

## PATENT ASSIGNMENT COVER SHEET

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 Stylesheet Version v1.2

EPAS ID: PAT5617923

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
ERIC E SWAYZE	04/25/2012
SUSAN M FREIER	04/06/2012
ROBERT A MACLEOD	04/05/2012
YOUNGSOO KIM	04/06/2012
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	IONIS PHARMACEUTIALS, INC.
<b>Street Address:</b>	2855 GAZELLE COURT
<b>City:</b>	CARLSBAD
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	92010
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15149642
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(301)398-9306
<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>	301-398-0000
<b>Email:</b>	patents@astrazeneca.com
<b>Correspondent Name:</b>	ASTRAZENECA
<b>Address Line 1:</b>	ONE MEDIMMUNE WAY
<b>Address Line 4:</b>	GAITHERSBURG, MARYLAND 20878
<b>ATTORNEY DOCKET NUMBER:</b>	200152-US-CNT[2]
<b>NAME OF SUBMITTER:</b>	ANNMARIE JEZIORO
<b>SIGNATURE:</b>	/Annmarie Jezioro/
<b>DATE SIGNED:</b>	07/15/2019
<b>Total Attachments: 6</b>	
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## A S S I G N M E N T

WHEREAS, I/we, **Eric E. Swayze**, of **Encinitas, CA**, **Susan M. Freier**, of **San Diego, CA**, **Robert A. MacLeod**, of **San Diego, CA**, and **Youngsoo Kim**, of **San Diego, CA**, has/have invented a certain invention entitled **MODULATION OF SIGNAL TRANSDUCER AND ACTIVATOR OF TRANSCRIPTION 3 (STAT3) EXPRESSION**, for which I/we have made applications for patents in the United States and foreign jurisdictions through the Patent Cooperation Treaty, said applications having been assigned Application No. **PCT/US2012/031642** filed **March 30, 2012**, and Application No. **13/436,558** filed **March 30, 2012**; and

WHEREAS, **ISIS Pharmaceuticals, Inc.** hereinafter referred to as the assignee, of **1896 Rutherford Road, Carlsbad CA**, a corporation of Delaware, desires to acquire the entire right, title and interest in and to the said inventions or improvements and in and to the said application, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in any and all countries:

NOW, THEREFORE, for and in consideration of the sum of One Dollar (\$1.00) to each of us in hand paid by said assignee, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, the said assignors, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over to said assignee, the entire right, title and interest in and to said inventions or improvements and said application and any and all continuations, divisions and renewals of and substitutes for said application, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in the United States and any and all other countries, and any reissue or reissues or extension or extensions of said Letters Patent, and assign to and authorize said assignee, to file in our names applications for Letters Patent in all countries, the same to be held and enjoyed by said assignee, its successors, assigns, nominees or legal representatives, to the full end of the term or terms for which said Letters Patent respectively may be granted, reissued or extended, as fully and entirely as the same would have been held and enjoyed by us had this assignment, sale and transfer not

been made.

AND we hereby covenant that we have full right to convey the entire interest herein assigned, and that we have not executed and will not execute any agreement in conflict herewith, and we further covenant and agree that we will each time request is made and without undue delay, execute and deliver all such papers as may be necessary or desirable to perfect the title to said inventions or improvements, said application and said Letters Patent to said assignee, its successors, assigns, nominees, or legal representatives, and each of us agrees to communicate to said assignee or to its nominee all known facts respecting said inventions or improvements, said application and said Letters Patent, to testify in any legal proceedings, to sign all lawful papers to execute all disclaimers and divisional, continuing, reissue and foreign applications, to make all rightful oaths, and generally to do everything possible to aid said assignee, its successors, assigns, nominees and legal representatives to obtain and enforce for its or their own benefit proper patent protection for said inventions or improvements in any and all countries.

AND we hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to said assignee, as assignee of the entire right, title and interest, any and all Letters Patent for said inventions or improvements, including any and all Letters Patent of the United States which may be issued and granted on or as a result of the application aforesaid, in accordance with the terms of this assignment.

IN WITNESS WHEREOF, we have hereunto set our hands and seals.

Dated: 4/25 2012

Eric E. Swayze  
Eric E. Swayze

State of California )  
County of San Diego ) ss.


On April 25, 2012 before me, Laura L. Eames, Notary Public, personally appeared **Eric E. Swayze**, who is proved to me on the basis of satisfactory evidence to be the person(~~s~~) whose name(~~s~~) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(~~ies~~), and that by his/~~her/their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.



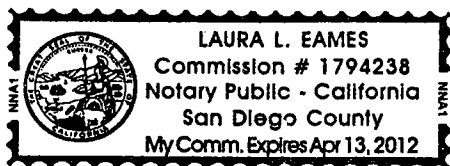
WITNESS my hand and official seal.

[Signature]  
Signature of Notary

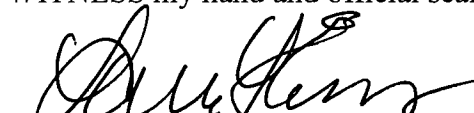
Dated: 4/6 20 12  
Susan M. FreierState of California )  
County of San Diego ) ss.

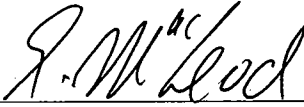
On April 6, 2012 before me, Laura L. Eames, Notary Public, personally appeared **Susan M. Freier**, who is proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that ~~he/she/they~~ executed the same in ~~his/her/their~~ authorized capacity(ies), and that by ~~his/her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.



WITNESS my hand and official seal.


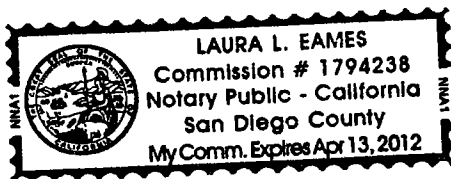
  
Signature of Notary

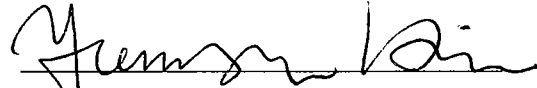
Dated: 4/05 2012  
Robert A. MacLeodState of California )  
County of San Diego ) SS.

On April 5, 2012 before me, Laura L. Eames, Notary Public, personally appeared **Robert A. MacLeod**, who is proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she~~/they executed the same in his/~~her~~/their authorized capacity(ies), and that by his/~~her~~/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

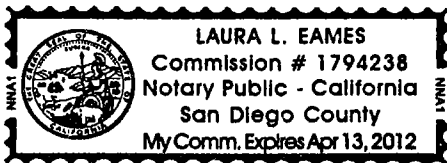
WITNESS my hand and official seal.

  
Signature of Notary


Dated: 4/6 2012  
Youngsoo KimState of California )  
County of San Diego ) SS.

On April 6, 2012 before me, Laura L. Eames, Notary Public, personally appeared **Youngsoo Kim**, who is proved to me on the basis of satisfactory evidence to be the person(~~s~~) whose name(~~s~~) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she~~/they executed the same in his/~~her~~/their authorized capacity(~~ies~~), and that by his/~~her~~/their signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~)/acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.



WITNESS my hand and official seal.

  
Signature of Notary