

## PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT6410919

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
FLOYD E. ROMESBERG	07/03/2020
VIVIAN T. DIEN	08/11/2020
AARON W. FELDMAN	10/27/2020
REBEKAH J. KARADEEMA	06/23/2020
LINGJUN LI	10/27/2020
MICHAEL P. LEDBETTER	06/24/2020
ANNE XIAOZHOU ZHOU	06/24/2020
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	THE SCRIPPS RESEARCH INSTITUTE
<b>Street Address:</b>	10550 NORTH TORREY PINES ROAD
<b>City:</b>	LA JOLLA
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	92037
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16900154
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(650)493-6811
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<b>Phone:</b>	(650) 493-9300
<b>Email:</b>	lmiller@wsgr.com, patentdocket@wsgr.com
<b>Correspondent Name:</b>	WILSON SONSINI GOODRICH & ROSATI
<b>Address Line 1:</b>	650 PAGE MILL ROAD
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<b>ATTORNEY DOCKET NUMBER:</b>	36271-808.201
<b>NAME OF SUBMITTER:</b>	LESLIE S. MILLER
<b>SIGNATURE:</b>	/Leslie S. Miller/
<b>DATE SIGNED:</b>	11/19/2020

**Total Attachments: 8**

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<b>PATENT ASSIGNMENT</b>	Docket Number 36271-808.201
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The undersigned:

1. Floyd E. ROMESBERG La Jolla, California (US)	2. Vivian T. DIEN San Diego, California (US)	3. Aaron W. FELDMAN San Diego, California (US)	4. Rebekah J. KARADEEMA San Diego, California (US)
5. Lingjun LI Xin Xiang (CN)	6. Michael P. LEDBETTER La Jolla, California (US)	7. Anne Xiaozhou ZHOU La Jolla, California (US)	

(the "Inventor(s)"), desire to assign the entire right, title and interest in and to the Inventions and Assigned Patents (each, as defined below) to 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, California 92037 (US), (the "Assignee"), and Assignee desires to acquire such right, title and interest, all on the terms and conditions set forth in this Patent Assignment.

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

1. Said Inventor(s) have invented certain new and useful inventions and improvements disclosed in the following patent(s) and patent application(s):

**REAGENTS AND METHODS FOR REPLICATION, TRANSCRIPTION, AND TRANSLATION IN SEMI-SYNTHETIC ORGANISMS**

for which application serial number 16/900,154 was filed on June 12, 2020 in the United States Patent and Trademark Office

(the "Listed Patent(s)"). As used herein: "Assigned Patents" means (a) the Listed Patent(s), (b) all Patents that share priority with or claim priority to or from the Listed Patent(s), including each and every Patent that is a divisional, substitution, continuation, continuation-in-part, non-provisional, or national phase application of any of the Listed Patent(s), (c) all Patents applied for on an invention disclosed within the Patents included in foregoing subclauses (a)-(b), (d) each and every Patent granting, issuing or reissuing from any of the foregoing under subclauses (a)-(c), (e) each and every reissue, reexamination, renewal or extension of any kind of any of the foregoing under subclauses (a)-(d), and (f) each and every Patent filed outside the United States and corresponding to any of the foregoing under subclauses (a)-(e). "Patents" means (i) patents, certifications of inventions, inventor's certificates and other forms of protection granted on any invention 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, and (ii) applications therefor (whether provisional, converted provisional, utility, design, plant, utility model, non-provisional or otherwise).

2. Said Inventor(s) do hereby sell, assign, transfer and convey unto said Assignee the entire right, title and interest (a) in and to the Assigned Patents, including the right to claim priority to and from said Assigned Patents; (b) in and to the inventions disclosed in the Assigned Patents, and in and to all embodiments of the inventions, heretofore conceived, made or discovered, whether jointly or severally, by said Inventor(s) (the "Inventions") and (c) in and to all claims for past, present and future infringement of the Assigned Patents, 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 Assigned Patents.

3. 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 filing, prosecuting or maintaining any of the Assigned Patents; (c) for filing, prosecuting or maintaining applications for reissuance of any said Assigned Patents; (d) for interference or other priority proceedings involving said Assigned Patents or Inventions; and (e) for legal proceedings involving said Inventions or Assigned Patents, including without limitation reissues and reexaminations, IPRs, opposition and other post-grant 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.

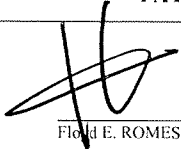

4. The terms and covenants of this assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Inventor(s), their respective heirs, legal representatives and assigns.

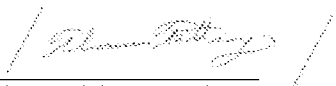
5. Said Inventor(s) hereby warrant, represent and covenant that said Inventor(s) have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

6. Said Inventor(s) hereby request that any Assigned Patents issuing or granting in the United States, foreign countries, or under any international convention, agreement, protocol, or treaty, be issued or granted in the name of the Assignee, or its successors and assigns, for the sole use of said Assignee, its successors, legal representatives and assigns.



7. 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.

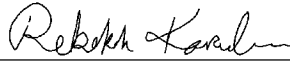
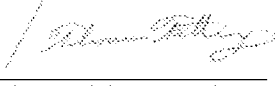
IN WITNESS WHEREOF, said Inventor(s) have executed and delivered this instrument to said Assignee as of the dates written below:

PATENT ASSIGNMENT		Docket Number 36271-808.201
Date: <u>3/16/2020</u>	 Floyd E. ROMESBERG	
Date: _____	Vivian T. DIEN	
Date: _____	Aaron W. FELDMAN	
Date: _____	Rebekah J. KARADEEMA	
Date: _____	Lingjun LI	
Date: _____	Michael P. LEDBETTER	
Date: _____	Anne Xiaozhou ZHOU	
RECEIVED AND AGREED TO BY ASSIGNEE: <b>THE SCRIPPS RESEARCH INSTITUTE</b>		
Date: <u>October 27, 2020</u>	Signature:  Name: Thomas Fitting, Esq., Ph.D. Title: Chief Patent Counsel	

PATENT ASSIGNMENT		Docket Number 36271-808.201
Date: _____	_____ Floyd E. ROMESBERG	
Date: <u>8/11/20</u>	_____ Vivian T. DIEN	
Date: _____	_____ Aaron W. FELDMAN	
Date: _____	_____ Rebekah J. KARADEEMA	
Date: _____	_____ Lingjun LI	
Date: _____	_____ Michael P. LEDBETTER	
Date: _____	_____ Anne Xiaozhou ZHOU	
<b>RECEIVED AND AGREED TO BY ASSIGNEE:</b> <b>THE SCRIPPS RESEARCH INSTITUTE</b>		
Date: <u>October 27, 2020</u>	Signature: <u></u> Name: Thomas Fitting, Esq., Ph.D. Title: Chief Patent Counsel	


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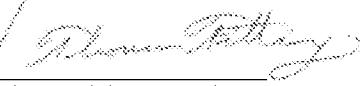
PATENT ASSIGNMENT		Examiner: November 2021-2024
Date	_____	_____
Date	_____	_____
Date	10/27/20	
Date	_____	_____
Date	_____	_____
Date	_____	_____
Date	_____	_____
Date	_____	_____
RECEIVED AND AGREED TO BY ASSIGNEE: THE MURPHY RESEARCH INSTITUTE		
Date	October 27, 2020	Signature: 
		Name: Thomas F. Fetting, Esq. Ph.D.
		Title: Chief Patent Counsel

PATENT ASSIGNMENT		Docket Number 36271-808.201
Date: _____	_____ Floyd E. ROMESBERG	
Date: _____	_____ Vivian T. DIEN	
Date: _____	_____ Aaron W. FELDMAN	
Date: <u>06/23/2020</u>	 _____ Rebekah J. KARADEEMA	
Date: _____	_____ Lingjun LI	
Date: _____	_____ Michael P. LEDBETTER	
Date: _____	_____ Anne Xiaozhou ZHOU	
<b>RECEIVED AND AGREED TO BY ASSIGNEE:</b> <b>THE SCRIPPS RESEARCH INSTITUTE</b>		
Date: <u>October 27, 2020</u>	Signature:  _____ Name: Thomas Fitting, Esq., Ph.D. Title: Chief Patent Counsel	

PATENT ASSIGNMENT		Docket Number 36271-808.201
Date: _____	Floyd E. ROMBERG	
Date: _____	Vivian J. DIEN	
Date: _____	Aaron W. FELDMAN	
Date: _____	Rebekah J. KARADEEMA	
Date: <u>October 27, 2020</u>	<u>Linguo LI</u>	
Date: _____	Michael P. LEDBETTER	
Date: _____	Anne Xiaozhen ZHOU	
RECEIVED AND AGREED TO BY ASSIGNEE: THE SCRIPPS RESEARCH INSTITUTE		
Date: <u>October 27, 2020</u>	Signature: <u>[Signature]</u> Name: Thomas Fitting, Esq., Ph.D. Title: Chief Patent Counsel	



PATENT ASSIGNMENT		Docket Number 36271-808.201
Date: _____	Floyd E. ROMESBERG	
Date: _____	Vivian T. DIEM	
Date: _____	Aaron W. FELDMAN	
Date: _____	Rebekah J. KARADEEMA	
Date: _____	Lingon LI	
Date: <u>2020-06-24</u>	 Michael P. LEDBETTER	
Date: _____	Anne Xiaozhou ZHOU	
RECEIVED AND AGREED TO BY ASSIGNEE: THE SCRIPPS RESEARCH INSTITUTE		
Date: <u>October 27, 2020</u>	Signature:  Name: Thomas Filling, Esq., Ph.D. Title: Chief Patent Counsel	

PATENT ASSIGNMENT		Docket Number 36271-808.201
Date: _____	_____ Floyd E. ROMESBERG	
Date: _____	_____ Vivian T. DIEN	
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Date: _____	_____ Rebekah J. KARADEEMA	
Date: _____	_____ Lingjun LI	
Date: _____	_____ Michael P. LEDBETTER	
Date: <u>06/24/2020</u>	 _____ Anne Xiaozhou ZHOU	
<div>RECEIVED AND AGREED TO BY ASSIGNEE: <b>THE SCRIPPS RESEARCH INSTITUTE</b></div> <div style="margin-top: 20px;">Date: <u>October 27, 2020</u>      Signature:  Name: Thomas Fitting, Esq., Ph.D. Title: Chief Patent Counsel</div>		