2014

Commonwealth of Massachusetts

County of Middlesex

On this 29<sup>th</sup> day of January, 2014, before me, the undersigned notary public, personally appeared **ANGELIKA FRETZEN**, proved to me through satisfactory evidence of identification which were personal knowledge, to be the person whose name is signed on this document and who swore or affirmed to me the contents of the document are truthful and accurate to the best of his/her knowledge and belief.

Clifton D. Mueller  
Notary Public  
My Commission Expires: 25 July 2019



Marco Kessler  
**MARCO KESSLER**

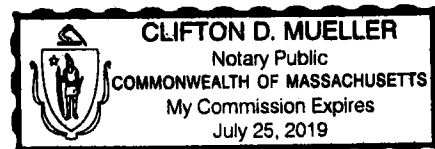
Date: 1/23/2014

Commonwealth of Massachusetts

County of Middlesex

On this 23<sup>rd</sup> day of January, 2014, before me, the undersigned notary public, personally appeared **MARCO KESSLER**, proved to me through satisfactory evidence of identification which were personal knowledge, to be the person whose name is signed on this document and who swore or affirmed to me the contents of the document are truthful and accurate to the best of his/her knowledge and belief.

Clifton D. Mueller  
Notary Public  
My Commission Expires: 25 July 2019.






  
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**BRIAN M. CALI**

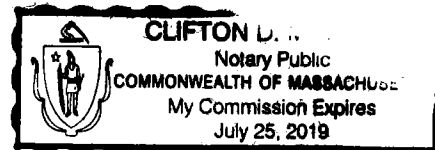
Date: 1/22/14

Commonwealth of Massachusetts

County of Middlesex

On this 22<sup>nd</sup> day of January, 2014, before me, the undersigned notary public, personally appeared **BRIAN M. CALI**, proved to me through satisfactory evidence of identification which were personal knowledge, to be the person whose name is signed on this document and who swore or affirmed to me the contents of the document are truthful and accurate to the best of his/her knowledge and belief.

  
\_\_\_\_\_  
Notary Public  
My Commission Expires: 25 July 2019



ACKNOWLEDGMENT OF ASSIGNEE

By: Karen E. Brown  
Karen E. Brown  
Chief Intellectual Property Officer  
Ironwood Pharmaceuticals, Inc.

Date: 23 July 2014

Commonwealth of Massachusetts  
Middlesex County

On this 23<sup>rd</sup> day of July, 2014, before me, the undersigned notary public, personally appeared Karen E. Brown, who proved to me through satisfactory evidence of identification which were personal knowledge, to be the person whose name is signed on this document and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of his/her knowledge and belief.

Clifton D. Mueller  
Notary Public  
My Commission Expires: 25 July 2019

