

## PATENT ASSIGNMENT COVER SHEET

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 Stylesheet Version v1.2

EPAS ID: PAT4504790

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
HAITAO CUI	08/26/2016
WEI ZHU	08/26/2016
BENJAMIN HOLMES	08/25/2016
LIJIE GRACE ZHANG	08/26/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	THE GEORGE WASHINGTON UNIVERSITY, A CONGRESSIONALLY CHARTERED NOT-FOR-PROFIT CORPORATION
<b>Street Address:</b>	2121 I STREET, N.W.
<b>Internal Address:</b>	RICE HALL, SUITE 601
<b>City:</b>	WASHINGTON
<b>State/Country:</b>	D.C.
<b>Postal Code:</b>	20052
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15650397
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(202)344-8300
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<b>Correspondent Name:</b>	MIGUEL A. LOPEZ, PH.D.
<b>Address Line 1:</b>	VENABLE LLP
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<b>Address Line 4:</b>	WASHINGTON, D.C. 20043-9998
<b>ATTORNEY DOCKET NUMBER:</b>	123585.415961
<b>NAME OF SUBMITTER:</b>	MIGUEL A. LOPEZ, PH.D.
<b>SIGNATURE:</b>	/MIGUEL A. LOPEZ, PH.D./
<b>DATE SIGNED:</b>	07/14/2017

**Total Attachments: 3**

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**WORLDWIDE ASSIGNMENT**

WHEREAS, Haitao Cui, Wei Zhu, Benjamin Holmes and Lijie Grace Zhang, hereinafter referred to as the Assignor, have invented a certain improvement relating to **SMART RELEASE SYSTEM FOR GROWTH FACTOR DELIVERY AND COMBINED BONE AND VASCULAR GROWTH**, for which said Assignor has caused an application for United States Letters Patent to be prepared,

☐ this Assignment being executed with said application to be filed in the U.S. Patent and Trademark Office;

☐ said application having been filed in the U.S. Patent and Trademark Office on \_\_\_\_\_, and given Application No. \_\_\_\_\_;

☒ said U. S. Provisional Application having been filed in the U.S. Patent and Trademark Office on July 14, 2016 and given Application No. 62/362,427

☐ said application having been filed under the Patent Cooperation Treaty on \_\_\_\_\_, and given International Application No. \_\_\_\_\_, the United States of America having been designated;

WHEREAS, The George Washington University, a Congressionally Chartered Not-for-Profit Corporation, having a principal place of business located at Rice Hall, Suite 601, 2121 I Street, NW, Washington, DC, 20052 hereinafter referred to as the Assignee, is desirous of acquiring the entire right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefore, including any and all renewals, reissues and prolongations thereof;

NOW THIS WITNESSETH, that for and in consideration of One Dollar (\$1.00), and other good and valuable consideration paid by Assignee to Assignor, the receipt and sufficiency of which is hereby acknowledged, Assignor hereby assigns, sells and transfers, and has assigned, sold, and transferred to Assignee, its successors and assigns, the entire and exclusive right, title, and interest for the United States in and to the invention, the application, any non-provisional application, and any patents which may be granted therefor, including any and all divisions, continuations, in whole or in part, substitutions, renewals, reissues, reexaminations, and extensions thereof, and all applications claiming priority therefrom; and Assignor authorizes and requests the Commissioner of Patents and Trademarks to issue all patents for the invention, or patents resulting therefrom, insofar as their interest is concerned, to Assignee; to have, hold, exercise, and enjoy, with all the rights, powers, privileges, and advantages in anywise arising therefrom or appertaining thereto, for and during the term or terms of any and all such patents when granted, for the use and benefit of said assignee, and said assignee's successors and assigns, in as ample and beneficial a manner as Assignor might or could have held and enjoyed the same, if this assignment had not been made.

Assignor further hereby assigns, sells and transfers, and has assigned, sold, and transferred to Assignee, its successors and assigns, the entire right, title and interest in all countries of the world, in and to the invention and in and to the application and all patents which may be granted therefor, and all national applications, regional applications, divisions, reissues, substitutions, continuations, in whole or in part, reexaminations, and extensions thereof, including the right to file applications and obtain patents for the invention in its own name, in all countries and including all rights of priority in all countries under the terms of any applicable international convention, insofar as its interest is concerned; and the Assignor hereby authorizes and requests the applicable patent office in each country of the world to issue all patents for the invention, or patents resulting therefrom, insofar as its interest is concerned, to the Assignee, to have and to hold for the sole and exclusive use and benefit of the Assignee, its successors and assigns, to the full end of the term or terms for which any and all of such patents for the invention may issue, to the same extent as the Assignor would hold and enjoy if this Assignment had not been made.

## WORLDWIDE ASSIGNMENT

The Assignor further agrees to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights, and also agrees, at the request of the Assignee, to testify in any legal proceedings, sign all lawful papers, make all lawful oaths, and generally do everything possible to aid said Assignee, its successors and assigns, to obtain, maintain and enforce proper patent protection for said invention.

IN WITNESS WHEREOF, each individual collectively referred to as Assignor has caused this Assignment to be executed.

Haitao Cui  
Haitao Cui

Date: 08/26/2016

On this 25<sup>th</sup> day of August, 2016, before me personally came Haitao Cui, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution

of the same.

District of Columbia: SS

Subscribed and Sworn to before me

this 25<sup>th</sup> day of August, 2016

Anara M. Conteh  
Notary Public

Anara M. Conteh  
Notary Public, D.C.

My commission expires 11-14-2019 Wei Zhu

Date: 08-26-2016

On this 25<sup>th</sup> day of August, 2016, before me personally came Wei Zhu, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

Anara M. Conteh  
Notary Public

Date: 8/25/16

District of Columbia: SS

Subscribed and Sworn to before me

this 25<sup>th</sup> day of August, 2016

Anara M. Conteh  
Notary Public, D.C.

My commission expires 11-14-2019

District of Columbia: SS  
Subscribed and Sworn to before me  
this 25<sup>th</sup> day of August, 2016

Atty. Dkt. 123585-404393

Amara M. Contee  
Notary Public, D.C.  
My commission expires 11-19-2019

Benjamin Holmes  
Benjamin Holmes

Date: 8/25/2016

On this 25<sup>th</sup> day of August, 2016, before me  
personally came Benjamin Holmes, to me known to be the individual  
described in and who executed the foregoing instrument, and acknowledged execution  
of the same.

Amara M. Contee  
Notary Public

Date: 8/25/16

Lijie Grace Zhang  
Lijie Grace Zhang

Date: 8/26/2016

On this 25<sup>th</sup> day of August, 2016, before me  
personally came Lijie Grace Zhang, to me known to be the individual  
described in and who executed the foregoing instrument, and acknowledged execution  
of the same.

Amara M. Contee  
Notary Public

Date: 8/25/2016

District of Columbia: SS  
Subscribed and Sworn to before me

this 25<sup>th</sup> day of August, 2016  
Amara M. Contee  
Notary Public, D.C.  
My commission expires 11-19-2019