FORM PTO-1595 RECORDATION FOR (Rev. 6-93)	M COVER SHEET  U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office
OMB No. 0651-0011 (exp. 4/94)  PATENTS	ONLY RE
To the Honorable Commissioner of Patents and Trademarks: Ple	ease record the attached original locustars or 201850 reof.
1. Name of conveying party(ies):	2. Name and address of receiving party(ies):
Radhakrishnan P. Iyer	Name: Hybridon, Inc.
	Internal Address:
Additional name(s) of conveying party(ies) attached? 口 Yes 粒 No	
3. Nature of conveyance:	Street Address: 620 Memorial Drive
■ Assignment    □ Merger	
☐ Security Agreement ☐ Change of Name ☐ Other	City: Cambridge State MA ZIP 02139
Execution Date: February 10, 1998	Additional name(s) & address attached?   □ Yes *□ No
4. Application number(s) or patent number(s):	
A. Patent Application No.(s) 08/920,087  Additional numbers attached?	06-01-1998  Yes *1 No 100723453
5. Name and address of party to whom correspondence concerning document should be mailed:	6. Total number of applications and registrations involved
Name: Wayne A. Keown, Ph.D.	7. T I.C (27. OFD. 2.41) (240.00)
Internal Address:	7. Total fee (37 CFR 3.41) \$40.00
HALE AND DORR LLP	□ Enclosed
	Authorized to be charged to deposit account
Street Address: 60 State Street	8. Deposit Account Number:
	08-0219
City: Boston State MA ZIP 02109	(Attach duplicate copy of this page if paying by deposit account)
3/18/1998 DCDATES 00000005 DAW:080219 08920087 DO NOT USE T	THIS SPACE
19. Statement and signature: To the best of my knowledge and belief, the foregoing information is a original document.	true and correct and any attached copy is a true copy of the
Wayne A. Keown, Ph.D.	March 9, 1998
Name of Person Signing Signature	Date
Total number of pages including cover sheet, attack	hments, and document

Attorney Docket No. 475.08.641

# **ASSIGNMENT**

WHEREAS, I, Radhakrishnan P. Iyer, being a citizen of India, and residing at 34 Shrewsbury Green Drive, Shrewsbury, MA 01545, United States of America, am the inventor of certain new and useful inventions and discoveries, for which we have made an application for a Letters Patent entitled "IMPROVED REAGENTS AND PROCESS FOR SYNTHESIS OF OLIGONUCLEOTIDES CONTAINING PHOSPHORODITHIOATE INTERNUCLEOSIDE LINKAGES," also identified as Attorney Docket No. 475.08.641, the specification of which was filed with the United States Patent and Trademark Office on August 26, 1997, and assigned Serial No. 08/920,087; and

WHEREAS, Hybridon, Inc., whose address is 260 Memorial Drive, Cambridge, MA 02139, United States of America, which, together with its successors and assigns is hereinafter called "ASSIGNEE," is desirous of acquiring the title, rights, benefits, and privileges hereinafter recited;

NOW, THEREFORE, for and in consideration of my employment by ASSIGNEE and other valuable consideration furnished by ASSIGNEE to me, receipt and sufficiency of which I hereby acknowledge, I hereby, without reservations:

1. Assign, transfer, and convey to ASSIGNEE the entire right, title, and interest in and to said inventions and discoveries, said United States Patent Application, any and all other applications for Letters Patent(s) on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation, continuation-in-part, reexamination and convention applications based in whole, or in part, upon said inventions or discoveries, or upon said applications, and any and all Letters Patent(s), reissues, and extensions of Letters Patent(s) granted for said inventions and discoveries or upon said applications, and every priority right

PATENT REEL: 9194 FRAME: 0712 that is or may be predicated upon, or arise from, said inventions, said discoveries, said applications, and said Letters Patent(s);

- 2. Authorize ASSIGNEE to file patent applications in any or all countries on any or all of said inventions and discoveries in my name or in the name of ASSIGNEE or otherwise as ASSIGNEE may deem advisable, under International Conventions or otherwise;
- 3. Authorize and request the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments throughout the world to issue or transfer all said Letters Patent(s) to ASSIGNEE, as assignee of the entire right, title, and interest therein or otherwise as ASSIGNEE may direct;
- 5. Warrant that I have not knowingly conveyed to others any right in said inventions, discoveries, applications, or patents, or any license to use the same, or to make, use, or sell anything embodying or utilizing any of said inventions or discoveries; and that I have good right to assign the same to ASSIGNEE without encumbrance:
- 6. Bind my heirs, legal representatives, and assigns, as well as myself, to do, upon ASSIGNEE's request and at ASSIGNEE's expense, but without additional consideration to either us or them, all acts reasonably serving to assure that said inventions and discoveries, said patent applications, and said Letters Patent(s) shall be held and enjoyed by ASSIGNEE as fully and entirely as the same could have been held and enjoyed by me, my heirs, legal representatives, and assigns if this Assignment had not been made; and particularly to execute and deliver to

ASSIGNEE all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by ASSIGNEE; and to communicate to ASSIGNEE all facts known to us relating to said inventions and discoveries or the history thereof, and to testify as to the same in any court or proceeding; and to furnish ASSIGNEE any and all documents, photographs, models, samples, and other physical exhibits in my control or in the control of my heirs, legal representatives, or assigns which may be useful for establishing the facts of my conceptions, disclosures, and reduction to practice of said inventions and discoveries.

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal.

DATE: 3/3 /98

Radhakrishnan P. Iyer

WITNESSED BY:

Marra

3007-970

#### **PATENTS**

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Radhakrishnan P. Iyer

**Serial No.:** 08/920,087

Filing Date: August 26, 1997

**Docket Number:** 475.08.641

Title: IMPROVED REAGENTS AND PROCESS FOR

SYNTHESIS OF OLIGONUCLEOTIDES CONTAINING

PHOSPHORODITHIOATE INTERNUCLEOSIDE

**LINKAGES** 

# **BOX ASSIGNMENTS**

Assistant Commissioner For Patents Washington, D.C. 20231

# RESPONSE TO NOTICE OF COVER LETTER RECEIVED WITHOUT ASSIGNMENT

Dear Sir:

In Response to the Notice of Cover Letter Received Without Assignment mailed on April 28, 1998 (copy enclosed) in the above-referenced patent application, applicant herewith submits the following documents:

- 1. A copy of the Transmittal Letter of Assignment and return postcard mailed on March 9, 1998;
- 2. A certified copy of the original Assignment from the inventor, Radhakrishnan P. Iyer, to Hybridon, Inc. mailed on March 9, 1998;
- 3. The original PTO Form 1595 mailed on March 9, 1998; and
- 4. Return Postcard

U.S.S.N. 08/920,087 Page 2

If there are any questions, please call the undersigned at the telephone number indicated below.

Respectfully submitted,

HALE AND DORR LLP

Ann-Louise Kerner, Ph.D. Registration No. 33, 523 for Wayne A. Keown, Ph.D. Registration No. 33,923 Attorney for Applicant

60 State Street Boston, MA 02109 Tel. (617) 526-6000 Fax. (617) 426-5000

Date: May 14, 1998

#### CERTIFICATE OF MAILING (37 C.F.R. § 1.8(1)

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to , **BOX ASSIGNMENTS**, Assistant Commissioner for Patents, Washington, DC 20231 on the date indicated below.

Date: 5/14/98

Angelo I. Magnanelli



# UNITED STATES DEPARTMENT OF COMMERCE Patent and Trademark Office

ASSISTANT SECRETARY AND COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231

Date: April 28, 1998

Hale And Dorr LLP Wayne A. Keown, PH.D. 60 State Street Boston, MA 02109



NOTICE OF COVER LETTER RECEIVED WITHOUT ASSIGNMENT ATTACHED

Thank you for your request to record a document with the Patent and Trademark Office. However, the attached cover letter was received in the U.S. Patent and Trademark Office, Assignment Branch without an assignment document attached. We are returning the cover letter to you.

Please resubmit the original cover letter along with a legible original assignment, or certified copy. If you have already received your assignment back recorded or wish not to record the assignment at this time please disregard this notice and keep the cover letter for your records. If you have any questions, you may contact the undersigned at (703) 308-9723.

The assignment fees are as follows:

Patent Assignment (for each property)

\$40.00

Trademark Assignment

\$40.00

(including one property)
(each additional property)

\$25.00

Sincerely,

Paralegal Specialist

Reviewed By Dockets By Received By Arrest 1998

PATENT REEL: 9194 FRAME: 0717

# **PATENTS**

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Radhakrishnan P. Iyer

**Serial No.:** 08/920,087

Filing Date: August 26, 1997

**Docket Number:** 475.08.641

Title: IMPROVED REAGENTS AND PROCESS FOR

SYNTHESIS OF OLIGONUCLEOTIDES CONTAINING

PHOSPHORODITHIOATE INTERNUCLEOSIDE

LINKAGES

#### **BOX ASSIGNMENTS**

Assistant Commissioner For Patents Washington, D.C. 20231

# TRANSMITTAL LETTER OF ASSIGNMENT

Dear Sir:

Enclosed herewith for filing in the above-identified patent application are the following documents:

- 1. Assignment;
- 2. Form PTO-1595 (Recordation Form Cover Sheet); and
- 3. Return Postcard.

U.S.S.N. 08/920,087 Page 2



If there are any questions, please call the undersigned at the telephone number indicated below.

Respectfully submitted,

Wayre A. Keown, Ph.D Registration No. 33,923 Attorney for Applicants

HALE AND DORR LLP 60 State Street Boston, MA 02109 Tel. (617) 526-6000 Fax. (617) 426-5000

Date: March 9, 1998

# CERTIFICATE OF MAILING (37 C.F.R. § 1.8(1)

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to **BOX ASSIGNMENTS**, Commissioner of Patents and Trademarks, Washington, DC 20231 on the date indicated below.

Date: 3/9/98

J. Migipanein

Title: IMPROVED REAGENTS AND PROCESS FOR SYNTHESIS Applicant . In the above matter, the following have been received by the US Patent and Transaction Certificate of Mailing angles 37 CFR | 8 a)

Response to Office Action/Restrict angles Application incl. \_\_\_\_pages (\_\_\_Design) \_\_\_\_pp. of specification ☐ Petition for \_\_\_ month extension of time Assignment and Cover Sheet ☐ Amendment (☐ Preliminary; ☐ After Final) ☐ Notice of Appeal ☐ Appellant's Brief (triplicate) (☐Reply Brief) ☐ Letter to Chief Draftsperson ☐ Issue Fee / ☐ Maintenance Fee Transmittal ☐ Declaration / Power of Attorney (\_Unsigned) ☐ Verified Statement Claiming Small Entity Status ☐ Sequence listing; ☐ Diskette ☐ Transmittal Letter ☐ Request for filing CPA; 37 CFR 53(d) ☐ Check for \$\_\_\_ \_; check # ☐ IDS, PTO-1449, and \_\_\_ references (Supp. \_\_\_) ☐ Deposit Account Authorization \$\_ <del>475.08.64</del>1

. 08/920,087

pp. of claims (# of claims -

\_ sheets of drawings; Figs. \_

☐ Express Mail Label No. \_\_\_\_

\_\_\_\_ pp. of abstract

☐ formal ☐ informal

☐ Provisional Application Cover Sheet

☐ Copy of Notice to File Missing Parts

Mailing Date: \_\_\_\_\_ Docket No. \_\_\_\_ Atty/paralegal/secy: \_\_\_

□ other: 3/9/98

stamped hereon.

other:

PATENT REEL: 9194 FRAME: 0720

#### **PATENTS**

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Radhakrishnan P. Iyer

**Serial No.:** 08/920,087

Filing Date: August 26, 1997

**Docket Number:** 475.08.641

Title: IMPROVED REAGENTS AND PROCESS FOR

SYNTHESIS OF OLIGONUCLEOTIDES CONTAINING

PHOSPHORODITHIOATE INTERNUCLEOSIDE

**LINKAGES** 

**BOX ASSIGNMENTS** 

Assistant Commissioner For Patents Washington, D.C. 20231

# **CERTIFICATION**

I, Angelo J. Mignanelli, a public notary in and for the Commonwealth of Massachusetts, hereby certify and attest that the attached document is a true and exact copy of the Assignment executed on March 3, 1998 by the inventor, Radhakrishnan P. Iyer, from said inventor to Hybridon Incorporated for the above-referenced United States patent application.

Angelo J. Mighanelli Notary Public

Commonwealth of Massachusetts

Date

My Commission Expires May 22, 2003

Seal