

RECORDATION FORM COVER SHEET
PATENTS ONLY

To The Honorable Commissioner of Patents and Trademarks. Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):	
Charles Allerson	December 1, 2004
Balkrishen Bhat	December 1, 2004
Anne B. Eldrup	November 23, 2004
Muthiah Manoharan	November 29, 2004
Richard H. Griffey	December 1, 2004
Brenda F. Baker	December 1, 2004
Eric E. Swayze	December 13, 2004

2. Name and address of receiving party(ies):
ISIS Pharmaceuticals, Inc.
 Street Address: 2292 Faraday Avenue
 City: Carlsbad
 State: California ZIP: 92008
 Additional name(s) & address attached? YES NO

3. Nature of Conveyance (check only one):

<input checked="" type="checkbox"/> New Assignment	<input type="checkbox"/> Merger
<input type="checkbox"/> License Agreement	<input type="checkbox"/> Security Agreement
<input type="checkbox"/> Change of Name	<input type="checkbox"/> Other:

Assignors Execution Date
 Additional name(s) of conveying party(ies) attached? YES NO

4. Identification of Application number(s), patent number(s) OR date of execution of application to which assignment refers:

Application Nos.: 10/860,265	Patent Nos.:	Date application was signed by the first named executing inventor (Fill-in this date only if assignment is filed together with a new application)
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5. Name and address of party to whom correspondence concerning documents should be mailed:

Name: John W. Caldwell
 WOODCOCK WASHBURN LLP
 One Liberty Place - 46th Floor
 Philadelphia, Pennsylvania 19103-7301
 215-568-3100

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41): \$40.00
 Enclosed
 Authorized to be charged to Deposit Account Number 23-3050
CLIENT MATTER NUMBER: ISIS-5482

8. Please charge any deficiency or credit any overpayment to Deposit Account Number 23-3050

DO NOT USE THIS SPACE

9. Statement and signature.
To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

John A. Harrelson, Jr. 42637 John A. Harrelson, Jr. 12/29/04
 Name of Person Signing/Reg. No. Signature Date

Total number of pages including cover sheet, assignment document and additional pages attached thereto: 11

Mail documents to be recorded with required cover sheet information to:

Mail Stop Assignment Recordation Services
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

CH \$40.00 233050 10860265

PATENT

DOCKET NO.: **ISIS-5482**

A S S I G N M E N T

WHEREAS, we, Charles Allerson of Carlsbad, California; Balkrishen Bhat of Carlsbad, California; Anne B. Eldrup of Danbury, Connecticut; Muthiah Manoharan of Weston, Massachusetts; Richard H. Griffey of Vista, California; Brenda F. Baker of Carlsbad, California; and, Eric E. Swayze of Carlsbad, California, have invented a certain invention entitled Compositions Comprising Alternating 2'-Modified Nucleosides for Use in Gene Modulation, for which we have made an application for Letters Patent of the United States, said application having been filed June 3, 2004 and assigned Application No. 10/860,265; and

WHEREAS, ISIS Pharmaceuticals, Inc. hereinafter referred to as the assignee, of 2292 Faraday Avenue, Carlsbad, California 92008, 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

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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.

AND this Assignment may be executed in multiple counterparts, each of which shall be deemed to be an original of this Assignment. Additionally, we hereby authorize our attorneys to collect the signature pages of each executed counterpart and to attach those signature pages to a single copy of this instrument, which single copy and attached signature pages together shall constitute an original of this Assignment.

ASSIGNMENT - Page 2 of 9

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REEL: 015506 FRAME: 0003

DOCKET NO.: ISIS-5482

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

Dated: Dec 1, 2004

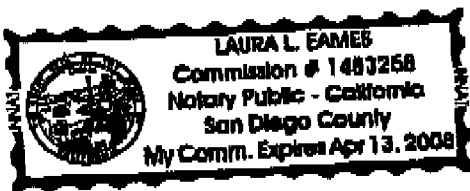


Charles Allerson

State of California)
)
County of San Diego) ss.

On this 1st day of December, 2004, before me, the undersigned, a Notary Public for the state, personally appeared Charles Allerson, 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.: ISIS-5482

PATENT

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

Dated: 12/01, 2004

Balkrish Bhat
Balkrishen Bhat

State of California)
) ss.
County of San Diego)

On this 1st day of December, 2004, before me, the undersigned, a Notary Public for the state, personally appeared **Balkrishen Bhat**, 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.

Laura Eames
Signature of Notary

PATENT

DOCKET NO.: ISIS-5482

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

Dated: November 23, 2004,

Anne B. Eldrup
Anne B. Eldrup

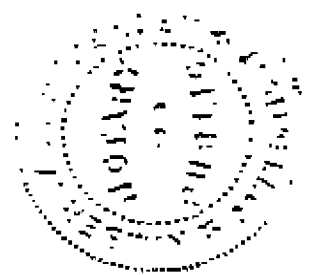
State of Connecticut)
County of Fairfield) ss.

On this 23 day of NOVEMBER, 2004, before me, the undersigned, a Notary Public for the state, personally appeared Anne B. Eldrup, 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.

James J. Pedersen
Signature of Notary

My Commission Exp. Sep. 30, 2005



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

Dated: 12/01/04, 2004

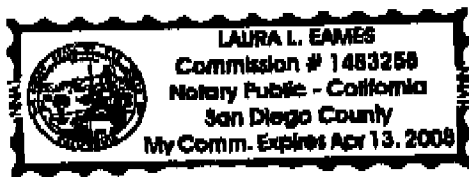
Richard H. Griffey
Richard H. Griffey

State of California)
) ss.
County of San Diego)

On this 1st day of December, 2004, before me, the undersigned, a Notary Public for the state, personally appeared **Richard H. Griffey**, 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.

Laura L. Eames
Signature of Notary



PATENT

DOCKET NO.: ISIS-5482

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

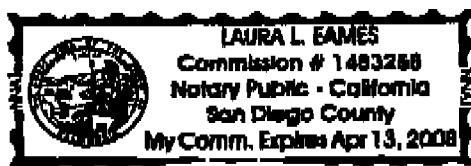
Dated: Dec 1, 2004


Brenda F. Baker

State of California)
)
County of San Diego) ss.

On this 1st day of December, 2004, before me, the undersigned, a Notary Public for the state, personally appeared **Brenda F. Baker**, 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.: ISIS-5482

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

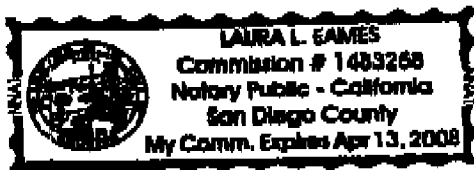
Dated: 12/13, 2004


Eric E. Swayze

State of California)
County of San Diego) ss.

On this 13th day of December, 2004, before me, the undersigned, a Notary Public for the state, personally appeared Eric E. Swayze, 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