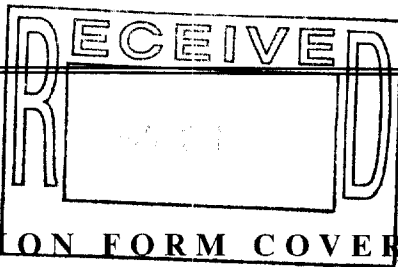


FORM PTO-1595
1-31-92
Docket No.: **ISPH-0349**



U.S. DEPARTMENT OF COMMERCE
06-23-1999 Office

RECORDATION FORM COVER SHEET



ID NO: **101072937**

To The Honorable Commissioner of Patents and Trademarks. Please record the attached original document(s) or copy thereof.

1. Name of conveying party(ies):
C. Frank Bennett, Elizabeth J. Ackermann, Eric E. Swayze and Lex M. Cowsert

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

3. Nature of Conveyance:
(XX) Assignment () Merger
() Name Change () Security Agreement
() Other: _____
Execution date: **June 4, 1999**

2. Name and address of receiving party(ies):
Name: **Isis Pharmaceuticals Inc.**
Internal Address: **Carlsbad Research Center**
Street Address: **2292 Faraday Avenue**
City: **Carlsbad**
State: **California** Zip: **92008**

Additional names (s) & address attached?
() YES (XX) NO

MRD 6.21.99

4. Application number(s) or patent number(s):
A. Patent Application No(s). **09/286,407** FILED April 5, 1999 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 correspondence concerning documents should be mailed:

Jane Massey Licata, Esq.
Law Offices of Jane Massey Licata
66 E. Main Street
Marlton, New Jersey 08053

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

7. Total fee (37 CFR 3.41): \$
() Enclosed
(XX) Authorized to be charged to deposit account.

8. Deposit Account number: **12-1086**
(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.

Jane Massey Licata, Reg. No. 32,257
Name of Person Signing

Signature *Jane Massey Licata* June 16, 1999

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

A S S I G N M E N T

WHEREAS, We, C. Frank Bennett, of Carlsbad, State of California; Elizabeth J. Ackermann, of Solano Beach, State of California; Eric E. Swayze, of Carlsbad, State of California; and Lex M. Cowser, of Carlsbad, State of California, have invented a certain invention entitled Antisense Modulation of Survivin Expression for which we have made application for Letters Patent of the United States, said application having been filed April 5, 1999 and assigned Application No. 09/286,407; 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.

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.

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

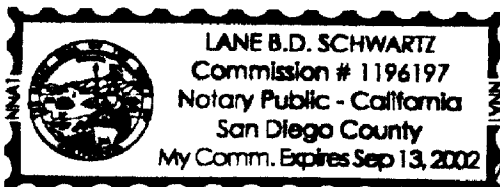
DATED: May 24, 1999

C. Frank Bennett
C. FRANK BENNETT

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

On this 24th day of May, 1999, 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.



Lane B.D. Schwartz
Signature of Notary

DATED: 6 - 4, 1999

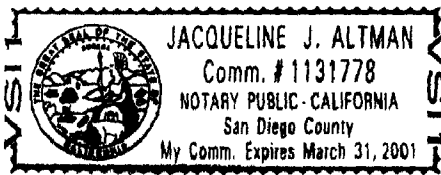
Elizabeth J. Ackermann
ELIZABETH J. ACKERMANN

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

On this 4th day of June, 1999, before me, the undersigned, a Notary Public for the state, personally appeared Elizabeth J. Ackermann, 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.



Jacqueline J. Altman
Signature of Notary

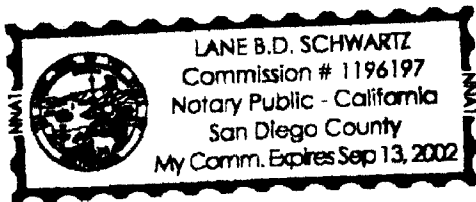
DATED: 5/11, 1999

Eric E. Swayze
ERIC E. SWAYZE

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

On this 11th day of May, 1999, 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.



Lane B.D. Schwartz
Signature of Notary

DATED: 5/26, 1999

Lex M. Cowser
LEX M. COWSERT

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

On this 26th day of May, 1999, before me, the undersigned, a Notary Public for the state, personally appeared Lex M. Cowser, 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.



Lane B.D. Schwartz

Signature of Notary