504115967 11/30/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4162637

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SUSAN M. FREIER	04/20/2005

RECEIVING PARTY DATA

Name:	ISIS PHARMACEUTICALS, INC.	
Street Address:	2292 FARADAY AVENUE	
City:	CARLSBAD	
State/Country:	CALIFORNIA	
Postal Code:	92008	

PROPERTY NUMBERS Total: 2

Property Type	Number
Application Number:	13629214
Application Number:	14175889

CORRESPONDENCE DATA

Fax Number: (617)646-8646

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.

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ATTORNEY DOCKET NUMBER:	K0645.70004US04	
NAME OF SUBMITTER:	PATRICK R.H. WALLER	
SIGNATURE:	/Patrick R.H. Waller/	
DATE SIGNED:	11/30/2016	

Total Attachments: 2

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PATENT 504115967 REEL: 040465 FRAME: 0781

ASSIGNMENT

WHEREAS, I, Susan M. Freier, residing at 2946 Renault Street, San Diego, California, hereinafter referred to as the assignor, am the joint inventor of certain inventions or improvements for which we have made application for Letters Patent to the United States, identified as Case No. 30566/39634[DOC-0216US] entitled ANTISENSE MODULATION OF APOLIPOPROTEIN B EXPRESSION filed November 13, 2003 and assigned U.S. Serial No. 10/712,795.

WHEREAS, Isis Pharmaceuticals Inc. hereinafter referred to as the assignee, of 2292 Faraday Ave, Carlsbad, California 92008 is desirous of acquiring 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 a 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

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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: 20- April 2005

Susan M. Freier

STATE OF California

COUNTY OF <u>San Diago</u>

ss.

This 20th day of April 2005, before me personally came the above-named Rosanne Crooke, who executed the foregoing Assignment in my presence, and who acknowledged to me that he/she executed the same of his/her own free will for the purposes set forth therein.

LABRA L. EAMES
Commission # 1483258
Notory Public - Coltomic
Son Diego County
My Comm. Expires Apr 13, 2006

Notary Public

[SEAL]