Zip:92008

FORM PTO-1595 08-16-2001 U.S. DEPARTMENT OF COMMERCE 1-31-92 Patent and Trademark Office Docket No.: RTSP-0117 101813146 RECORDA SHEET PATENTS ONLY ID NO: To The Honorable Commissioner of Patents and Trademarks. Please record the attached original document(s) or copy thereof. 1. Name of conveying party(ies): ////a 2. Name and address of receiving party(ies): Brett P. Monia and Lex M. Cowsert Name: ISIS Pharmaceuticals, Inc. Internal Address: Carlsbad Research Center Street Address: 2292 Faraday Avenue Additional name(s) of conveying party(ies) City: Carlsbad attached? State: California () YES (XX) NO 3. Nature of Conveyance: Additional names (s) & address attached? (XX) Assignment () Merger () YES (XX) NO () Name Change () Security Agreement () Other: Execution date: May 24, 2001 4. Application number(s) or patent number(s): A. Patent Application No(s). 09/856,074 FILED May 17, 2001 B. Patent No(s). If this document is being filed together with a new application, the execution date of the application is: Additional numbers attached? () YES (XX) NO 5. Name and address of party to whom 6. Total number of applications and patents involved: One (1) correspondence concerning documents should be mailed: 7. Total fee (37 CFR 3.41): \$40.00 Licata & Tyrrell P.C. () Enclosed 66 E. Main Street (XX) Authorized to be charged to deposit account. Marlton, New Jersey 08053 8. Deposit Account number: 50-1619 08/03/2001 UEDUVIJE 00000077 09856074 (Attach duplicate copy of this page if paying by deposit account.) 08 FC:581 40.00 OP 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.

Kathleen A. Tyrrell, Reg. No. 38,350

Name of Person Signing

Signature 2

July 27, 2001

Total number of pages comprising cover sheet, attachments, and document: Five

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

Commissioner of Patents and Trademarks

Box Assignments Washington, D.C. 20231

DOCKET NO.: RTSP-0117

ASSIGNMENT

WHEREAS, We, Brett P. Monia, of La Costa, State of California and Lex M. Cowsert, of San Mateo, State of California, have invented a certain invention entitled Antisense Modulation of Inhibitor-Kappa B Kinase-Alpha Expression, for which we have made application for Letters Patent of the United States identified as Attorney Docket No. RTSP-0117; 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

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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 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 successors, assigns, nominees, or assignee, its 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

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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.

We further authorize and direct my attorneys to insert below* the serial number and filing date of said application now identified as Attorney Docket No. RTSP-0117 as soon as the same shall have been made known to them by the United States Patent Office.

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

DATED: 5/24/01, 2001

Brett P. Monia

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

On this 24 day of May, 2001, before me, the undersigned, a Notary Public for the state, personally appeared Brett P. Monia, 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 executed the same in his authorized capacity, and that by his signature on the Assignment the person, or the entity on behalf of which the person acted, executed the Assignment.

PAMELA GROOMS
Commission # 1296342
Notary Public - California
San Diego County
My Comm. Expires Mar 8, 2005

WITNESS my hand and official seal.

Signature of Notary

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DOCKET NO.: RTSP-0117	PATENT
DATED: 5/15, 2001	Lek M. Cowsert
State of California) ss.
County of SAN MATEO	
Lex M. Cowsert, persona of satisfactory evidence foregoing Assignment and same in his authorized	day of May, 2001, before me, the sublic for the state, personally appeared ally known to me/proved to me on the basis to be the person who subscribed the adacknowledged to me that he executed the capacity, and that by his signature on the or the entity on behalf of which the
person acted, executed	the Assignment.
****	, WITNESS my hand and official seal.
JIM M. SUN NOTARY PUBLIC - CALIFORNIA COMMISSION # 1190578 SAN MATEO COUNTY My Comm. Exp. July 20, 2002	Signature of Notary
	Signature of Notary
	ssignment covers application Serial No. on May 17, 2001.
The above ins	sertion made by me this 27th day of
•	Yhathun A. Tunal
	Jane Massey Liceta, Reg. No. 32,257 or

ASSIGNMENT - PAGE 4 OF 4

Kathleen A. Tyrrell, Reg. No. 38,350

of Licata & Tyrrell P.C.

RECORDED: 07/27/2001