503972473 08/23/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4019129

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
BIRGITTE BINDERUP SIMEN	06/30/2009
ELIZABETH PATRICIA ST. JOHN	06/30/2009

RECEIVING PARTY DATA

Name:	454 LIFE SCIENCES CORPORATION	
Street Address:	20 COMMERCIAL STREET	
City:	BRANFORD	
State/Country:	CONNECTICUT	
Postal Code:	06405	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14586563

CORRESPONDENCE DATA

Fax Number: (202)842-7899

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 6179372383

Address Line 1: COOLEY LLP

Address Line 2: 1299 PENNSYLVANIA AVENUE NW, SUITE 700

Address Line 4: WASHINGTON, D.C. 20004

ATTORNEY DOCKET NUMBER:	454L-040/R01US	
NAME OF SUBMITTER:	CHRISTINA K. STOCK	
SIGNATURE:	/Christina K. Stock/	
DATE SIGNED:	08/23/2016	

Total Attachments: 4

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PATENT 503972473 REEL: 039509 FRAME: 0136

ASSIGNMENT

I, Birgitte Binderup SIMEN and Elizabeth Patricia ST. JOHN, 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:

SYSTEM AND METHOD FOR DETECTION OF HIV TROPISM VARIANTS

filed with the U.S. Patent and Trademark Office on June 17, 2009

1 and assigned Serial No. 12/456,528

1 including any subsequently filed utility applications, which claims priority to U.S. Provisional Patent Application Serial No. 61/077,356, filed July 1, 2008, 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.

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.

Page 1 of 2

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 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: 30 fme, 2003 Signature of Birgitte Binderup	Simen
On this 30th day of June 2009, before me, the upublic, personally appeared Birgitte Binderup Simen, provisatisfactory evidence of identification, which were 154 company Photo 10 B the person whose name is signed on the preceding or attached document, as affirmed to me that the contents of the document are truthful and accurate to the knowledge and belief. Notary Public My commission expires: Determber 31, 2009 LINDA S. BURTON Netary Public-Connection My Commission Expires December 31, 2009	ndersigned notary ved to me through to be nd who swore or e best of (his)(her)
Date: Signature of: Elizabeth Patricia	St. John
On this day of 2009, before me, the upublic, personally appeared, provisatisfactory evidence of identification, which were the person whose name is signed on the preceding or attached document, a affirmed to me that the contents of the document are truthful and accurate to the knowledge and belief.	ndersigned notary ved to me through to be and who swore or
Notary Public My commission expires:	

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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.

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.

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Date:	Signature of: Birgitte Binderup Simen
public, personally appearedsatisfactory evidence of identification, where the person whose name is signed on the	
Notary Public My commission expires:	
Date: 06-30-09	Signature of: Elizabeth Patricia St. John
satisfactory evidence of identification, where the person whose name is signed on the affirmed to me that the contents of the doknowledge and belief.	2009, before me, the undersigned notary the Ratricia St. Tohn, proved to me through hich were 454 Company Roto /A Base, to be ne preceding or attached document, and who swore or ocument are truthful and accurate to the best of (his)(her) best 31, 2009.

Page 2 of 2 Notary Public-Connecticut My Commission Expires December 31, 2009

PATENT REEL: 039509 FRAME: 0140

RECORDED: 08/23/2016