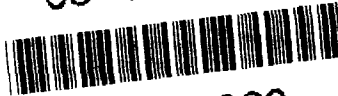


09-12-2008



103524369

U.S. DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)

1. Ekambar R. Kandimalla; 2. Mallikarjuna Putta; 3. Daqing Wang;
4. Dong Yu; 5. Lakshmi Bhagat; 6. Sudhir Agrawal

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

3. Nature of conveyance/Execution Date(s):

Execution Date(s) 1-3, 5. 8/6/08 4. 8/14/08 6. 8/7/08

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Joint Research Agreement
☐ Government Interest Assignment
☐ Executive Order 9424, Confirmatory License
☐ Other

2. Name and address of receiving party(ies)

Name: Idera Pharmaceuticals, Inc.

Internal Address: _____

Street Address: 167 Sidney Street

City: Cambridge

State: MA

Country: US Zip: 02139

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application or patent number(s):

☐ This document is being filed together with a new application.

A. Patent Application No.(s)

12/183,439

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address to whom correspondence concerning document should be mailed:

Name: Keown & Zuccherro, LLP

Internal Address: Suite 1200

Street Address: 500 West Cummings Park

City: Woburn

State: MA Zip: 01801

Phone Number: 781-938-1805

Fax Number: 781-938-4777

Email Address: jzuccherro@keownlaw.com

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40

- ☐ Authorized to be charged by credit card
☒ Authorized to be charged to deposit account
☐ Enclosed
☐ None required (government interest not affecting title)

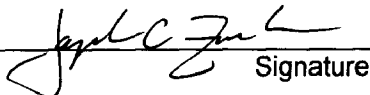
8. Payment Information

a. Credit Card Last 4 Numbers _____
Expiration Date _____

b. Deposit Account Number 502285

Authorized User Name Keown & Zuccherro, LLP

9. Signature:


Signature

Joseph C. Zuccherro, Reg. No. 55762

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents: 6

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, V.A. 22313-1450

PATENT
REEL: 021519 FRAME: 0827

ASSIGNMENT

WHEREAS we, **Ekambar R. Kandimalla**, being a citizen of the United States of America and residing at 6 Candlewood Lane, Southboro, Massachusetts, 01772-1981; **Mallikarjuna Putta**, being a citizen of India and residing at 824 Arboretum Way, Burlington, Massachusetts, 01803; **Daqing Wang**, being a citizen of Canada and residing at 7 Selfridge Road, Bedford, Massachusetts, 01730; **Dong Yu**, being a citizen of China and residing at 25 Indian Pond Road, Westboro, Massachusetts, 01581; **Lakshmi Bhagat**, being a citizen of India and residing at 1550 Worcester Street, Framingham, Massachusetts, 01702 and **Sudhir Agrawal**, being a citizen of the United States of America and residing at 61 Lamplighter Drive, Shrewsbury, Massachusetts, 01545, are inventors of certain new and useful inventions and discoveries, for which we have made an application for Letters Patent entitled **NOVEL SYNTHETIC AGONISTS OF TLR9**, which application was filed in the United States Patent and Trademark Office on July 31, 2008, and assigned Serial No. 12/183,439; and

WHEREAS Idera Pharmaceuticals, Inc., a corporation organized and existing under the laws of the State of Delaware,, whose address is 167 Sidney Street, Cambridge, MA 02139, which together with its successors and assigns is hereinafter called "ASSIGNEE," is desirous of acquiring all right, title, interest, benefits, and privileges to and under said inventions and discoveries as hereinafter recited;

NOW THEREFORE, for and in consideration of good and valuable consideration furnished by ASSIGNEE to us, receipt and sufficiency of which we hereby acknowledge, we hereby, without reservations:

1. Assign, transfer and convey to ASSIGNEE the entire right, title and interest in and to said inventions and discoveries, said application for Letters Patent, any and all other applications for Letters Patent on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation, continuation-in-part, and convention applications based in whole or in part upon said inventions or discoveries, or upon said applications, and any and all Letters

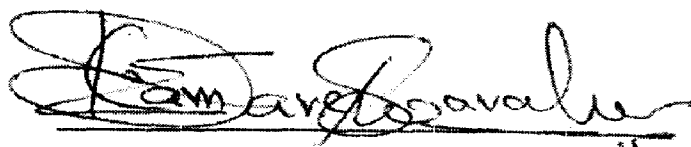
Patent, reissues and extensions of Letters Patent granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon, or arise from, said inventions, said discoveries, said applications and said Letters Patent;

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 official of any other government throughout the world to issue or transfer all said Letters Patent to ASSIGNEE as ASSIGNEE of the entire right, title and interest therein or otherwise as ASSIGNEE may direct;
4. Warrant that we have the full right to convey the entire right, title and interest herein assigned without encumbrance and have not knowingly conveyed to others any right, title or interest in said inventions, discoveries, applications or patents or any license to use the same, or to make, use, sell or import anything embodying or utilizing any of said inventions or discoveries;
5. 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 us or them, all acts reasonably serving to assure that said inventions and discoveries, said patent applications, and said Letters Patents shall be held and enjoyed by ASSIGNEE as fully and entirely as the same could have been held and enjoyed by us, our heirs, legal representatives and assigns as 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 me 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 invention and discoveries.

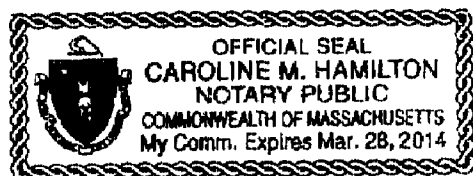
IN TESTIMONY WHEREOF, we have hereunto set our hands and seals.

Date: August 6, 2008



Ekambar R. Kandimalla

Then personally appeared before me this 6th day of August, 2008, the above named Ekambar Kandimalla who acknowledged the execution of the foregoing instrument to be his free act and deed.



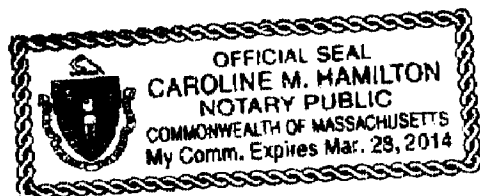
Caroline M. Hamilton
Notary Public

Date: August 6, 2008



Mallikarjuna Putta

Then personally appeared before me this 6th day of August, 2008, the above named Mallikarjuna Putta who acknowledged the execution of the foregoing instrument to be his free act and deed.



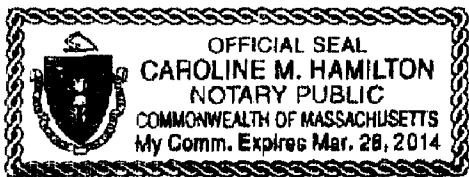
Caroline M. Hamilton
Notary Public

Date: Aug. 6, 2008

D. Wang

Daqing Wang

Then personally appeared before me this 6th day of August, 2008,
the above named Daqing Wang who acknowledged the execution of the
foregoing instrument to be his free act and deed.

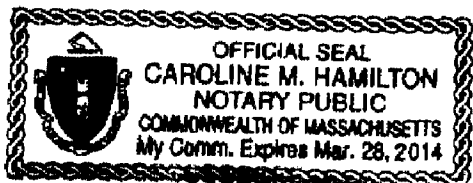


Caroline M. Hamilton
Notary Public

Date: 8-14-08

Dong Yu
Dong Yu

Then personally appeared before me this 14th day of August, 2008,
the above named Dong Yu who acknowledged the execution of the
foregoing instrument to be his free act and deed.



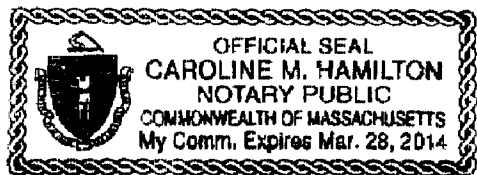
Caroline M. Hamilton
Notary Public

Date: August 6, 2008

Lakshmi Bhagat

Lakshmi Bhagat

Then personally appeared before me this 6th day of August, 2008,
the above named Lakshmi Bhagat who acknowledged the execution of the
foregoing instrument to be his free act and deed.

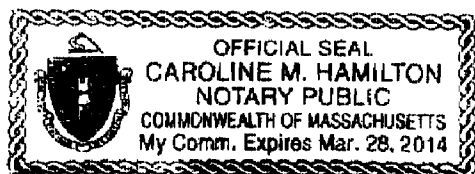


Caroline M. Hamilton
Notary Public

Date: August 7, 2008

Sudhir Agrawal
Sudhir Agrawal

Then personally appeared before me this 7th day of August, 2008,
the above named Sudhir Agrawal who acknowledged the execution of the
foregoing instrument to be his free act and deed.



Caroline M. Hamilton
Notary Public