505237757 12/14/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
FLOYD E. ROMESBERG	07/26/2018
BRIAN LAMB	06/29/2018
YORKE ZHANG	07/27/2018

RECEIVING PARTY DATA

Name:	THE SCRIPPS RESEARCH INSTITUTE	
Street Address:	10550 NORTH TORREY PINES ROAD	
City:	LA JOLLA	
State/Country:	CALIFORNIA	
Postal Code:	92037	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16063107

CORRESPONDENCE DATA

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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.

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ATTORNEY DOCKET NUMBER:	46085-706.831
NAME OF SUBMITTER:	LORA KIM
SIGNATURE:	/Lora Kim/
DATE SIGNED:	12/14/2018

Total Attachments: 3

source=46085-706.831 Executed Assignment#page1.tif source=46085-706.831 Executed Assignment#page2.tif source=46085-706.831 Executed Assignment#page3.tif

PATENT 505237757 REEL: 047779 FRAME: 0361

PATENT ASSIGNMENT

Docket Number 46085-706.831

WHEREAS, the undersigned:

1. Floyd E. ROMESBERG 8109 Camino Del Sol La Jolla, CA 92037 2. Brian LAMB 3144 Cowley Way #3 San Diego, CA 92117 Yorke ZHANG
 4531 Lisann Street
 San Diego, CA 92117

(hereinafter "Inventor(s)"), have invented certain new and useful improvements in

PRODUCTION OF UNNATURAL NUCLEOTIDES USING A CRISPR/CAS9 SYSTEM

for which application serial number 16/063,107, a U.S. National Phase of PCT/US16/67353, filed on December 16, 2016 in the U.S. Receiving Office of the Patent Cooperation Treaty, was filed on June 15, 2018 in the United States Patent & Trademark Office;

(hereinafter, "Application(s)"). The term "Application(s)" also includes all patent applications that share or claim priority to or from the above application(s).

WHEREAS, The Scripps Research Institute, a corporation incorporated under the laws of the State of California having a place of business at 10550 North Torrey Pines Road, La Jolla, CA 92037, (hereinafter "Assignee"), is desirous of acquiring the entire right, title and interest in and to said Application(s), and the inventions disclosed therein, and in and to all embodiments of the inventions, heretofore conceived, made or discovered, whether jointly or severally, by said Inventor(s) (hereinafter collectively referred to as "Inventions"), and in and to any and all patents, inventor's certificates and other forms of protection thereon granted in the United States, foreign countries, or under any international convention, agreement, protocol, or treaty, including those filed under the Paris Convention for the Protection of Industrial Property, The Patent Cooperation Treaty or otherwise (hereinafter "Patent(s)").

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Inventor(s) to have been received in full from said Assignee:

- Said Inventor(s) do hereby sell, assign, transfer and convey unto said Assignee the entire right, title and interest (a) in and to said Inventions; (b) in and to said Applications, including the right to claim priority to and from said Application(s); (c) in and to each and every application that is a divisional, substitution, continuation, or continuation-in-part of any of said Application(s); (d) in and to said Patent(s) and each and every patent issuing or reissuing from any of the foregoing; (e) in and to each and every reissue, reexamination, renewal or extension of any kind of any of the foregoing; (f) in and to each and every patent and application filed outside the United States and corresponding to any of the foregoing; and (g) in and to all claims for past, present and future infringement of the Patent(s), including all rights to sue for and to receive and recover for Assignee's own use all past, present, and future lost profits, royalties, and damages of whatever nature recoverable from an infringement of the Patent(s).
- Said Inventor(s) hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest herein conveyed in the United States, foreign countries, or under any international convention, agreement, protocol, or treaty. Such cooperation by said Inventor(s) shall include prompt production of pertinent facts and documents, giving of testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any applications covering said Inventions; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said Inventions; (d) for filing and prosecuting applications for reissuance of any said Patent(s); (e) for interference or other priority proceedings involving said Inventions; and (f) for legal proceedings involving said Inventions and any applications therefor and any Patent(s) granted thereon, including without limitation reissues and reexaminations, opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that reasonable expenses incurred by said Inventor(s) in providing such cooperation shall be paid for by said Assignee.
- 3. The terms and covenants of this assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Inventor(s), their respective heirs, legal representatives and assigns.
- 4. Said Inventor(s) hereby warrant, represent and covenant that said Inventor(s) have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.
- 5. Said Inventor(s) hereby request that any Patent(s) issuing in the United States, foreign countries, or under any international convention, agreement, protocol, or treaty, be issued in the name of the Assignee, or its successors and assigns, for the sole use of said Assignee, its successors, legal representatives and assigns.
- 6. This instrument will be interpreted and construed in accordance with the laws of the State of California, without regard to conflict of law principles. If any provision of this instrument is found to be illegal or unenforceable, the other provisions shall remain effective and enforceable to the greatest extent permitted by law. This instrument may be executed in counterparts, each of which is deemed an original, but all of which together constitute one and the same agreement.

IN WITNESS WHEREOF, said Inventor(s) have executed and delivered this instrument to said Assignee as of the dates written below:

Page 1 of 3

/PATENT ASSIGNMENT	Docket Number 46085-706.831
Date: 7/4/8 Fløyd E. ROMESBERG	
A notary public or other officer completing this certificate verifies only the this certificate is attached, and not the truthfulness, accuracy, or validity of that	
State of California County of San Diego On July 26, 2018 before me, Bethany M.	Crandel Notary Public
Date personally appeared Floyd E. ROMESBERG Name(s) of	Here Insert Name and Title of the Officer
who proved to me on the basis of satisfactory evidence to be the person(s) wacknowledged to me that he/she/they executed the same in his/her/their authorithe instrument the person(s), or the entity upon behalf of which the person(s) a set that the person(s) and the instrument the person(s), or the entity upon behalf of which the person(s) are common to be a set of the person of the instrument the person of the perso	orized capacity(ies), and that by his/her/their signature(s) on
Place Notary Seal Above Date 61217 Blian In	
Brian LAMB 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 the State of California County of San Diego) On June 3, 2018 before me, Bethany M.	
personally appeared Brian LAMB Name(s) of:	Signer(s)
who proved to me on the basis of satisfactory evidence to be the person(s) vacknowledged to me that he/she/they executed the same in his/her/their auth the instrument the person(s), or the entity upon behalf of which the person(s) a	orized capacity(ies), and that by his/her/their signature(s) on leted, executed the instrument.
BETHANY B. CRANDELL S COMM. 8 2208083 Z COMM. 8 2208083 Z Notary Public - California C San Diego County My Comm. Escres Add 30, 2023 [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 Signature of Votary Public

Place Notary Seal Above

PATENT ASSIGNMENT	Docket Number 46085-706,831
Date: 7/27/2018 Yorke ZHANG	
A notary public or other officer completing this certificate verifies only the identity this certificate is attached, and not the truthfulness, accuracy, or validity of that documents	
State of California County of San Diego On July 27, 2018 before me, Bethany M. Cru	Notary Public Sert Name and Title of the Officer
personally appeared Yorke ZHANG	seri Name and Tille of the Officer
Name(s) of Signer(s)	
who proved to me on the basis of satisfactory evidence to be the person(s) whose na acknowledged to me that he/she/they executed the same in his/her/their authorized countries the instrument the person(s), or the entity upon behalf of which the person(s) acted, except the instrument the person(s), or the entity upon behalf of which the person(s) acted, except the instrument the person(s) acted the instrument the person (s) acted the instrument the instrument the person (s) acted the instrument	apacity(ies), and that by his/her/their signature(s) on
Place Notary Seal Above	
RECEIVED AND AGREED TO BY ASSIGNEE: THE SCRIPPS RESEARCH INST	<u>rture</u>
Date: 7/27/2018 Signature: Thomas Fitting, Esq. Ph.D. Title: Chief Patent Counsel	

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RECORDED: 12/14/2018

Page 3 of 3

PATENT REEL: 047779 FRAME: 0364