

**RECORDATION FORM COVER SHEET
PATENTS ONLY**

**TO THE DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE:
PLEASE RECORD THE ATTACHED ORIGINAL DOCUMENTS OR COPY THEREOF.**

1. Conveying party(ies):

Name(s)	Execution Date(s)
Balkrishen Bhat	June 26, 2003
Phillip Dan Cook	June 26, 2003

Additional name(s) of conveying party(ies) attached? Yes No

2. Nature of conveyance:

Assignment Security Agreement
 Merger Change of Name
 Other: _____

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

Name: Isis Pharmaceuticals, Inc.
Internal Address: 1896 Rutherford Road
Street Address: _____
City & State: Carlsbad, California
Zip/Postal Code: 92008-7326

Additional name(s) & addresses attached? Yes No

4. Application number(s) or patent number(s) are as follows:
(a) Patent Application No(s) 10/520,925, filed on September 26, 2005
and titled:
THIONUCLEOSIDE DERIVATIVES AS INHIBITORS OF RNA-DEPENDENT RNA VIRAL POLYMERASE

(b) If this document is being filed together with a new application, the execution date of the application is:
_____ Additional numbers attached? Yes No

5. Name & address of party to whom correspondence concerning documents should be mailed:
Name: Kenneth R. Walton
Internal Address: PATENT DEPARTMENT
MERCK & CO., INC.
P.O. BOX 2000 -- RY60-30
City & State: RAHWAY, N.J. Zip: 07065-0907

6. Total no. of applications & patents involved: 1

7. Total fee (37 CFR 3.41).....\$ 40.00
 Enclosed
 The Director is hereby authorized to charge the deposit account number entered below for any fees which may be required or to credit any overpayment.

8. Deposit account number: 13-2755

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.

Kenneth R. Walton Reg. No. 32,951 Kenneth R. Walton Nov. 27, 2007
Name of Person Signing Signature Date

Total number of pages including cover sheet, attachments, and documents: 5

NOTE: Send to Mail Stop Assignment Recordation Services or Fax to Patent and Trademark Office at (571) 273-0140

CERTIFICATE OF MAILING OR FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Director of the U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450, or facsimile transmitted to the U.S. Patent and Trademark Office on:

Name (Print/Type) Jodi Hobbs
Signature Jodi Hobbs Date Nov. 28, 2007

CH \$40.00 132755 10520925

JOINT PATENT

Attorney Docket Number 21194
U.S. Serial No. 10/520,925
Filing Date 09/26/2005

A S S I G N M E N T

WHEREAS, we Balkrishen Bhat of Carlsbad, CA and Phillip Dan Cook of Fallbrook, CA, hereinafter referred to as the assignors, are the joint inventors of certain inventions or improvements for which we have made application for Letters Patent to the United States, entitled THIONUCLEOSIDE DERIVATIVES AS INHIBITORS OF RNA-DEPENDENT RNA VIRAL POLYMERASE described in applications for Patents having Attorney Docket number 21194 and in application(s) Serial No. 60/398,237 filed 07/24/2002; Serial No. _____ filed _____; Serial No. _____ filed _____; (if applicable).

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

ASSIGNMENT - Page 1 of 4

PATENT
REEL: 020171 FRAME: 0202

JOINT PATENT

Attorney Docket Number 21194
U.S. Serial No. 10/520,925
Filing Date 09/26/2005

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.

WE hereby authorize our attorney, Philippe L. Durette or an attorney with Power of Attorney in this application of the said ISIS Pharmaceuticals, Inc. to insert **Serial No.,(s)** and **Filing Date(s)** of said application(s) when known.

ASSIGNMENT - Page 2 of 4

PATENT
REEL: 020171 FRAME: 0203

JOINT PATENT

Attorney Docket Number 21194
U.S. Serial No. 10/520,925
Filing Date 09/26/2005

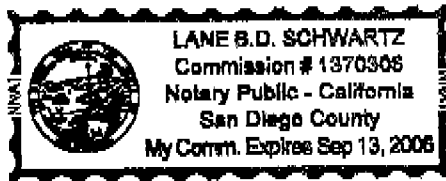
IN WITNESS WHEREOF, we have hereunto set our hands and seals.

Dated: 6/26 2003

Balkrishen Bhat
Balkrishen Bhat

State of California)
County of San Diego) ss.

On this 26th day of June, 2003, 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.



[SEAL]

WITNESS my hand and official seal.

Lane S.D. Schwartz
Signature of Notary

JOINT PATENT

Attorney Docket Number 21194
U.S. Serial No. 10/520,925
Filing Date 09/26/2005

Dated: 06/26 2003

Phillip Dan Cook
Phillip Dan Cook

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

On this 26th day of June, 2003, before me, the undersigned, a Notary Public for the state, personally appeared Phillip Dan Cook, 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