

Form PTO-1595 (Rev. 09/04)  
OMB No. 0651-0027 (exp. 6/30/2005)

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

## RECORDATION FORM COVER SHEET PATENTS ONLY

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)/Execution Date(s):

Andrew R. Marks  
Donald W. Landry  
Shi Xian Deng  
Zhen Zhuang Cheng

Execution Date(s) January 4, 2005

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

### 3. Nature of conveyance:

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

### 2. Name and address of receiving party(ies)

Name: The Trustees of Columbia University in the City

Internal Address: of New York

Office of the General Counsel

Street Address: 412 Low Library, Mail Code 4308

535 West 116th Street

City: New York

State: NY

Country: USA Zip: 10027

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

### 4. Application or patent number(s):

A. Patent Application No.(s)

10/809,089

☐ This document is being filed together with a new application.  
B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

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

Name: Leslie Gladstone Restaino

Internal Address: Brown Raysman Millstein Felder  
& Steiner LLP

Street Address: 163 Madison Avenue

P.O. Box 1989

City: Morristown

State: NJ Zip: 07962-1989

Phone Number: 973-775-8930

Fax Number: 973-775-8901

Email Address: lrestaino@brownraysman.com

### 6. Total number of applications and patents involved:

1

### 7. Total fee (37 CFR 1.21(h) & 3.41) \$ 160

- ☐ 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 02-4270

Authorized User Name Brown Raysman Millstein

### 9. Signature:

Todd A. Holmbo  
Signature

January 7, 2005  
Date

Todd A. Holmbo

Name of Person Signing

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

5

Documents to be recorded (including cover sheet) should be faxed to (703) 306-5995, or mailed to:  
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, V.A. 22313-1450

CH \$40.00 024270 10809089

700143896

PATENT  
REEL: 015559 FRAME: 0679

## ASSIGNMENT

Assignment before issue of Letters Patent

Docket No. 5199-144

WHEREAS, I, **Andrew R. Marks**, a resident of New York, County of New York, State of New York;

(hereinafter "Assignor") have invented certain new and useful improvements in

**NOVEL ANTI-ARRHYTHMIC AND HEART FAILURE DRUGS THAT TARGET THE LEAK IN THE RYANODINE RECEPTOR (RYR2) AND USES THEREOF**

(hereinafter "invention") for which Assignor is making or has made application for LETTERS PATENT OF

THE UNITED STATES, which application has been duly executed by Assignor on

the day(s) and date(s) of these presents.

AND WHEREAS, **THE TRUSTEES OF COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK**, having its principal offices at: Office of the General Counsel, 412 Low Library, Mail Code 4308, 535 West 116<sup>th</sup> Street, New York, NY 10027, U.S.A., hereinafter called the Assignee, is desirous of acquiring the entire right, title and interest in and to said invention within the United States of America and its territorial possessions and all foreign countries and any United States or foreign LETTERS PATENT that may be granted therefor.

NOW, THIS INDENTURE WITNESSETH, that for good and valuable considerations, the receipt whereof is hereby acknowledged, Assignor has assigned, sold and transferred, and does hereby assign, sell and transfer to the said Assignee the entire right, title and interest in and to the said invention, within the United States of America and its territorial possessions and all foreign countries and in and to any LETTERS PATENT of the United States and foreign countries, including utility models, inventor's certificates and like government grants, and all divisions, reissues, continuations and extensions thereof that may be granted therefor, and the right to apply for LETTERS PATENT in foreign countries with full benefit of such priorities as may now or hereafter be granted to Assignor by local laws or by treaty, including any international convention, for the protection of industrial property, together with the right to extend the protection of said U.S. LETTERS PATENT to the various territorial possessions now owned or which may be hereafter acquired by the United States of America, all said rights to be held and enjoyed by the Assignee for its own use and benefit, and for the use and benefit of its successors or assigns, to the full end of the term for which said LETTERS PATENT may be granted, as fully and entirely as the same would have been held and enjoyed by Assignor if this assignment and sale had not been made. And Assignor does hereby request and authorize the Commissioner of Patents and Trademarks, U.S.A., to issue said U.S. LETTERS PATENT, when granted, in accordance with this assignment.

Assignor further covenants and agrees with the Assignee that Assignor has a full and unencumbered title to the invention hereby assigned, which title Assignor warrants unto the Assignee, and Assignor further agrees that Assignor will, without demanding any further consideration therefor, at the request but at the expense of the Assignee, do all lawful and just acts, including the execution and acknowledgment of instruments, that may be or become necessary for obtaining, sustaining, extending, reissuing or reexamining United States and foreign LETTERS PATENT or the like for the said invention, and for maintaining and perfecting the Assignee's right to said invention and LETTERS PATENT particularly in cases of interference, conflict, opposition and litigation.

IN TESTIMONY WHEREOF, I have hereunto set my hand this 4 day of January, 2005

  
\_\_\_\_\_  
Andrew R. Marks

## ASSIGNMENT

Assignment before issue of Letters Patent

Docket No. 5199-144

WHEREAS, I, **Donald W. Landry**, a resident of New York, County of New York, State of New York; (hereinafter "Assignor") have invented certain new and useful improvements in

**NOVEL ANTI-ARRHYTHMIC AND HEART FAILURE DRUGS THAT TARGET THE LEAK IN THE RYANODINE RECEPTOR (RYR2) AND USES THEREOF**

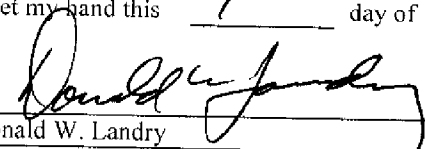
(hereinafter "invention") for which Assignor is making or has made application for LETTERS PATENT OF THE UNITED STATES, which application has been duly executed by Assignor on the day(s) and date(s) of these presents.

AND WHEREAS, **THE TRUSTEES OF COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK**, having its principal offices at: Office of the General Counsel, 412 Low Library, Mail Code 4308, 535 West 116<sup>th</sup> Street, New York, NY 10027, U.S.A., hereinafter called the Assignee, is desirous of acquiring the entire right, title and interest in and to said invention within the United States of America and its territorial possessions and all foreign countries and any United States or foreign LETTERS PATENT that may be granted therefor.

NOW, THIS INDENTURE WITNESSETH, that for good and valuable considerations, the receipt whereof is hereby acknowledged, Assignor has assigned, sold and transferred, and does hereby assign, sell and transfer to the said Assignee the entire right, title and interest in and to the said invention, within the United States of America and its territorial possessions and all foreign countries and in and to any LETTERS PATENT of the United States and foreign countries, including utility models, inventor's certificates and like government grants, and all divisions, reissues, continuations and extensions thereof that may be granted therefor, and the right to apply for LETTERS PATENT in foreign countries with full benefit of such priorities as may now or hereafter be granted to Assignor by local laws or by treaty, including any international convention, for the protection of industrial property, together with the right to extend the protection of said U.S. LETTERS PATENT to the various territorial possessions now owned or which may be hereafter acquired by the United States of America, all said rights to be held and enjoyed by the Assignee for its own use and benefit, and for the use and benefit of its successors or assigns, to the full end of the term for which said LETTERS PATENT may be granted, as fully and entirely as the same would have been held and enjoyed by Assignor if this assignment and sale had not been made. And Assignor does hereby request and authorize the Commissioner of Patents and Trademarks, U.S.A., to issue said U.S. LETTERS PATENT, when granted, in accordance with this assignment.

Assignor further covenants and agrees with the Assignee that Assignor has a full and unencumbered title to the invention hereby assigned, which title Assignor warrants unto the Assignee, and Assignor further agrees that Assignor will, without demanding any further consideration therefor, at the request but at the expense of the Assignee, do all lawful and just acts, including the execution and acknowledgment of instruments, that may be or become necessary for obtaining, sustaining, extending, reissuing or reexamining United States and foreign LETTERS PATENT or the like for the said invention, and for maintaining and perfecting the Assignee's right to said invention and LETTERS PATENT particularly in cases of interference, conflict, opposition and litigation.

IN TESTIMONY WHEREOF, I have hereunto set my hand this 4 day of January, 2005

  
Donald W. Landry

# ASSIGNMENT

Assignment before issue of Letters Patent

Docket No. 5199-144

WHEREAS, I, **Shi Xian Deng**, a resident of New York, County of New York, State of New York; (hereinafter "Assignor") have invented certain new and useful improvements in

## **NOVEL ANTI-ARRHYTHMIC AND HEART FAILURE DRUGS THAT TARGET THE LEAK IN THE RYANODINE RECEPTOR (RYR2) AND USES THEREOF**

(hereinafter "invention") for which Assignor is making or has made application for LETTERS PATENT OF THE UNITED STATES, which application has been duly executed by Assignor on the day(s) and date(s) of these presents.

AND WHEREAS, **THE TRUSTEES OF COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK**, having its principal offices at: Office of the General Counsel, 412 Low Library, Mail Code 4308, 535 West 116<sup>th</sup> Street, New York, NY 10027, U.S.A., hereinafter called the Assignee, is desirous of acquiring the entire right, title and interest in and to said invention within the United States of America and its territorial possessions and all foreign countries and any United States or foreign LETTERS PATENT that may be granted therefor.

NOW, THIS INDENTURE WITNESSETH, that for good and valuable considerations, the receipt whereof is hereby acknowledged, Assignor has assigned, sold and transferred, and does hereby assign, sell and transfer to the said Assignee the entire right, title and interest in and to the said invention, within the United States of America and its territorial possessions and all foreign countries and in and to any LETTERS PATENT of the United States and foreign countries, including utility models, inventor's certificates and like government grants, and all divisions, reissues, continuations and extensions thereof that may be granted therefor, and the right to apply for LETTERS PATENT in foreign countries with full benefit of such priorities as may now or hereafter be granted to Assignor by local laws or by treaty, including any international convention, for the protection of industrial property, together with the right to extend the protection of said U.S. LETTERS PATENT to the various territorial possessions now owned or which may be hereafter acquired by the United States of America, all said rights to be held and enjoyed by the Assignee for its own use and benefit, and for the use and benefit of its successors or assigns, to the full end of the term for which said LETTERS PATENT may be granted, as fully and entirely as the same would have been held and enjoyed by Assignor if this assignment and sale had not been made. And Assignor does hereby request and authorize the Commissioner of Patents and Trademarks, U.S.A., to issue said U.S. LETTERS PATENT, when granted, in accordance with this assignment.

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IN TESTIMONY WHEREOF, I have hereunto set my hand this 4 day of January, 2005

*Shi Xian Deng*  
 \_\_\_\_\_  
 Shi Xian Deng

## ASSIGNMENT

Assignment before issue of Letters Patent

Docket No. 5199-144

WHEREAS, I, **Zhen Zhuang Cheng**, a resident of New York, County of New York, State of New York; (hereinafter "Assignor") have invented certain new and useful improvements in

**NOVEL ANTI-ARRHYTHMIC AND HEART FAILURE DRUGS THAT TARGET THE LEAK IN THE RYANODINE RECEPTOR (RYR2) AND USES THEREOF**

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IN TESTIMONY WHEREOF, I have hereunto set my hand this 4 day of January, 2005

  
Zhen Zhuang Cheng