PATENTS ONLY



To the Director of the U.S. Patent and Trademark Office: Ple	ease record the attached docui 103650781	
1. Name of conveying party(ies)	2. Name and address of receiving party(ies)	
Paul Schimmel	Name: The Scripps Research Institute	
Xiang-Lei Yang Bonnie Slike	Internal Address: 10550 North Torrey Pines Road, TPC-8,	
Xiaoling Xu	La Jolla, California 92037	
	No Charact Address and a second a second and	
3. Nature of conveyance/Execution Date(s):	Street Address: 10550 North Torrey Pines Road	
Execution Date(s) March 7, 2011 & July 27, 2011 Assignment Merger		
	City: La Jolla	
Security Agreement Change of Name		
Joint Research Agreement	State: California	
Government Interest Assignment	Country: USA Zip: 92037	
Executive Order 9424, Confirmatory License	,	
Other	Additional name(s) & address(es) attached? Yes X No	
4. Application or patent number(s): A. Patent Application No.(s)	nis document is being filed together with a new application. B. Patent No.(s) Received	
13/577,090	V DCT 2 2 2012 and 5th Floor . S	
Additional numbers	s attached? Yes No	
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved: 1	
Name: The Scripps Research Institute	7. Total fee (37 CFR 1.21(h) & 3.41) \$_40.00	
Internal Address:10550 North Torrey Pines Road, TPC-8	7. Total 100 (01 01 11 1.2 ((1) 0 0.41)	
Morrial National Costs Nation For Printed Costs (Costs)	Authorized to be charged to deposit account	
Street Address 1975 No. 11 Town Birds Book TDC 0	X Enclosed	
Street Address: 10550 North Torrey Pines Road, TPC-8	None required (government interest not affecting title)	
City: La Jolla	8. Payment Information	
	_ [
Phone Number: <u>858-784-2937</u>	Deposit Account Number 19-0962	
Fax Number: 858-784-9399	19/22/2012 AMULLINS 90009033 13577099 Authorized User Name	
Email Address:	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
9. Signature:	October 16, 2012	
Signature	Date	
Hugh Wang	Total number of pages including cover	
Name of Person Signing	sheet, attachments, and documents:	

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

Recordation Form Cover Sheet U.S. Patent Application Serial No. 13/577,090 Page -2-

Continuation of information in Item 1:

Min Guo

PATENT REEL: 029253 FRAME: 0475

ASSIGNMENT

Serial No. PCT/US2011/00210		Filed	February 4	2011
Serial No. <u>61/337,528</u>		Filed	February 4	2010
Serial No. 61/337,489		Filed	February 4	2010
Serial No. <u>61/337,488</u>		Filed	February 4	2010

In Consideration of One Dollar and other good and valuable considerations, the receipt of which is hereby acknowledged, the entire right, title and interest in the invention or improvements of the undersigned in MONOMERIC FORMS OF HUMAN AMINOACYL-TRNA SYNTHETASES HAVING NON-CANONICAL BIOLOGICAL ACTIVITIES and in the application for Letters Patent of the United States therefor, and in any reissue or extension of any letters Patent that may be granted upon said application are hereby assigned by the undersigned to THE SCRIPPS RESEARCH INSTITUTE, a public benefit, not-for-profit corporation of California, located at 10550 North Torrey Pines Road, La Jolla, USA 92037, and the heirs, successors, legal representatives and assigns of THE SCRIPPS RESEARCH INSTITUTE (herein collectively called said Assignee), and the Commissioner of Patents and Trademarks is hereby authorized and requested by the undersigned to issue said Letters Patent to said Assignee.

For said considerations it is hereby agreed by the undersigned, upon the request of said Assignee, to execute any necessary and proper oaths or affidavits relating to said application or required for the filing or prosecution of any divisional or continuing application thereof or for the filing or prosecution of any application for the reissue or extension of any Letters Patent that may be granted on said invention or improvements that said Assignee may deem necessary or expedient, and for said considerations it is further agreed by the undersigned, upon request of said Assignee, in the event of said application or any division thereof, or Letters Patent issued thereon, or any reissue or application for the reissue thereof, becomes involved in Interference, to cooperate to the best of the ability of the undersigned with said Assignee in the matters of preparing and executing the preliminary statement and giving and producing evidence in support thereof, and further to perform, on such request, any and all affirmative acts to obtain said Letters Patent and vest all rights therein hereby conveyed in said Assignee as fully and entirely as the same would have been held and enjoyed by the undersigned if this Assignment and sale had not been made. And for said considerations the entire right, title and interest in said invention or improvements, including all priority rights, and the right to claim priority rights and the privileges and benefits thereof, including those under the International Convention, and all other Conventions, and the right to file applications for patent in said Assignee's own name for said invention or improvements in each and every country of the world are hereby assigned and granted by the undersigned to said Assignee. It is further agreed by the undersigned, upon the request of said Assignee, to execute any and all documents that shall be required of the undersigned to be executed in connection with any and all applications for foreign Letters Patent therefor, including the prosecution thereof, and to execute any and all documents necessary to invest title in said foreign applications and patents in said Assignee. The attorneys of record in said application for patent are hereby authorized and requested by the undersigned to insert in this Assignment the date and serial number thereof in the places provided therefor.

***************************************	_(Seal)
Paul Schimmel	
Xiang-Lei Yang	_(Seal)
Bonnie Slike	_(Seal)
Xiaoling Xu	_(Seal)
Min Guo	_(Seal)

State of FLORIDA)		\cdot
County of PALM BEACH	SS	(P)
on 7th day of March, 2011	before me,	Mar South Percente
, personally app	peared MIN	940

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/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/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.

Notary Public

ASSIGNMENT

Serial No. <u>PCT/US2011/00210</u>	Filed February 4, 2011
Serial No. <u>61/337,528</u>	Filed February 4, 2010
Serial No. 61/337,489	Filed February 4, 2010
Serial No. 61/337,488	Filed February 4, 2010

In Consideration of One Dollar and other good and valuable considerations, the receipt of which is hereby acknowledged, the entire right, title and interest in the invention or improvements of the undersigned in MONOMERIC FORMS OF HUMAN AMINOACYL-trna SYNTHETASES HAVING NON-CANONICAL BIOLOGICAL ACTIVITIES and in the application for Letters Patent of the United States therefor, and in any reissue or extension of any letters Patent that may be granted upon said application are hereby assigned by the undersigned to THE SCRIPPS RESEARCH INSTITUTE, a public benefit, not-for-profit corporation of California, located at 10550 North Torrey Pines Road, La Jolla, USA 92037, and the heirs, successors, legal representatives and assigns of THE SCRIPPS RESEARCH INSTITUTE (herein collectively called said Assignee), and the Commissioner of Patents and Trademarks is hereby authorized and requested by the undersigned to issue said Letters Patent to said Assignee.

For said considerations it is hereby agreed by the undersigned, upon the request of said Assignee, to execute any necessary and proper oaths or affidavits relating to said application or required for the filing or prosecution of any divisional or continuing application thereof or for the filing or prosecution of any application for the reissue or extension of any Letters Patent that may be granted on said invention or improvements that said Assignee may deem necessary or expedient, and for said considerations it is further agreed by the undersigned, upon request of said Assignee, in the event of said application or any division thereof, or Letters Patent issued thereon, or any reissue or application for the reissue thereof, becomes involved in Interference, to cooperate to the best of the ability of the undersigned with said Assignee in the matters of preparing and executing the preliminary statement and giving and producing evidence in support thereof, and further to perform, on such request, any and all affirmative acts to obtain said Letters Patent and vest all rights therein hereby conveyed in said Assignee as fully and entirely as the same would have been held and enjoyed by the undersigned if this Assignment and sale had not been made. And for said considerations the entire right, title and interest in said invention or improvements, including all priority rights, and the right to claim priority rights and the privileges and benefits thereof, including those under the International Convention, and all other Conventions, and the right to file applications for patent in said Assignee's own name for said invention or improvements in each and every country of the world are hereby assigned and granted by the undersigned to said Assignee. It is further agreed by the undersigned, upon the request of said Assignee, to execute any and all documents that shall be required of the undersigned to be executed in connection with any and all applications for foreign Letters Patent therefor, including the prosecution thereof, and to execute any and all documents necessary to invest title in said foreign applications and patents in said Assignee. The attorneys of record in said application for patents are basely authorized. Assignee. The attorneys of record in said application for patent are hereby authorized and requested by the undersigned to insert in this Assignment the date and serial number thereof in the places provided therefor.

Real)

Min Guo

(Seal)

Macine Xu the person (s) whose name(s) sistare subscribed to the within instrument and acknowledged to me that he/sho/they executed the same in his/her/their authorized capacity(ies), and that by his/her/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.

Notary Public

ASSIGNMENT

Serial No. PCT/US2011/00210	Filed February 4, 2011
Serial No. 61/337,528	Filed February 4, 2010
Serial No. <u>61/337,489</u>	Filed February 4, 2010
Serial No. 61/337,488	Filed February 4, 2010

In Consideration of One Dollar and other good and valuable considerations, the receipt of which is hereby acknowledged, the entire right, title and interest in the invention or improvements of the undersigned in MONOMERIC FORMS OF HUMAN AMINOACYL-trna SYNTHETASES HAVING NON-CANONICAL BIOLOGICAL ACTIVITIES and in the application for Letters Patent of the United States therefor, and in any reissue or extension of any letters Patent that may be granted upon said application are hereby assigned by the undersigned to THE SCRIPPS RESEARCH INSTITUTE, a public benefit, not-for-profit corporation of California, located at 10550 North Torrey Pines Road, La Jolla, USA 92037, and the heirs, successors, legal representatives and assigns of THE SCRIPPS RESEARCH INSTITUTE (herein collectively called said Assignee), and the Commissioner of Patents and Trademarks is hereby authorized and requested by the undersigned to issue said Letters Patent to said Assignee.

For said considerations it is hereby agreed by the undersigned, upon the request of said Assignee, to execute any necessary and proper oaths or affidavits relating to said application or required for the filing or prosecution of any divisional or continuing application thereof or for the filing or prosecution of any application for the reissue or extension of any Letters Patent that may be granted on said invention or improvements that said Assignee may deem necessary or expedient, and for said considerations it is further agreed by the undersigned, upon request of said Assignee, in the event of said application or any division thereof, or Letters Patent issued thereon, or any reissue or application for the reissue thereof, becomes involved in Interference, to cooperate to the best of the ability of the undersigned with said Assignee in the matters of preparing and executing the preliminary statement and giving and producing evidence in support thereof, and further to perform, on such request, any and all affirmative acts to obtain said Letters Patent and vest all rights therein hereby conveyed in said Assignee as fully and entirely as the same would have been held and enjoyed by the undersigned if this Assignment and sale had not been made. And for said considerations the entire right, title and interest in said invention or improvements, including all priority rights, the right to claim priority rights and the privileges and benefits thereof, including those under the International Convention, and all other Conventions, and the right to file applications for patent in said Assignee's own name for said invention or improvements in each and every country of the world are hereby assigned and granted by the undersigned to said Assignee. It is further agreed by the undersigned, upon the request of said Assignee, to execute any and all documents that shall be required of the undersigned to be executed in connection with any and all applications for foreign Letters Patent therefor, including the prosecution thereof, and to execute any and all documents necessary to invest title in said foreign applications and patents in said Assignee. The attorneys of record in said application for patent are hereby authorized and requested by the undersigned to insert in this Assignment the date and serial number thereof in the places provided therefor.

		(Seal)
	Paul Schimmel	
	Xiang-Lei Yang	_(Seal)
	Lanie Slike	(Seal)
÷	Xiaoling Xu	_(Seal)
	Min Guo	(Seal)
State of MD County of Howard ss		
On 7/27/20// before personally appeared //	me, Stephano T. No	<i>am</i>
me on the basis of satisfactory evidence subscribed to the within instrument and ac same in his/her/their authorized capacity on the instrument the person(s), or the en	e to be the person(s) whose naknowledged to me that he/she/they (ies), and that by his/her/their	executed the signature(s)

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

STEPHANO T. NAM Notary Public State of Maryland **Howard County** My commission exp. November 26, 2011

WITNESS my hand and official seal.

PATENT REEL: 029253 FRAME: 0478

to

RECORDED: 10/22/2012

executed the instrument.