

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT3261459

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
HOWARD HUGHES MEDICAL INSTITUTE	06/10/2013
RECEIVING PARTY DATA	
Name:	CALIFORNIA INSTITUTE OF TECHNOLOGY
Street Address:	1200 EAST CALIFORNIA BOULEVARD
Internal Address:	MAIL STOP 201-85
City:	PASADENA
State/Country:	CALIFORNIA
Postal Code:	91125
Name:	THE ROCKEFELLER UNIVERSITY
Street Address:	1230 YORK AVENUE
City:	NEW YORK
State/Country:	NEW YORK
Postal Code:	10065
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	13558312
CORRESPONDENCE DATA	
Fax Number:	(626)577-8800
<i>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.</i>	
Phone:	626-795-9900
Email:	pto@cph.com
Correspondent Name:	CHRISTIE, PARKER & HALE, LLP
Address Line 1:	P.O. BOX 29001
Address Line 4:	GLENDALE, CALIFORNIA 91209-9001
ATTORNEY DOCKET NUMBER:	69598(#2) NBC/CLM
NAME OF SUBMITTER:	CHRISTINA L. MALINOSKY
SIGNATURE:	/Christina L. Malinosky/
DATE SIGNED:	03/11/2015

Total Attachments: 20

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CORRECTIVE ASSIGNMENT

WHEREAS, HOWARD HUGHES MEDICAL INSTITUTE ("HHMI" and "ASSIGNOR"), having an address at 4000 Jones Bridge Road, Chevy Chase, Maryland 20815, is an owner by the assignment recorded at Reel/Frame 029107/0398 from (a) Pamela J. Bjorkman, executed on August 1, 2011 and (b) Michel C. Nussenzweig, executed on August 1, 2011, of certain new and useful improvements disclosed in an application for United States Letters Patent entitled **COMPOSITIONS AND METHODS FOR IMPROVING POTENCY AND BREADTH OF HIV ANTIBODIES**, filed July 25, 2012, Application No. 13/558,312, together with claim to the priority of United States Provisional Application Nos. 61/511,425, filed July 25, 2011 and 61/523,244, filed August 12, 2011;

AND WHEREAS CALIFORNIA INSTITUTE OF TECHNOLOGY, a California educational institution, having a place of business at 1200 East California Boulevard, Mail Stop 201-85, Pasadena, California 91125 and **THE ROCKEFELLER UNIVERSITY**, a New York educational institution, having a place of business at 1230 York Avenue, New York, New York 10065 (hereafter, together with any of their respective successors, legal representatives or assigns thereof, collectively referred to as "**ASSIGNEES**") want to acquire the entire right, title and interest in and to said improvements and application;

AND WHEREAS HHMI AND ASSIGNEES agree by execution of this **CORRECTIVE ASSIGNMENT** that the Assignment executed on October 17, 2012 (but not recorded) by Pamela Bjorkman as agent for HHMI transferring all the right, title, and interest of HHMI in and to the improvements and application that are the subject of this **CORRECTIVE ASSIGNMENT** to **CALIFORNIA INSTITUTE OF TECHNOLOGY** is null and void as if that Assignment executed on October 17, 2012 by Pamela J. Bjorkman as agent to HHMI was never executed.

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to HHMI in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, HHMI has sold, assigned, transferred and set over, and does hereby sell, assign, transfer and set over, to **ASSIGNEES** the entire right, title and interest in and to said improvements and application, including all divisions and continuations thereof, and all United States Letters Patents which may be granted thereon, and all reissues, reexaminations and extensions thereof, including the right to sue or otherwise bring action and to collect and receive damages therefrom, including for past infringement thereof, and all priority rights under all available International Agreements, Treaties and Conventions for the protection of intellectual property in its various forms in every participating country, and all applications for patents (including related rights such as utility-model registrations, inventor's certificates, and the like) heretofore or hereafter filed for said improvements in any foreign countries, and all patents (including all continuations, divisions, extensions, renewals, substitutes, and reissues thereof) granted for said improvements in any foreign countries; and HHMI hereby authorizes and requests the United States Commissioner of Patents and Trademarks, and any officials of foreign countries whose duty it is to issue patents on applications as aforesaid, to issue all patents for said improvements to **ASSIGNEES** in accordance with the terms of this **CORRECTIVE ASSIGNMENT**;

ASSIGNMENT
Docket No. 69598/C766

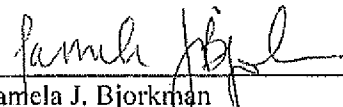
Joint

AND HHMI HEREBY covenants that it has full right to convey the entire interest herein assigned, and that it has not executed (pursuant to the agreement herein to render the Assignment executed on October 17, 2013 by Pamela Bjorkman as agent of HHMI null and void), and will not execute, any agreement in conflict herewith;

AND HHMI HEREBY further covenants and agrees that it will communicate to ASSIGNEES any facts known to HHMI respecting said improvements, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute and reissue applications, make all rightful oaths, and generally do everything possible to aid ASSIGNEES to obtain and enforce proper patent protection for said improvements in all countries.

AND WHEREAS HHMI has appointed PAMELA J. BJORKMAN and MICHEL C. NUSSENZWEIG its agents for the purpose of assigning by execution of this CORRECTIVE ASSIGNMENT the rights of HHMI in said improvements, and said application and all divisions and continuations thereof, and all United States Letters Patents which may be granted thereon, and all reissues, reexaminations and extensions thereof, as evidenced by the APPOINTMENT OF INVESTIGATOR AS AGENT OF PAMELA J. BJORKMAN and the APPOINTMENT OF INVESTIGATOR AS AGENT OF MICHEL C. NUSSENZWEIG, both executed on August 8, 2011.

IN TESTIMONY WHEREOF, I hereunto set my hand this 10 day of June 2013,
2013



Pamela J. Bjorkman
Appointed Agent for
Howard Hughes Medical Institute

STATE OF California)
COUNTY OF Los Angeles)

On June 10, 2013 before me, Gwendolyn Pollard,
Notary Public, personally appeared Pamela J. Bjorkman, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

ASSIGNMENT

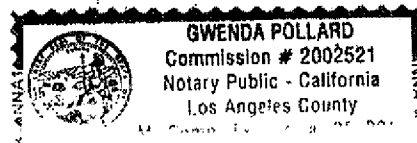
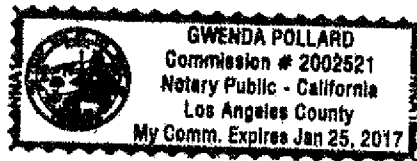
Docket No. 69598/C766

Joint

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Gwenda Pollard
Signature of Notary (Seal)



ASSIGNMENT
Docket No. 69598/C766

Joint

IN TESTIMONY WHEREOF, I hereunto set my hand this _____ day of _____,
20_____

Michel C. Nussenzweig
Appointed Agent for
Howard Hughes Medical Institute

STATE OF _____)
COUNTY OF _____)

On _____ before me, _____,
Notary Public, personally appeared **Michel C. Nussenzweig**, who proved to me on the basis of
satisfactory evidence to be the person whose name is subscribed to the within instrument and
acknowledged to me that he executed the same in his authorized capacity, and that by his
signature on the instrument the person, or the entity upon behalf of which the person acted,
executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of _____ that
the foregoing paragraph is true and correct.


WITNESS my hand and official seal.

Signature of Notary (Seal)

ASSIGNMENT
Docket No. 69598/C766

Joint

IN TESTIMONY WHEREOF, I hereunto set my hand this 17 day of June,
20 13


Fred Farina
Chief Innovation Officer and Executive
Director of the CALIFORNIA INSTITUTE
OF TECHNOLOGY

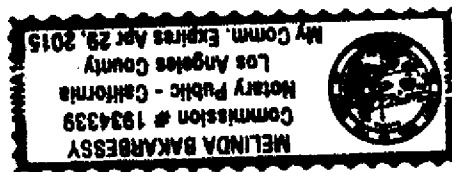
STATE OF California
COUNTY OF Los Angeles

On June 17, 2013 before me, Melinda Bakarbessy
Notary Public, personally appeared **Fred Farina**, who proved to me on the basis of satisfactory
evidence to be the person whose name is subscribed to the within instrument and acknowledged
to me that he executed the same in his authorized capacity, and that by his signature on the
instrument the person, or the entity upon behalf of which the person acted, executed the
instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that
the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Melinda Bakarbessy
Signature of Notary (Seal)



ASSIGNMENT
Docket No. 69598/C766

Joint

IN TESTIMONY WHEREOF, I hereunto set my hand this ____ day of _____,
20____

Kathleen A. Denis
Associate Vice President of Technology
Transfer
University of Rockefeller

STATE OF _____)
COUNTY OF _____)

On _____ before me, _____,
Notary Public, personally appeared **Kathleen A. Denis**, who proved to me on the basis of
satisfactory evidence to be the person whose name is subscribed to the within instrument and
acknowledged to me that she executed the same in her authorized capacity, and that by her
signature on the instrument the person, or the entity upon behalf of which the person acted,
executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of _____ that
the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary (Seal)

NBC/nbc

NBC PAS1236424.1-06/4/13 12:36 PM

APPOINTMENT OF INVESTIGATOR AS AGENT

Appointment by the Howard Hughes Medical Institute ("HHMI") of Pamela J. Bjorkman, PhD, an employee of HHMI, as its agent for the purpose of assigning certain rights to California Institute of Technology ("Institution").

WHEREAS, HHMI and Institution collaborate in the active conduct of medical research pursuant to an Agreement between them dated as of May 1, 1991 (the "Agreement");

WHEREAS, pursuant to the Agreement, HHMI has agreed to assign to Institution HHMI's rights with respect to inventions, discoveries, improvements, and other intellectual property, whether patentable or copyrightable (each a "Subject Property"), conceived or reduced to practice in the course of the research program conducted under the Agreement by employees of HHMI;

WHEREAS, research conducted pursuant to the Agreement by Pamela J. Bjorkman, PhD while employed by HHMI at Institution has resulted in the invention of a certain Subject Property entitled "Improving Anti-HIV Antibodies that Target the CD4 Binding-Site by Substituting Residue 54 of the Heavy Chain to a Residue with a Hydrophobic Sidechain that Mimics Phe43 of CD4," which is the subject of a patent application entitled "Improving Anti-HIV Antibodies that Target the CD4 Binding-Site by Substituting Residue 54 of the Heavy Chain to a Residue with a Hydrophobic Sidechain that Mimics Phe43 of CD4" filed in the U.S. Patent and Trademark Office on July 25, 2011 with Serial Number 61/511,425 (the "Invention"), and the Invention is a Subject Property; and

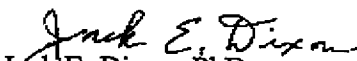
WHEREAS, HHMI wishes Pamela J. Bjorkman, PhD to act as its agent for the purpose of assigning to Institution the rights HHMI has in the Invention by reason of the research program conducted at Institution.

NOW THEREFORE, HHMI hereby appoints Pamela J. Bjorkman, PhD as its agent for the purpose of assigning the rights HHMI has or may acquire in the Invention by reason of the research program conducted at Institution to Institution in accordance with and subject to the conditions of the Agreement.

Executed: August 8, 2011


HOWARD HUGHES MEDICAL INSTITUTE

By:


Jack E. Dixon, PhD

Vice President and Chief Scientific Officer

ATTESTED:


Craig A. Alexander
Vice President and General Counsel

CIT 5930
HHMI 04922

PATENT
REEL: 035143 FRAME: 0832

CORRECTIVE ASSIGNMENT

WHEREAS, HOWARD HUGHES MEDICAL INSTITUTE ("HHMI" and "ASSIGNOR"), having an address at 4000 Jones Bridge Road, Chevy Chase, Maryland 20815, is an owner by the assignment recorded at Reel/Frame 029107/0398 from (a) Pamela J. Bjorkman, executed on August 1, 2011 and (b) Michel C. Nussenzweig, executed on August 1, 2011, of certain new and useful improvements disclosed in an application for United States Letters Patent entitled **COMPOSITIONS AND METHODS FOR IMPROVING POTENCY AND BREADTH OF HIV ANTIBODIES**, filed July 25, 2012, Application No. 13/558,312, together with claim to the priority of United States Provisional Application Nos. 61/511,425, filed July 25, 2011 and 61/523,244, filed August 12, 2011;

AND WHEREAS CALIFORNIA INSTITUTE OF TECHNOLOGY, a California educational institution, having a place of business at 1200 East California Boulevard, Mail Stop 201-85, Pasadena, California 91125 and **THE ROCKEFELLER UNIVERSITY**, a New York educational institution, having a place of business at 1230 York Avenue, New York, New York 10065 (hereafter, together with any of their respective successors, legal representatives or assigns thereof, collectively referred to as **"ASSIGNEES"**) want to acquire the entire right, title and interest in and to said improvements and application;

AND WHEREAS HHMI AND ASSIGNEES agree by execution of this **CORRECTIVE ASSIGNMENT** that the Assignment executed on October 17, 2012 (but not recorded) by Pamela Bjorkman as agent for HHMI transferring all the right, title, and interest of HHMI in and to the improvements and application that are the subject of this **CORRECTIVE ASSIGNMENT** to **CALIFORNIA INSTITUTE OF TECHNOLOGY** is null and void as if that Assignment executed on October 17, 2012 by Pamela J. Bjorkman as agent to HHMI was never executed.

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to HHMI in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, HHMI has sold, assigned, transferred and set over, and does hereby sell, assign, transfer and set over, to **ASSIGNEES** the entire right, title and interest in and to said improvements and application, including all divisions and continuations thereof, and all United States Letters Patents which may be granted thereon, and all reissues, reexaminations and extensions thereof, including the right to sue or otherwise bring action and to collect and receive damages therefrom, including for past infringement thereof, and all priority rights under all available International Agreements, Treaties and Conventions for the protection of intellectual property in its various forms in every participating country, and all applications for patents (including related rights such as utility-model registrations, inventor's certificates, and the like) heretofore or hereafter filed for said improvements in any foreign countries, and all patents (including all continuations, divisions, extensions, renewals, substitutes, and reissues thereof) granted for said improvements in any foreign countries; and HHMI hereby authorizes and requests the United States Commissioner of Patents and Trademarks, and any officials of foreign countries whose duty it is to issue patents on applications as aforesaid, to issue all patents for said improvements to **ASSIGNEES** in accordance with the terms of this **CORRECTIVE ASSIGNMENT**;

ASSIGNMENT

Docket No. 69598/C766

Joint

AND HHMI HEREBY covenants that it has full right to convey the entire interest herein assigned, and that it has not executed (pursuant to the agreement herein to render the Assignment executed on October 17, 2013 by Pamela Bjorkman as agent of HHMI null and void), and will not execute, any agreement in conflict herewith;

AND HHMI HEREBY further covenants and agrees that it will communicate to ASSIGNEES any facts known to HHMI respecting said improvements, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute and reissue applications, make all rightful oaths, and generally do everything possible to aid ASSIGNEES to obtain and enforce proper patent protection for said improvements in all countries.

AND WHEREAS HHMI has appointed **PAMELA J. BJORKMAN** and **MICHEL C. NUSSENZWEIG** its agents for the purpose of assigning by execution of this **CORRECTIVE ASSIGNMENT** the rights of HHMI in said improvements, and said application and all divisions and continuations thereof, and all United States Letters Patents which may be granted thereon, and all reissues, reexaminations and extensions thereof, as evidenced by the **APPOINTMENT OF INVESTIGATOR AS AGENT OF PAMELA J. BJORKMAN** and the **APPOINTMENT OF INVESTIGATOR AS AGENT OF MICHEL C. NUSSENZWEIG**, both executed on August 8, 2011.

IN TESTIMONY WHEREOF, I hereunto set my hand this ____ day of _____,
20____

Pamela J. Bjorkman
Appointed Agent for
Howard Hughes Medical Institute

STATE OF _____)
COUNTY OF _____)

On _____ before me, _____,
Notary Public, personally appeared **Pamela J. Bjorkman**, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

ASSIGNMENT

Docket No. 69598/C766

Joint

I certify under PENALTY OF PERJURY under the laws of the State of _____ that
the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

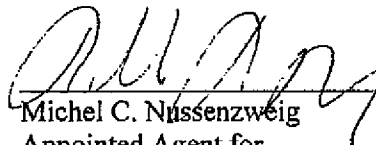
Signature of Notary

(Seal)

ASSIGNMENT
Docket No. 69598/C766

Joint

IN TESTIMONY WHEREOF, I hereunto set my hand this 10 day of March,
2015



Michel C. Nussenzweig
Appointed Agent for
Howard Hughes Medical Institute

STATE OF New York
COUNTY OF New York

On MARCH 10, 2015 before me, MARGUERITE T. NULTY,
Notary Public, personally appeared Michel C. Nussenzweig, who proved to me on the basis of
satisfactory evidence to be the person whose name is subscribed to the within instrument and
acknowledged to me that he executed the same in his authorized capacity, and that by his
signature on the instrument the person, or the entity upon behalf of which the person acted,
executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of New York that
the foregoing paragraph is true and correct.

WITNESS my hand and official seal.


Signature of Notary (Seal)

MARGUERITE T. NULTY
Notary Public, State of New York
No. 01NU4638775
Qualified in Nassau County
Commission Expires Aug. 31, 2018

ASSIGNMENT
Docket No. 69598/C766

Joint

IN TESTIMONY WHEREOF, I hereunto set my hand this ____ day of _____,
20____

Fred Farina
Chief Innovation Officer and Executive
Director of the CALIFORNIA INSTITUTE
OF TECHNOLOGY

STATE OF _____)
COUNTY OF _____)

On _____ before me, _____,
Notary Public, personally appeared **Fred Farina**, who proved to me on the basis of satisfactory
evidence to be the person whose name is subscribed to the within instrument and acknowledged
to me that he executed the same in his authorized capacity, and that by his signature on the
instrument the person, or the entity upon behalf of which the person acted, executed the
instrument.

I certify under PENALTY OF PERJURY under the laws of the State of _____ that
the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary (Seal)

ASSIGNMENT
Docket No. 69598/C766

Joint

IN TESTIMONY WHEREOF, I hereunto set my hand this _____ day of _____,
20____

Kathleen A. Denis
Associate Vice President of Technology
Transfer
University of Rockefeller

STATE OF _____)
COUNTY OF _____)

On _____ before me, _____,
Notary Public, personally appeared **Kathleen A. Denis**, who proved to me on the basis of
satisfactory evidence to be the person whose name is subscribed to the within instrument and
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executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of _____ that
the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary (Seal)

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APPOINTMENT OF INVESTIGATOR AS AGENT

Appointment by the Howard Hughes Medical Institute ("HHMI") of Michel C. Nussenzweig, MD, PhD, an employee of HHMI, as its agent for the purpose of assigning certain rights to The Rockefeller University ("Institution").

WHEREAS, HHMI and Institution collaborate in the active conduct of medical research pursuant to an Agreement between them dated as of August 12, 1986 (the "Agreement");

WHEREAS, pursuant to the Agreement, HHMI has agreed to assign to Institution HHMI's rights with respect to intellectual property resulting from research by HHMI employees, alone or with others, at the Institution during the term of the Agreement, whether or not patentable or copyrightable, and whether funded in whole or in part by HHMI (each a "Subject Property");


WHEREAS, research conducted pursuant to the Agreement by Michel C. Nussenzweig, MD, PhD while employed by HHMI at Institution has resulted in the invention of a certain Subject Property entitled "Overcoming HIV Pathways for Escape Using Rationally-Designed Anti-HIV Antibodies," which is the subject of a patent application entitled "Overcoming HIV Pathways for Escape Using Rationally-Designed Anti-HIV Antibodies" filed in the U.S. Patent and Trademark Office on June 21, 2012 with Serial Number 61/662,594 (the "Invention"), and the Invention is a Subject Property; and

WHEREAS, HHMI wishes Michel C. Nussenzweig, MD, PhD to act as its agent for the purpose of assigning to Institution the rights HHMI has in the Invention by reason of the research program conducted at Institution.


NOW THEREFORE, HHMI hereby appoints Michel C. Nussenzweig, MD, PhD as its agent for the purpose of assigning the rights HHMI has or may acquire in the Invention by reason of the research program conducted at Institution to Institution in accordance with and subject to the conditions of the Agreement.

Executed: July 11, 2012

HOWARD HUGHES MEDICAL INSTITUTE

By: 
Jack E. Dixon, PhD
Vice President and Chief Scientific Officer

ATTESTED:


Craig A. Alexander
Vice President and General Counsel

RU 1097
HHMI 05201

CORRECTIVE ASSIGNMENT

WHEREAS, HOWARD HUGHES MEDICAL INSTITUTE ("HHMI" and "ASSIGNOR"), having an address at 4000 Jones Bridge Road, Chevy Chase, Maryland 20815, is an owner by the assignment recorded at Reel/Frame 029107/0398 from (a) Pamela J. Bjorkman, executed on August 1, 2011 and (b) Michel C. Nussenzweig, executed on August 1, 2011, of certain new and useful improvements disclosed in an application for United States Letters Patent entitled **COMPOSITIONS AND METHODS FOR IMPROVING POTENCY AND BREADTH OF HIV ANTIBODIES**, filed July 25, 2012, Application No. 13/558,312, together with claim to the priority of United States Provisional Application Nos. 61/511,425, filed July 25, 2011 and 61/523,244, filed August 12, 2011;

AND WHEREAS CALIFORNIA INSTITUTE OF TECHNOLOGY, a California educational institution, having a place of business at 1200 East California Boulevard, Mail Stop 201-85, Pasadena, California 91125 and **THE ROCKEFELLER UNIVERSITY**, a New York educational institution, having a place of business at 1230 York Avenue, New York, New York 10065 (hereafter, together with any of their respective successors, legal representatives or assigns thereof, collectively referred to as **"ASSIGNEES"**) want to acquire the entire right, title and interest in and to said improvements and application;

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NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to HHMI in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, HHMI has sold, assigned, transferred and set over, and does hereby sell, assign, transfer and set over, to **ASSIGNEES** the entire right, title and interest in and to said improvements and application, including all divisions and continuations thereof, and all United States Letters Patents which may be granted thereon, and all reissues, reexaminations and extensions thereof, including the right to sue or otherwise bring action and to collect and receive damages therefrom, including for past infringement thereof, and all priority rights under all available International Agreements, Treaties and Conventions for the protection of intellectual property in its various forms in every participating country, and all applications for patents (including related rights such as utility-model registrations, inventor's certificates, and the like) heretofore or hereafter filed for said improvements in any foreign countries, and all patents (including all continuations, divisions, extensions, renewals, substitutes, and reissues thereof) granted for said improvements in any foreign countries; and HHMI hereby authorizes and requests the United States Commissioner of Patents and Trademarks, and any officials of foreign countries whose duty it is to issue patents on applications as aforesaid, to issue all patents for said improvements to **ASSIGNEES** in accordance with the terms of this **CORRECTIVE ASSIGNMENT**;

ASSIGNMENT
Docket No. 69598/C766

Joint

AND HHMI HEREBY covenants that it has full right to convey the entire interest herein assigned, and that it has not executed (pursuant to the agreement herein to render the Assignment executed on October 17, 2013 by Pamela Bjorkman as agent of HHMI null and void), and will not execute, any agreement in conflict herewith;

AND HHMI HEREBY further covenants and agrees that it will communicate to ASSIGNEES any facts known to HHMI respecting said improvements, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute and reissue applications, make all rightful oaths, and generally do everything possible to aid ASSIGNEES to obtain and enforce proper patent protection for said improvements in all countries.

AND WHEREAS HHMI has appointed **PAMELA J. BJORKMAN** and **MICHEL C. NUSSENZWEIG** its agents for the purpose of assigning by execution of this **CORRECTIVE ASSIGNMENT** the rights of HHMI in said improvements, and said application and all divisions and continuations thereof, and all United States Letters Patents which may be granted thereon, and all reissues, reexaminations and extensions thereof, as evidenced by the **APPOINTMENT OF INVESTIGATOR AS AGENT OF PAMELA J. BJORKMAN** and the **APPOINTMENT OF INVESTIGATOR AS AGENT OF MICHEL C. NUSSENZWEIG**, both executed on August 8, 2011.

IN TESTIMONY WHEREOF, I hereunto set my hand this _____ day of _____,
20____

Pamela J. Bjorkman
Appointed Agent for
Howard Hughes Medical Institute

STATE OF _____)
COUNTY OF _____)

On _____ before me, _____,
Notary Public, personally appeared **Pamela J. Bjorkman**, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

ASSIGNMENT
Docket No. 69598/C766

Joint

I certify under PENALTY OF PERJURY under the laws of the State of _____ that
the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary (Seal)

ASSIGNMENT
Docket No. 69598/C766

Joint

IN TESTIMONY WHEREOF, I hereunto set my hand this ____ day of _____,
20____

Michel C. Nussenzweig
Appointed Agent for
Howard Hughes Medical Institute

STATE OF _____)
COUNTY OF _____)

On _____ before me, _____,
Notary Public, personally appeared **Michel C. Nussenzweig**, who proved to me on the basis of
satisfactory evidence to be the person whose name is subscribed to the within instrument and
acknowledged to me that he executed the same in his authorized capacity, and that by his
signature on the instrument the person, or the entity upon behalf of which the person acted,
executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of _____ that
the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary (Seal)

ASSIGNMENT
Docket No. 69598/C766

Joint

IN TESTIMONY WHEREOF, I hereunto set my hand this _____ day of _____,
20 _____

Fred Farina
Chief Innovation Officer and Executive
Director of the CALIFORNIA INSTITUTE
OF TECHNOLOGY

STATE OF _____)
COUNTY OF _____)

On _____ before me, _____,
Notary Public, personally appeared **Fred Farina**, who proved to me on the basis of satisfactory
evidence to be the person whose name is subscribed to the within instrument and acknowledged
to me that he executed the same in his authorized capacity, and that by his signature on the
instrument the person, or the entity upon behalf of which the person acted, executed the
instrument.

I certify under PENALTY OF PERJURY under the laws of the State of _____ that
the foregoing paragraph is true and correct.

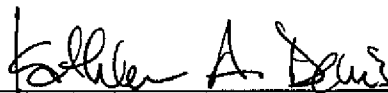
WITNESS my hand and official seal.

Signature of Notary (Seal)

ASSIGNMENT
Docket No. 69598/C766

Joint

IN TESTIMONY WHEREOF, I hereunto set my hand this 11th day of March,
2015



Kathleen A. Denis
Associate Vice President of Technology
Transfer
University of Rockefeller

STATE OF NM)
COUNTY OF NY)

On 11 March before me, Teresa Solomon,
Notary Public, personally appeared **Kathleen A. Denis**, who proved to me on the basis of
satisfactory evidence to be the person whose name is subscribed to the within instrument and
acknowledged to me that she executed the same in her authorized capacity, and that by her
signature on the instrument the person, or the entity upon behalf of which the person acted,
executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of NY that
the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Signature of Notary (Seal)

NBC/nbc

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TERESA SOLOMON
Notary Public State of New York
Qualified in New York County
No. 02SO4989836
Commission Expires 2.11.2018