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OMB No. 0651-0027

(exp. 5/31/2002)

**PATENTS ONLY**
**ISIS0080-100 (CORE0016US)**

Tab settings ⇌ ⇌ ⇌

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

**1. Name of conveying party(ies):**

- 1) Christine Esau
- 2) Bridget Lollo
- 3) C. Frank Bennett
- 4) Susan M. Freier
- 5) Richard H. Griffey
- 6) Brenda F. Baker
- 7) Timothy A. Vickers
- 8) Eric G. Marcusson
- 9) Erich Koller
- 10) Eric E. Swayze
- 11) Ravi Jain
- 12) Balkrishen Bhat
- 13) Eigen Peralta

Additional name of conveying party(ies) attached?

☐ Yes ☒ No

**2. Name and address of receiving party(ies)**

Name: ISIS Pharmaceuticals, Inc.

Street Address: 2292 Faraday Avenue

City: Carlsbad State: California Zip: 92008

Additional Name(s) & address(es) attached? ☐ Yes ☒ No

**3. Nature of conveyance:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> 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              |

Execution Date(s): 1) August 27, 2004; 2) August 27, 2004; 3) September 3, 2004; 4) August 24, 2004; 5) August 24, 2004; 6) August 24, 2004; 7) September 1, 2004; 8) August 27, 2004; 9) August 27, 2004; 10) September 7, 2004; 11) August 25, 2004; 12) August 27, 2004; and 13) August 25, 2004.

**4. Application number(s) or patent number(s):**

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_.

A. Patent Application No.(s)

10/909,125

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

**5. Name and address of party to whom correspondence concerning this document should be mailed:**

Name: Paul K. Legaard, Ph.D.  
Cozen O'Connor, P.C.  
1900 Market Street  
Philadelphia, PA 19103  
215-665-6914

**6. Total number of applications and patents involved: 01**
**7. Total fee (37 CFR 3.41) . . . . . \$ 40.00**

- ☐ Enclosed  
☒ Authorized to be charged to deposit account

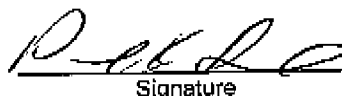
8. Please charge any deficiency or credit any overpayment to Deposit Account Number 50-1275  
(Attach duplicate copy of this page if paying by deposit account)

**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.

Paul K. Legaard, Ph.D./38,534

Name of Person Signing/Reg. No.



Signature

29 OCTOBER 2004

Date

Total number of pages including cover sheet, attachments, and documents: 16

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

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

CH \$40.00 501275 10909125

**DOCKET NO. ISIS0080-100 (CORE0016US)****PATENT APPLICATION**  
**Joint Inventors****ASSIGNMENT**

WHEREAS, we, Christine Esau of La Jolla, California, Bridget Lollo of Encinitas, California, C. Frank Bennett of Carlsbad, California, Susan M. Freier of San Diego, California, Richard H. Griffey of Vista, California, Brenda F. Baker of Carlsbad, California, Timothy A. Vickers of Oceanside, California, Eric G. Marcusson of San Diego, Erich Koller of Carlsbad, California, Eric E. Swayze of Carlsbad, California Ravi Jain of Carlsbad, California, Balkrishen Bhat of Carlsbad, California, and Eigen Peralta of Chula Vista, California hereinafter referred to as the assignors, have invented a certain invention entitled "Oligomeric Compounds And Compositions For Use In Modulation Of Small NonCoding RNAs," for which we have made an application for Letters Patent of the United States, said application having been filed on July 30, 2004 and assigned Application No. 10/909,125; and

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

**DOCKET NO. ISIS0080-100 (CORE0016US)****PATENT APPLICATION**  
**Joint Inventors**

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.

**DOCKET NO. ISIS0080-100 (CORE0016US)**

**PATENT APPLICATION**  
**Joint Inventors**

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

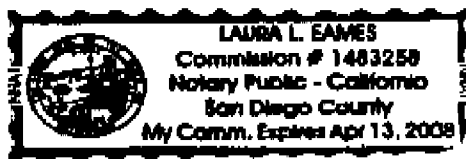
Dated: Aug 27, 2004

Christine Esau  
Christine Esau

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

On this 27th day of August, 2004, before me, the undersigned, a Notary Public for the state, personally appeared **Christine Esau**, 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. ISIS0080-100 (CORE0016US)

PATENT APPLICATION  
Joint Inventors

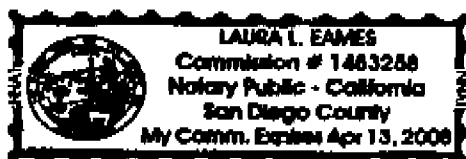
Dated: Aug 27, 2004

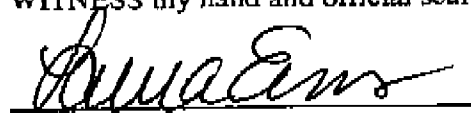
  
Bridget Lollo

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

On this 27th day of August, 2004, before me, the undersigned, a Notary Public for the state, personally appeared **Bridget Lollo**, 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. ISIS0080-100 (CORE0016US)

PATENT APPLICATION  
Joint Inventors

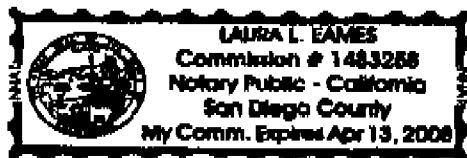
Dated: 9-3-04, 2004

C. Frank Bennett  
C. Frank Bennett

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

On this 3rd day of September, 2004, before me, the undersigned, a Notary Public for the state, personally appeared **C. Frank Bennett**, 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

DOCKET NO. ISIS0080-100 (CORE0016US)

PATENT APPLICATION  
Joint Inventors

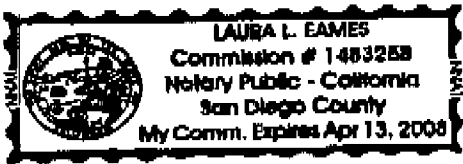
Dated: 24-Aug, 2004

Susan M Freier  
Susan M. Freier

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

On this 24th day of August, 2004, before me, the undersigned, a Notary Public for the state, personally appeared ~~Steven~~ Susan M. Freier, 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

DOCKET NO. ISIS0080-100 (CORE0016US)

PATENT APPLICATION  
Joint Inventors

Dated: 8/24/04, 2004 Richard H. Griffey  
Richard H. Griffey

State of California )  
County of San Diego ) ss.

On this 24th day of August, 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 Eames  
Signature of Notary





DOCKET NO. ISIS0080-100 (CORE0016US)

PATENT APPLICATION  
Joint Inventors


Dated: 9/1, 2004

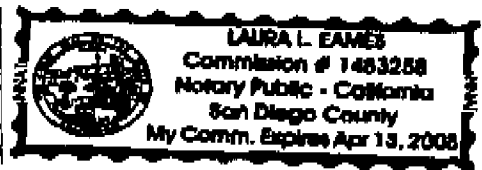
  
Timothy A. Vickers

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

On this 1st day of September 2004, before me, the undersigned, a Notary Public for the state, personally appeared **Timothy A. Vickers**, 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. ISIS0080-100 (CORE0016US)

PATENT APPLICATION  
Joint Inventors

Dated: 8/27, 2004

Erich Koller  
Erich Koller

State of California )  
County of San Diego ) ss.

On this 27th day of August, 2004, before me, the undersigned, a Notary Public for the state, personally appeared **Erich Koller**, 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

DOCKET NO. ISIS0080-100 (CORE0016US)

PATENT APPLICATION  
Joint Inventors


Dated: 9/07, 2004

  
Eric E. Swayze

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

On this 7<sup>th</sup> day of September, 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



DOCKET NO. ISIS0080-100 (CORE0016US)

PATENT APPLICATION  
Joint Inventors

Dated: 25 August, 2004

Ravi Jain  
Ravi Jain

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

On this 25th day of August, 2004, before me, the undersigned, a Notary Public for the state, personally appeared **Ravi Jain**, 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



DOCKET NO. ISIS0080-100 (CORE0016US)

PATENT APPLICATION  
Joint Inventors

Dated: 8-27, 2004



**Balkrishen Bhat**

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

On this 27th day of August, 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.

  
Signature of Notary

DOCKET NO. ISIS0080-100 (CORE0016US)

PATENT APPLICATION  
Joint Inventors

Dated: August 25, 2004

Eigen R. Peralta  
Eigen Peralta

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

On this 25th day of August, 2004, before me, the undersigned, a Notary Public for the state, personally appeared **Eigen Peralta**, 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]  
Signature of Notary