505641058 08/27/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5687864

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
AIMEE CROMBIE SPEERSCHNEIDER	01/29/2018
DENNIS SHINJI YAMASHITA	01/19/2018
PHILIP MICHAEL PITIS	01/11/2018
MICHAEL JOHN HAWKINS	01/11/2018
GUODONG LIU	02/02/2018
TAMARA ANN MISKOWSKI DAUBERT	01/17/2018
CATHERINE C.K. YUAN	01/26/2018
DONNA ROMERO	01/29/2018

RECEIVING PARTY DATA

Name:	TREVENA, INC.
Street Address:	1018 WEST 8TH AVENUE
Internal Address:	SUITE A
City:	KING OF PRUSSIA
State/Country:	PENNSYLVANIA
Postal Code:	19406

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16286700

CORRESPONDENCE DATA

Fax Number: (610)640-7835

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: 610-640-7820

Email: bwdocket@pepperlaw.com Correspondent Name: DANIEL M. SCOLNICK Address Line 1: PEPPER HAMILTON LLP

Address Line 2: 400 BERWYN PARK, 899 CASSATT ROAD

Address Line 4: BERWYN, PENNSYLVANIA 19312

ATTORNEY DOCKET NUMBER:	138851.01821
NAME OF SUBMITTER:	MELISSA SEEBARAN

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REEL: 050177 FRAME: 0687 505641058

SIGNATURE:	/Melissa Seebaran/			
DATE SIGNED:	08/27/2019			
Total Attachments: 14				
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PATENT REEL: 050177 FRAME: 0688

ASSIGNMENT

WHEREAS, we, WHEREAS, we, Aimee Crombie Speerschneider, of Downingtown, Pennsylvania; Dennis Shinji Yamashita, of Cambridge, Massachusetts; Philip Michael Pitis, of North Wales, Pennsylvania; Michael John Hawkins, of Ambler, Pennsylvania; Guodong Liu, of Chalfont, Pennsylvania; Tamara Ann Miskowski Daubert, of Chalfont, Pennsylvania; Catherine C.K. Yuan, of King of Prussia, Pennsylvania; and Donna Romero, of Chesterfield, Missouri; "6-MEMBERED AZA-HETEROCYCLIC CONTAINING DELTA-OPIOID RECEPTOR MODULATING COMPOUNDS, METHODS OF USING AND MAKING THE SAME," along with Robert Jason Herr, Robert Borbo Kargbo, and Gregory J. Pacofsky, for which we have made an applications for Letters Patent of the United States, said applications having been assigned Application Serial Nos. U.S. Provisional Application No. 62/213,203 filed September 2, 2015, U.S. Patent Application No. 15/252,112, filed August 30, 2016, and PCT Application No. PCT/US2016/049526, filed August 30, 2016; and

WHEREAS, TREVENA, INC., hereinafter referred to as the ASSIGNEE, of 1018 West 8th Avenue, Suite A, King of Prussia, Pennsylvania 19406, a corporation of Delaware, is desirous of acquiring our entire right, title and interest in and to said inventions or improvements and in and to said application, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in any and all countries;

NOW, THEREFORE, for and in consideration of the sum of One Dollar (\$1.00) to each of us in hand paid by said ASSIGNEE, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, said ASSIGNORS, intending to be legally bound, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over to said ASSIGNEE, the entire right, title and interest in and to said inventions and/or improvements and said application and any and all continuations, divisions and renewals of and

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substitutes for said application and to and under any and all additional Letters Patent which may be granted on or as a result thereof in the United States, and any reissue or reissues or extension or extensions of said Letters Patent, and the entire right, title, and interest in said invention and/or improvements for all foreign countries, including all priority rights under the Paris Convention, and agree to execute, at the request of said ASSIGNEE or its assignees, all documents in connection with any application for foreign Letters Patent therefore, and the full right to sue for and recover all profits and damages recoverable for past infringement of the same, and the right to claim priority, and assign to and authorize said ASSIGNEE to file in our names applications for Letters Patent in the United States and all foreign countries, the same to be held and enjoyed by said ASSIGNEE, its successors, assigns, nominees or legal representatives, to the full end of the term or terms for which said Letters Patent respectively may be granted, reissued or extended, as fully and entirely as the same would have been held and enjoyed by ASSIGNOR had this assignment, sale and transfer not been made.

AND we hereby covenant that we have full right to convey our entire interest herein assigned, and that we have not executed and will not execute any agreement in conflict herewith, and we further covenant and agree that we will each time request is made and without undue delay, execute and deliver all such papers as may be necessary or desirable to perfect the title to said inventions or improvements, said application and said Letters Patent to said ASSIGNEE, its successors, assigns, nominees, or legal representatives, and each of us agrees to communicate to said ASSIGNEE or to its nominee all known facts respecting said inventions or improvements, said application and said Letters Patent, to testify in any legal proceedings, to sign all lawful papers, to execute all disclaimers and divisional, continuing, reissue and foreign applications, to make all rightful oaths, and generally to do everything possible to aid said ASSIGNEE, its successors, assigns, nominees and legal representatives to obtain and enforce for its or their own benefit proper patent protection for said inventions or improvements in any and all countries, all at the expense, however, of said ASSIGNEE, its successors, assigns, nominees, or legal representatives.

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PATENT APPLICATION
Joint Inventors - Notary

DOCKET NO. 138851.01801

AND we hereby authorize and request the Commissioner of Patents and Trademarks of

the United States and any official of any country or countries foreign to the United States whose

duty it is to issue patents on applications as aforesaid, to issue to said ASSIGNEE, as assignee of

our entire right, title and interest, any and all Letters Patent for said inventions or improvements,

including any and all Letters Patent of the United States which may be issued and granted on or

as a result of the application aforesaid, in accordance with the terms of this ASSIGNMENT.

AND this ASSIGNMENT may be executed in multiple counterparts, each of which shall

be deemed to be an original of this ASSIGNMENT. Additionally, we hereby authorize our

attorneys to collect the signature pages of each executed counterpart and to attach those signature

pages to a single copy of this instrument, which single copy and attached signature pages together

shall constitute an original of this ASSIGNMENT.

AND if the invention requires a biological deposit, ASSIGNORS also grant to

ASSIGNEE such control over any deposit made by ASSIGNORS as may be necessary to the

validity of the patent rights assigned herein.

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PATENT REEL: 050177 FRAME: 0691 IN WITNESS WHEREOF, we have hereunto set our hands and seals.

Doted: January 29, 2018 June Character
Aimee Crombie Speerschneider

State of Jelasone)
County of Yew Castle)

On this 27th day of Jacusty 20/8, before me, the undersigned, a Notary Public for the state, personally appeared Affinee Crombie Speerschneider personally known to me/proved to me on the basis of satisfactory evidence to be the person who subscribed the foregoing ASSIGNMENT and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the ASSIGNMENT the person, or the entity on behalf of which the person acted, executed the ASSIGNMENT.

WITNESS my hand and official seal,

X///26/ XAVA XAMA-Signature of Notary

KATHLEEN MARIE NOVELLO NOTARY PUBLIC STATE OF DELAWARE My Commission Expires June 20, 2018

DOCKET NO. 138851,01801

PATENT APPLICATION Joint Inventors - Notary

Dated: 19 Jan 2018	QAA n Ash By
	Dentis Shinji Yamashita
State of: California) County of: Saw)	SS,
County of: Soler)	
for the state, personally appeared Dennis me on the basis of satisfactory evider ASSIGNMENT and acknowledged to m	The state of the s
WITNESS my hand and official seal	A. P. Brianna Notary Public - Calif San Commission My Commission
Signature of Notary	

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ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

before me. A.P. Bhatia, Notary Public
(insert name and title of the officer)
nji Yamashita

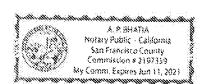
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/shé/théy executed the same in his/he/théir authorized capacity(ies), and that by his/ber/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) 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.

Signature 49-78 have literature

(Seal)



Dated: SAAMARY 11, 20	John .	Philip Michael Pitis
State of: PENWs ye Ungaring)	
County of Months MERY)	89 ç

On this // day of January 20/ before me, the undersigned, a Notary Public for the state, personally appeared Philip Michael Pitis, personally known to me/proved to me on the basis of satisfactory evidence to be the person who subscribed the foregoing ASSIGNMENT and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the ASSIGNMENT the person, or the entity on behalf of which the person acted, executed the ASSIGNMENT.

WITNESS my hand and official scale-

Signapor of Note

COMMONWEALTH **OF PENNSYLVANIA** NOTAMIAL SEAL

JAY O PETERMAN Noisty Publis Whatpain Twp: Monticonery County My Commission Espires Roy 8, 2018

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Dated: 1/11/	0011/	Michael John F	
State of:)		
County of:))	SS,	

On this 1) day of Associated 2018, before me, the undersigned, a Notary Public for the state, personally appeared Michael John Hawkins, personally known to me/proved to me on the basis of satisfactory evidence to be the person who subscribed the foregoing ASSIGNMENT and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the ASSIGNMENT the person, or the entity on behalf of which the person acted, executed the ASSIGNMENT.

WITNESS my hand and official seal.

Signature of Notary

COMMONWEALTH OF PENNSYLVANIA

NOTARIAL SEAL
HEATHER JOHNSON, Notary Public
Upper Merion Typ., Montgenery County
My Commission Expires May 21, 2018

1. 1

Guodong Liu

On this 2 day of Fe Best as 4, 20 (Before me, the undersigned, a Notary Public for the state, personally appeared Guodong Liu, personally known to me/proved to me on the basis of satisfactory evidence to be the person who subscribed the foregoing ASSIGNMENT and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the ASSIGNMENT the person, or the entity on behalf of which the person acted, executed the ASSIGNMENT.

WITNESS my hand and official seal.

Signature of Notary

NOTABIAL SEAL DIAME V. DIFFLYIO, NOTARY PUBLIC Treatffria Township, Chester County Go Commission Expires North V. 2001

, N _A		Caraca, Con No Nazal, Ve. Societ Tamara Ann Miskowski Daubert
State of Pennsylvania) County of Wondaymory)	;	55.
On this 17 day of Against for the state, personally appeared Tame/proved to me on the basis of satisf	ımârı sfacto	, 2018, before me, the undersigned, a Notary Public Ann Miskowski Daubert personally known to by evidence to be the person who subscribed the ed to me that he/she executed the same in his/her

authorized capacity, and that by his/her signature on the ASSIGNMENT the person, or the entity

WITNESS my hand and official seal.

on behalf of which the person acted, executed the ASSIGNMENT.

Signature of Notary

COMBONWEALTH OF PERHAPLVANIA

NOTARIAL SEAL HEATHER JOHNSON, Notary Public Upper Merlon Two., Montgomery County My Commission Expires May 21, 2018 Dated: 1/2/1 26-21/6 Catherine C.K. Yuan

State of: Pennsylvania }

County of: Montagement }

State of: Pennsylvania }

State of: Montagement }

On this <u>740</u> day of <u>Annalistics</u>, 2016, before me, the undersigned, a Notary Public for the state, personally appeared Catherine C.K. Yuan, personally known to me/proved to me on the basis of satisfactory evidence to be the person who subscribed the foregoing ASSIGNMENT and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the ASSIGNMENT the person, or the entity on behalf of which the person acted, executed the ASSIGNMENT.

WITNESS my hand and official seal.

COMMONWEALTH OF PENNSYLVANIA

NOTARIAL SEAL HEATHER JOHNSON, Notary Public Upper Merion Twp., Montgomery County My Commission Expires May 21, 2018

Dated: <u>Knyery 29</u>	, 20 18	Dero Horrers	
Control of the contro	St. Sprogotini,	Donna Romero	
State of: Mission	>		
)	88.	
County of: 5x. Louis)		

On this 27 day of 70, 2018, before me, the undersigned, a Notary Public for the state, personally appeared **Donna Romero**, personally known to me/proved to me on the basis of satisfactory evidence to be the person who subscribed the foregoing ASSIGNMENT and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the ASSIGNMENT the person, or the entity on behalf of which the person acted, executed the ASSIGNMENT.

WITNESS my hand and official seal.

Signature of Notary

DOCKET NO. 138851.018 PATENT APPLICATION
Dated: 3/28 ,20/19
/Trevena, Inc.
Joel S. Solomon
Title: By: Coupling Title:
State of: Dusylvania) County of: Chester) Ss.
County of: Chester) ss.
On this <u>28</u> day of <u>Mult</u> 20/3 before me, the undersigned, a Notary Public for the state, personally appeared <u>July 10/10</u> , personally known to
me/proved to me on the basis of satisfactory evidence to be the person who subscribed the foregoing ASSIGNMENT and acknowledged to me that he/she executed the same in his/he authorized capacity, and that by his/her signature on the ASSIGNMENT the person, or the entity on behalf of which the person acted, executed the ASSIGNMENT.
WITNESS my hand and official seal.
Juntes Park
Sighature of Motary

COMMONWEALTH OF PENNSYLVANIA

NOTARIAL SEAL JENNIFER A. SHANK, Notary Public Upper Dublin Twp., Montgomery County My Commission Expires May 10, 2020



PATENT REEL: 050177 FRAME: 0702

RECORDED: 08/27/2019