

**PATENT ASSIGNMENT**

Electronic Version v1.1  
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

**CONVEYING PARTY DATA**

Name	Execution Date
Zhoutao Chen	02/12/2009
Brian Christopher Godwin	03/03/2009
Gianni Calogero Ferreri	02/24/2009
David Roderick Riches	02/24/2009

**RECEIVING PARTY DATA**

Name:	454 Life Sciences Corporation
Street Address:	20 Commercial Street
City:	Branford
State/Country:	CONNECTICUT
Postal Code:	06405

**PROPERTY NUMBERS Total: 6**

Property Type	Number
Application Number:	12322119
Application Number:	61026319
Application Number:	11448462
Application Number:	60688042
Application Number:	60717964
Application Number:	60771818

**CORRESPONDENCE DATA**

Fax Number: (212)983-3115  
*Correspondence will be sent via US Mail when the fax attempt is unsuccessful.*  
 Phone: 212-935-3000  
 Email: sabelardo@mintz.com  
 Correspondent Name: Mintz Levin Cohn Ferris Glovsky et al.  
 Address Line 1: 666 Third Avenue, 24th Floor

CH \$240.00 12322119

Address Line 4: New York, NEW YORK 10017

ATTORNEY DOCKET NUMBER:

21465-537001US

NAME OF SUBMITTER:

Michelle A. Iwamoto

**Total Attachments: 18**

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RECORDATION FORM COVER SHEET  
PATENTS ONLY

FORM PTO-1595  
(Rev. 6-93)  
OMB No. 0651-0011 (exp. 4/94)

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):      Execution Date:      2. Name and address of receiving party(ies)
- Zhoutao Chen      February 12, 2009      454 Life Sciences Corporation  
Brian Christopher Godwin      March 3, 2009      20 Commercial Street  
Gianni Calogero Ferreri      February 24, 2009      Branford, Connecticut 06405  
David Roderick Riches      February 24, 2009
- Additional name(s) of conveying party(ies) attached?  Yes  No      Additional name(s) & address(es) attached?  Yes  No
3. Nature of conveyance:
- Assignment       Merger  
 Security Agreement       Change of Name  
 Other

4. Application number(s) or patent number(s):
- If this document is being filed together with a new application, the execution date of the application is \_\_\_\_\_
- A. Patent Application No(s):      B. Patent No(s):
- 12/322,119, filed January 28, 2009  
61/026,319, filed February 5, 2008  
11/448,462, filed June 6, 2006  
60/688,042, filed June 6, 2005  
60/717,964, filed September 16, 2005  
60/771,818, filed February 8, 2006
- Additional numbers attached?  Yes  No

- |  |  |
|--|--|
| 5. Name and address of party to whom correspondence Concerning document should be mailed:  | 6. Total number of applications and patents involved: [ <u>6</u> ]   |
| Name: Ivor R. Elrifi, Esq.<br>Address: MINTZ, LEVIN, COHN, FERRIS<br>GLOVSKY and POPEO, P.C.<br>666 Third Avenue, 24 <sup>th</sup> Floor<br>New York, New York 10017<br>Telephone: (212) 935-3000<br>Telefax: (212) 983-3115<br>Customer No. 35437 | 7. Total fee (37 CFR 3.41)      \$240.00<br><input checked="" type="checkbox"/> Charge to Deposit Account 50-0311.<br><input checked="" type="checkbox"/> The Commissioner is authorized to charge Deposit Account No: 50-0311, Reference No. 21465-537001US for any deficiencies. |

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.*
- Michelle A. Iwamoto, Reg. No. 55,296      Michelle A Iwamoto      March 6, 2009
- Name of Person Signing      Signature      Date

Total number of pages including cover sheet, attachments, and document: (18 pages total, including four counterparts)

Mail documents to be recorded with required cover sheet information to:  
MAIL STOP ASSIGNMENT RECORDATION SERVICES  
Director of the United States Patent and Trademark Office  
P. O. Box 1450; Alexandria, VA 22313-1450

## ASSIGNMENT

I, Zhoutao **CHEN**, Brian Christopher **GODWIN**, Gianni Calogero **FERRERI** and David Roderick **RICHES**, the undersigned, for good and valuable consideration, the receipt of which is hereby acknowledged, hereby assign, sell and transfer to **454 Life Sciences Corporation**, a Delaware corporation, with offices at **20 Commercial Street, Branford, Connecticut 06405**, and its successors, assigns and legal representatives, all hereinafter referred to as the ASSIGNEE: (1) our entire right, title and interest for the United States and in all countries, in and to any and all inventions, discoveries and applications which are disclosed in the application for United States Letters Patent entitled:

## PAIRED END SEQUENCING

filed with the U.S. Patent and Trademark Office on January 28, 2009<sup>1</sup> and assigned Serial No. 12/322,119<sup>1</sup>, including any subsequently filed utility applications, which claim priority to U.S. Provisional Patent Application Serial No. **61/026,319**, filed on **February 5, 2008**, U.S. Patent Application Serial No. **11/448,462** filed **June 6, 2006**, U.S. Provisional Patent Application Serial No. **60/688,042**, filed **June 6, 2005**, U.S. Provisional Patent Application Serial No. **60/717,964**, filed **September 16, 2005** and U.S. Provisional Patent Application Serial No. **60/771,818**, filed **February 8, 2006**, including any renewals, revivals, reissues, reexaminations, extensions, continuations and divisions thereof and any substitute applications therefor; (2) the full and complete right to file patent applications in the name of the ASSIGNEE, its designee, or in my/our names at the ASSIGNEE, or its designee's election, on the aforesaid inventions, discoveries and applications in all countries of the world; (3) the entire right, title and interest in and to any Letters Patent which may issue thereon in the United States or in any country, and any renewals, revivals, reissues, reexaminations and extensions thereof, and any patents of confirmation, registration and importation of the same; and (4) the entire right, title and interest in all Convention and Treaty Rights of all kinds thereon, including without limitation all rights of priority in any country of the world, in and to the above inventions, discoveries and applications.

I hereby authorize and request the competent authorities to grant and to issue any and all such Letters Patent in the United States and throughout the world to the ASSIGNEE of the entire right, title and interest therein, as fully and entirely as the same would have been held and enjoyed by me/us had this assignment, sale and transfer not been made.

---

<sup>1</sup> Any attorney or agent of record and any registered attorney or agent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Chrysler Center, 666 Third Avenue, New York, NY 10017, Telephone No. (212) 935-3000, is hereby authorized to insert, when known.

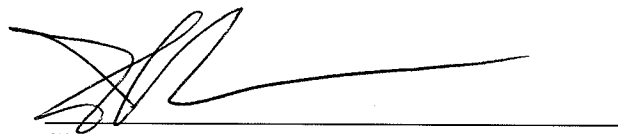
I agree, at any time, upon the request of the ASSIGNEE, to execute and to deliver to the ASSIGNEE any additional applications for patents for said inventions and discoveries, or any part or parts thereof, and any applications for patents of confirmation, registration and importation based on any Letters Patent issuing on said inventions, discoveries, or applications and divisions, continuations, renewals, revivals, reissues, reexaminations and extensions thereof.

I further agree at any time to execute and to deliver upon request of the ASSIGNEE such additional documents, if any, as are necessary or desirable to secure patent protection on said inventions, discoveries and applications throughout all countries of the world, and otherwise to do the necessary to give full effect to and to perfect the rights of the ASSIGNEE under this Assignment, including the execution, delivery and procurement of any and all further documents evidencing this assignment, transfer and sale as may be necessary or desirable.

I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

I further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

Date: 2/12/2009



Signature of: Zhoutao Chen

On this \_\_\_\_\_ day of \_\_\_\_\_ 2009, before me, the undersigned notary public, personally appeared \_\_\_\_\_, proved to me through satisfactory evidence of identification, which were \_\_\_\_\_, to be the person whose name is signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his)(her) knowledge and belief.

\_\_\_\_\_  
Notary Public  
My commission expires: \_\_\_\_\_

**CALIFORNIA JURAT WITH AFFIANT STATEMENT**

- See Attached Document (Notary to cross out lines 1-6 below)
- See Statement Below (Lines 1-5 to be completed only by document signer[s], *not* Notary)

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_

4 \_\_\_\_\_

5 \_\_\_\_\_

6 \_\_\_\_\_

Signature of Document Signer No. 1 \_\_\_\_\_ Signature of Document Signer No. 2 (if any) \_\_\_\_\_

State of California

County of San Diego

Subscribed and sworn to (or affirmed) before me on this

12 day of February, 2009, by

(1) Zhoutao Chen  
Name of Signer

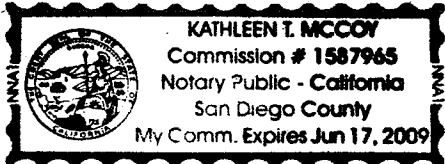
proved to me on the basis of satisfactory evidence to be the person who appeared before me (.) (.)

(and

(2) \_\_\_\_\_  
Name of Signer

proved to me on the basis of satisfactory evidence to be the person who appeared before me.)

Signature Kathleen L. McCoy  
Signature of Notary Public



Place Notary Seal Above

**OPTIONAL**

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

**Further Description of Any Attached Document**

Title or Type of Document: \_\_\_\_\_

Document Date: \_\_\_\_\_ Number of Pages: \_\_\_\_\_

Signer(s) Other Than Named Above: \_\_\_\_\_

**RIGHT THUMBPRINT OF SIGNER #1**

Top of thumb here

**RIGHT THUMBPRINT OF SIGNER #2**

Top of thumb here

Date: \_\_\_\_\_

Signature of: **Brian Christopher Godwin**

On this \_\_\_\_\_ day of \_\_\_\_\_ 2009, before me, the undersigned notary public, personally appeared \_\_\_\_\_, proved to me through satisfactory evidence of identification, which were \_\_\_\_\_, to be the person whose name is signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his)(her) knowledge and belief.

\_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_

Date: \_\_\_\_\_

Signature of: **Gianni Calogero Ferreri**

On this \_\_\_\_\_ day of \_\_\_\_\_ 2009, before me, the undersigned notary public, personally appeared \_\_\_\_\_, proved to me through satisfactory evidence of identification, which were \_\_\_\_\_, to be the person whose name is signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his)(her) knowledge and belief.

\_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_

Date: \_\_\_\_\_

Signature of: **David Roderick Riches**

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\_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_



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Date: \_\_\_\_\_  
Signature of: Zhoutao Chen

On this \_\_\_\_\_ day of \_\_\_\_\_ 2009, before me, the undersigned notary public, personally appeared \_\_\_\_\_, proved to me through satisfactory evidence of identification, which were \_\_\_\_\_, to be the person whose name is signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his)(her) knowledge and belief.

\_\_\_\_\_  
Notary Public  
My commission expires: \_\_\_\_\_

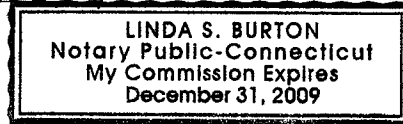
Date: 03-March-2009

*Brian Christopher Godwin*  
Signature of: **Brian Christopher Godwin**

On this 3RD day of MARCH 2009, before me, the undersigned notary public, personally appeared BRIAN Christopher Godwin, proved to me through satisfactory evidence of identification, which were 454 Company Picture ID BAAGLE to be the person whose name is signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his)(her) knowledge and belief.

*Linda S. Burton*  
Notary Public

My commission expires: December 31, 2009



Date: \_\_\_\_\_

Signature of: **Gianni Calogero Ferreri**

On this \_\_\_\_\_ day of \_\_\_\_\_ 2009, before me, the undersigned notary public, personally appeared \_\_\_\_\_, proved to me through satisfactory evidence of identification, which were \_\_\_\_\_, to be the person whose name is signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his)(her) knowledge and belief.

\_\_\_\_\_  
Notary Public  
My commission expires: \_\_\_\_\_

Date: \_\_\_\_\_

Signature of: **David Roderick Riches**

On this \_\_\_\_\_ day of \_\_\_\_\_ 2009, before me, the undersigned notary public, personally appeared \_\_\_\_\_, proved to me through satisfactory evidence of identification, which were \_\_\_\_\_, to be the person whose name is signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his)(her) knowledge and belief.

\_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_

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Date: \_\_\_\_\_

Signature of: Zhoutao Chen

On this \_\_\_\_\_ day of \_\_\_\_\_ 2009, before me, the undersigned notary public, personally appeared \_\_\_\_\_, proved to me through satisfactory evidence of identification, which were \_\_\_\_\_, to be the person whose name is signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his)(her) knowledge and belief.

\_\_\_\_\_  
Notary Public  
My commission expires: \_\_\_\_\_

Date: \_\_\_\_\_

Signature of: **Brian Christopher Godwin**

On this \_\_\_\_\_ day of \_\_\_\_\_ 2009, before me, the undersigned notary public, personally appeared \_\_\_\_\_, proved to me through satisfactory evidence of identification, which were \_\_\_\_\_, to be the person whose name is signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his)(her) knowledge and belief.

Notary Public

My commission expires: \_\_\_\_\_

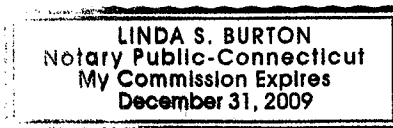
Date: 24 - Feb - 2009

  
Signature of: **Gianni Calogero Ferreri**

On this 24<sup>th</sup> day of February 2009, before me, the undersigned notary public, personally appeared GIANNI Calogero Ferreri, proved to me through satisfactory evidence of identification, which were 454 Company Photo ID BADGE, to be the person whose name is signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his)(her) knowledge and belief.

  
Notary Public

My commission expires: December 31, 2009



Date: \_\_\_\_\_  
Signature of: **David Roderick Riches**

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\_\_\_\_\_  
Notary Public  
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I hereby authorize and request the competent authorities to grant and to issue any and all such Letters Patent in the United States and throughout the world to the ASSIGNEE of the entire right, title and interest therein, as fully and entirely as the same would have been held and enjoyed by me/us had this assignment, sale and transfer not been made.

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<sup>1</sup> Any attorney or agent of record and any registered attorney or agent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Chrysler Center, 666 Third Avenue, New York, NY 10017, Telephone No. (212) 935-3000, is hereby authorized to insert, when known.

I agree, at any time, upon the request of the ASSIGNEE, to execute and to deliver to the ASSIGNEE any additional applications for patents for said inventions and discoveries, or any part or parts thereof, and any applications for patents of confirmation, registration and importation based on any Letters Patent issuing on said inventions, discoveries, or applications and divisions, continuations, renewals, revivals, reissues, reexaminations and extensions thereof.

I further agree at any time to execute and to deliver upon request of the ASSIGNEE such additional documents, if any, as are necessary or desirable to secure patent protection on said inventions, discoveries and applications throughout all countries of the world, and otherwise to do the necessary to give full effect to and to perfect the rights of the ASSIGNEE under this Assignment, including the execution, delivery and procurement of any and all further documents evidencing this assignment, transfer and sale as may be necessary or desirable.

I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

I further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

Date: \_\_\_\_\_

Signature of: **Zhoutao Chen**

On this \_\_\_\_\_ day of \_\_\_\_\_ 2009, before me, the undersigned notary public, personally appeared \_\_\_\_\_, proved to me through satisfactory evidence of identification, which were \_\_\_\_\_, to be the person whose name is signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his)(her) knowledge and belief.

\_\_\_\_\_  
Notary Public  
My commission expires: \_\_\_\_\_

Date: \_\_\_\_\_

Signature of: **Brian Christopher Godwin**

On this \_\_\_\_\_ day of \_\_\_\_\_ 2009, before me, the undersigned notary public, personally appeared \_\_\_\_\_, proved to me through satisfactory evidence of identification, which were \_\_\_\_\_, to be the person whose name is signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his)(her) knowledge and belief.

\_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_

Date: \_\_\_\_\_

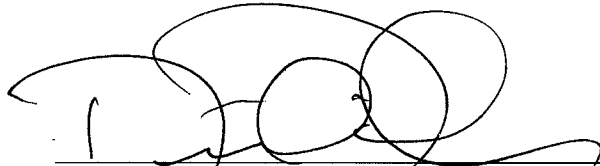
Signature of: **Gianni Calogero Ferreri**

On this \_\_\_\_\_ day of \_\_\_\_\_ 2009, before me, the undersigned notary public, personally appeared \_\_\_\_\_, proved to me through satisfactory evidence of identification, which were \_\_\_\_\_, to be the person whose name is signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his)(her) knowledge and belief.

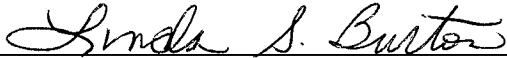
\_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_

Date: 24 FEB 2009

  
Signature of: **David Roderick Riches**

On this 24<sup>th</sup> day of February 2009, before me, the undersigned notary public, personally appeared DAVID RODERICK RICHES, proved to me through satisfactory evidence of identification, which were 454 COMPANY PHOTO ID BADGE, to be the person whose name is signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his)(her) knowledge and belief.



Notary Public

My commission expires: December 31, 2009

