

FORM PTO-1586  
1-31-92  
ISIS-2018

07-21-1998

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

IEET

To The Honorable Commissioner of  
thereof.

100768830

d the attached original documents or copy

1. Name of conveying party(ies):

David J. Ecker

Additional name(s) of conveying party(ies)  
attached? ( ) YES (X) NO

3. Nature of Conveyance:

(X) Assignment ( ) Merger

( ) Security Agreement

( ) Change of Name

(X) Other: **Cross-Reference of Assignment Originally  
Recorded in S.N. 08/088,658 filed July 2, 1998 at Reel  
7842 Frame 0823**

Execution Date: **January 10, 1996**

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

Name: **ISIS Pharmaceuticals, Inc.**

Internal Address:

Street Address: **2280 Faraday Avenue**

City **Carlsbad**

State **California** ZIP **92008**

Additional name(s) & address attached? ( ) YES (X) NO

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)

**U.S. Serial No. 08/471,907**

B. Patent No.(s)

Additional numbers attached? ( ) YES (X) NO

5. Name and address of party to whom correspondence  
concerning documents should be mailed:

Name: **Joseph Lucci**

Internal Address: **WOODCOCK WASHBURN KURTZ**

**MACKIEWICZ & NORRIS**

**One Liberty Place - 46th Floor**

**Philadelphia, Pennsylvania 19103-7301**

Street Address: **WOODCOCK WASHBURN KURTZ**

**MACKIEWICZ & NORRIS**

**One Liberty Place - 46th Floor**

**1650 Market Street**

**Philadelphia, Pennsylvania 19103-7301**

6. Total number of applications and patents involved: **1**

7. Total fee (37 CFR 3.41):.....\$40.00

(X) Enclosed

( ) Authorized to be charged to Deposit Account  
Number 23-3050

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.*

**Joseph Lucci/ Reg. No. 33,307.**

Signature

**July 8, 1998**

Date

Total number of pages including cover sheet, attachments, and document: **3**

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

07/20/1998 DCOATES 00000059 08471907 Commissioner of Patents and Trademarks

01 FC:581

40.00 OP Washington, D.C. 20231

PATENT  
REEL: 9312 FRAME: 0645

PATL  
Joint Inventor

DOCKET NO.: ISIS-1052

(Pending Application;  
Serial No. Known)

A S S I G N M E N T

WHEREAS, David J. Ecker of 1041 Saxony Road, Leucadia, California 92024 U.S.A.; Ole Buchardt (deceased); Michael Egholm of 1231 Lexington Ridge Drive, Lexington, Massachusetts 02173 U.S.A.; Peter E. Nielsen of Hjortevanget 509, DK 2980 Kokkedal, Denmark; Rolf H. Berg of Strandvaenget 6, DK 2960 Rungsted Kyst, Denmark; and Niels E. Mollegaard of Benvedvaenget 27, Sorgenfri 2830 Virum, Denmark are the joint inventors of certain inventions or improvements for which they have made application for Letters Patent to the United States, identified as Serial No. 08/088,658, filed July 2, 1993, entitled HIGHER ORDER STRUCTURE AND BINDING OF PEPTIDE NUCLEIC ACIDS; and

WHEREAS, I, David J. Ecker, hereinafter referred to as the assignor, residing at the above address, have assigned my right, title and interest in and to the said inventions or improvements to ISIS PHARMACEUTICALS, INC., a corporation of Delaware, hereinafter referred to as the assignee, of 2280 Faraday Avenue, Carlsbad, California 92008, who is desirous of acquiring my 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 me in hand paid by said assignee, and other good and valuable consideration, the receipt of which is hereby acknowledged, I, the said assignor, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over to said assignee, my 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 my name 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 me had this assignment, sale and transfer not been made.

AND I hereby covenant that I have full right to convey my entire interest herein assigned, and that I have not executed and will not execute any agreement in conflict herewith, and I

PATENT

REEL: 9312 FRAME: 0646

PATENT  
Joint Inventors

further covenant and agree that I 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 I agree 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.

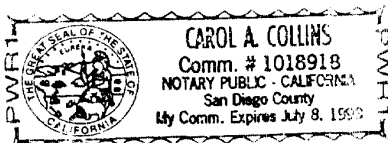
AND I hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to said assignee, as assignee of my entire right, title 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, I have hereunto set my hand and seal.

David J. Ecker  
David J. Ecker

CALIFORNIA :  
SS  
COUNTY OF SAN DIEGO :

On this 10<sup>th</sup> day of JANUARY, 1996, before me personally came the above named David J. Ecker to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth.



Carol A. Collins  
Notary Public