

Form PTO-1595 (Rev. 09/04)
OMB No. 0651-0027 (exp. 6/30/2005)

U.S. DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

RECORDATION FORM COVER SHEET PATENTS ONLY

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)/Execution Date(s):

Eric G. Marcusson

Execution Date(s) October 19, 2005

Additional name(s) of conveying party(ies) attached? Yes No

3. Nature of conveyance:

- Assignment Merger
 Security Agreement Change of Name
 Other

2. Name and address of receiving party(ies)

Name: Isis Pharmaceuticals, Inc.

Internal Address: _____

Street Address: 1896 Rutherford Rd.

City: Carlsbad

State: California

Country: United States Zip: 92008

Additional name(s) & address(es) attached? Yes No

4. Application or patent number(s):

A. Patent Application No.(s)

11/213,593

This document is being filed together with a new application.

B. Patent No.(s)

Additional numbers attached? Yes No

5. Name and address to whom correspondence concerning document should be mailed:

Name: Isis Pharmaceuticals, Inc.

Internal Address: _____

Street Address: 1896 Rutherford Rd.

City: Carlsbad

State: California Zip: 92008

Phone Number: 760 931-9200

Fax Number: 760 603-3820

Email Address: _____

6. Total number of applications and patents involved:

1

7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00

- Authorized to be charged by credit card
 Authorized to be charged to deposit account
 Enclosed
 None required (government interest not affecting title)

8. Payment Information

a. Credit Card Last 4 Numbers _____
 Expiration Date _____

b. Deposit Account Number 50-0252

Authorized User Name Isis Pharmaceuticals

9. Signature:

Jodi Connolly
 Signature

Jodi L. Connolly, Ph.D., Reg. No. 54,044

Name of Person Signing

11/16/2005
 Date

Total number of pages including cover sheet, attachments, and documents:

8

Documents to be recorded (including cover sheet) should be faxed to (703) 306-5995, or mailed to:
 Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, V.A. 22313-1450

700225600

PATENT
 REEL: 017027 FRAME: 0055

CH \$40.00 500252 11213593

Serial No.: 1/213,593
First Inventor: Eric G. Marcusson

Recordation Form Cover Sheet
PATENTS ONLY
(Cont.)

ITEM 1 (cont.): Add'l name(s) of conveying part(ies)

| <u>Name</u> | <u>Execution Date(s)</u> |
|------------------|--------------------------|
| Scott Henry | November 15, 2005 |
| Youngsoo Kim | November 15, 2005 |
| Kenneth W. Dobie | October 28, 2005 |

PATENT

REEL: 017027 FRAME: 0056

DOCKET NO.: BIOL0046US

ASSIGNMENT

WHEREAS, I/we, **Eric G. Marcusson, of San Francisco, California, Henry Scott, of Cardiff, California, Youngsoo Kim, of San Diego, California, Kenneth W. Dobie, of Del Mar, California,** has/have invented a certain invention entitled **MODULATION OF HIF1-BETA EXPRESSION**, for which I/we have made an application for Letters Patent of the United States, said application having been filed **8/25/2005**, and assigned Application No. **11/213,593**; and

WHEREAS, **ISIS Pharmaceuticals, Inc.** hereinafter referred to as the assignee, of 1896 Rutherford Road, Carlsbad CA, a corporation of Delaware, 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

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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.

DOCKET NO.: BIOL0046US

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

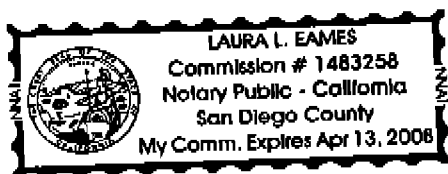
Dated: October 19 2005

Eric G. Marcusson

State of California)

County of San Diego) ss.

On this 19th day of October, 2005, before me, the undersigned, a Notary Public for the state, personally appeared **Eric G. Marcusson**, personally known to me/proved to me on the basis of satisfactory evidence to be the person who subscribed the foregoing Assignment and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the Assignment the person, or the entity on behalf of which the person acted, executed the Assignment.

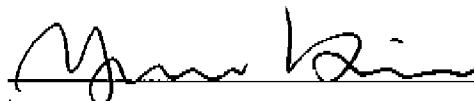


WITNESS my hand and official seal.

Signature of Notary

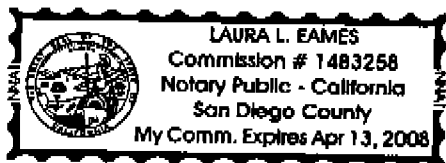
DOCKET NO.: BIOL0046US

Dated: 11/15 2005



Youngsoo Kim

State of California)
County of San Diego) SS.

On this 15th day of November, 2005, before me, the undersigned, a Notary Public for the state, personally appeared **Youngsoo Kim**, personally known to me/proved to me on the basis of satisfactory evidence to be the person who subscribed the foregoing Assignment and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the Assignment the person, or the entity on behalf of which the person acted, executed the Assignment.



WITNESS my hand and official seal.


Signature of Notary

DOCKET NO.: BIOL0046US

Dated: 10/28 20 05

Kenneth W. Dobie
Kenneth W. Dobie

State of _____)
) ss.
County of _____)

On this _____ day of _____, 20___, before me, the undersigned, a Notary Public for the state, personally appeared **Kenneth W. Dobie**, personally known to me/proved to me on the basis of satisfactory evidence to be the person who subscribed the foregoing Assignment and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the Assignment the person, or the entity on behalf of which the person acted, executed the Assignment.

WITNESS my hand and official seal.

Signature of Notary