

## PATENT ASSIGNMENT COVER SHEET

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Stylesheet Version v1.2

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JAMES YOO	01/13/2011
SANG JIN LEE	01/26/2011
MARK VAN DYKE	01/24/2011
ANTHONY ATALA	01/13/2011
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	WAKE FOREST UNIVERSITY HEALTH SCIENCES
<b>Street Address:</b>	MEDICAL CENTER BOULEVARD
<b>City:</b>	WINSTON-SALEM
<b>State/Country:</b>	NORTH CAROLINA
<b>Postal Code:</b>	27157
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15640063
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(617)204-5150
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<b>ATTORNEY DOCKET NUMBER:</b>	140155.03211
<b>NAME OF SUBMITTER:</b>	THOMAS J. ENGELLENER
<b>SIGNATURE:</b>	/Thomas J. Engellenner/
<b>DATE SIGNED:</b>	07/05/2017
<b>Total Attachments: 5</b>	
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ASSIGNMENT BY INVENTORS

THIS ASSIGNMENT, made this 26th day of January, 2011, by James Yoo, Sang Jin Lee, Mark Van Dyke, and Anthony Atala (hereinafter referred to as Assignors), residing at 185 Cedar Trail, Winston-Salem, North Carolina 27104, 326 Summergate, Winston-Salem, North Carolina 27103, 1003 Greenhurst Road, Winston-Salem, North Carolina 27104, and 345 North Stratford Road, Winston-Salem, North Carolina 27104; respectively;

WHEREAS, Assignors have invented certain new and useful improvements in **DIRECTED STEM CELL RECRUITMENT**, set forth in a Patent application for Letters Patent of the United States, filed on May 11, 2009 as International Application No. PCT/US09/43446; and

WHEREAS, WAKE FOREST UNIVERSITY HEALTH SCIENCES, a non-profit organization, having a place of business at 391 Technology Way, Suite 199, Winston-Salem, North Carolina 27101 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said inventions and said Application for Letters Patent of the United States, and in and to any Letters Patent of the United States to be obtained therefore and thereon.

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and sufficient consideration, the receipt of which is hereby acknowledged, Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions and application for Letters Patent, and in and to any and all direct and indirect divisions, continuations and continuations-in-part of said application, and any and all Letters Patent in the United States and all foreign countries which may be granted therefore and thereon, and reissues, reexaminations and extensions of said Letters Patent, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee, for its own use and benefit and the use

and benefit of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent may be granted and/or extended, as fully and entirely as the same would have been held and enjoyed by Assignors, had this sale and assignment not been made.

AND for the same consideration, Assignors hereby represent and warrant to Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already been transferred to Assignee, Assignors are the sole and lawful owners of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

AND for the same consideration, Assignors hereby covenant and agree to and with Assignee, its successors, legal representatives and assigns, that Assignors will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignee, its successors, legal representatives and assigns, whenever counsel of Assignee, or counsel of its successors, legal representatives and assigns, shall advise: that any proceeding in connection with said inventions, or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions in any country, including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable.

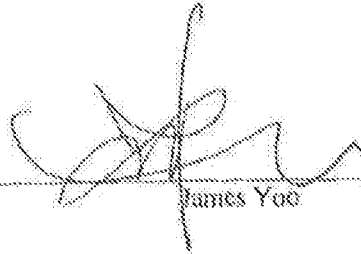
AND Assignors hereby request the Commissioner of Patent and Trademarks to issue said Letters Patent of the United States to Assignee, as Assignee of said inventions and the Letters Patent to be issued thereon, for the sole use and benefit of Assignee, its successors, legal representatives and assigns.

AND Assignors hereby grant the following individuals the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document:

NUTTER MCCLENNEN & FISH LLP

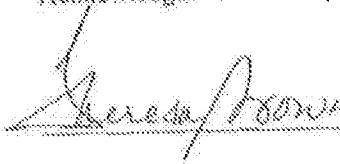
All practitioners at Customer Number 021125

AND Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

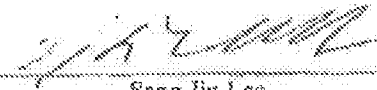
  
James Yoo

Date: 1-13-11

On this 13<sup>th</sup> day of January, 2011 before me, the undersigned notary public, personally appeared James Yoo (name of document signer), proved to me through satisfactory evidence of identification, which were personally known to be the person whose name is signed on the preceding or attached document, and Acknowledged to me that (he)(she) signed it voluntarily for its stated purpose.

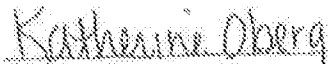
 (official signature and seal of notary)

TERESA BOWEN  
Notary Public, North Carolina  
Forsyth County  
My Commission Expires  
June 23, 2014

  
Sang Jin Lee

Date: 1-26-2011

On this 26<sup>th</sup> day of January, 2011 before me, the undersigned notary public, personally appeared Sang Jin Lee (name of document signer), proved to me through satisfactory evidence of identification, which were personally known to be the person whose name is signed on the preceding or attached document, and Acknowledged to me that (he)(she) signed it voluntarily for its stated purpose.

 (official signature and seal of notary)  
My Commission Expires 10/19/2015

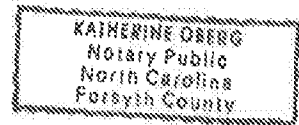
KATHERINE OBERG  
Notary Public  
North Carolina  
Forsyth County

Mark Van Dyke  
Mark Van Dyke

Date: 1/24/2011

On this 24th day of January, 2011 before me, the undersigned notary public, personally appeared Mark Van Dyke (name of document signer), proved to me through satisfactory evidence of identification, which were personally known to be the person whose name is signed on the preceding or attached document, and Acknowledged to me that (he)(she) signed it voluntarily for its stated purpose.

Katherine Oberg (official signature and seal of notary)  
My Commission Expires 10/19/2015



Anthony Atala  
Anthony Atala

Date: 1-13-2011

On this 13th day of January, 2011 before me, the undersigned notary public, personally appeared Anthony Atala (name of document signer), proved to me through satisfactory evidence of identification, which were personally known to be the person whose name is signed on the preceding or attached document, and Acknowledged to me that (he)(she) signed it voluntarily for its stated purpose.

Katherine Oberg (official signature and seal of notary)  
My Commission Expires 10/19/2015

