

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT2737523

SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>LESTER SMITH</td> <td>11/15/2012</td> </tr> <tr> <td>STAVROS THOMOPOULOS</td> <td>11/15/2012</td> </tr> </tbody> </table>		Name	Execution Date	LESTER SMITH	11/15/2012	STAVROS THOMOPOULOS	11/15/2012				
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RECEIVING PARTY DATA											
<table border="1"> <tr> <td>Name:</td> <td>WASHINGTON UNIVERSITY</td> </tr> <tr> <td>Street Address:</td> <td>ONE BROOKINGS DRIVE</td> </tr> <tr> <td>City:</td> <td>ST. LOUIS</td> </tr> <tr> <td>State/Country:</td> <td>MISSOURI</td> </tr> <tr> <td>Postal Code:</td> <td>63130</td> </tr> </table>		Name:	WASHINGTON UNIVERSITY	Street Address:	ONE BROOKINGS DRIVE	City:	ST. LOUIS	State/Country:	MISSOURI	Postal Code:	63130
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CORRESPONDENCE DATA											
<p>Fax Number: (618)655-9640</p> <p>Phone: 618-692-2600</p> <p>Email: uspt@polsinelli.com</p> <p><i>Correspondence will be sent via US Mail when the email attempt is unsuccessful.</i></p> <p>Correspondent Name: POLSINELLI PC</p> <p>Address Line 1: 105 WEST VANDALIA STREET</p> <p>Address Line 2: SUITE 400</p> <p>Address Line 4: EDWARDSVILLE, ILLINOIS 62025</p>											
ATTORNEY DOCKET NUMBER:	047563-468995										
NAME OF SUBMITTER:	REBECCA L. ENDSLEY, PARALEGAL										
Signature:	/Rebecca L. Endsley/										
Date:	02/21/2014										

PATENT

Total Attachments: 5

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PATENT

REEL: 032272 FRAME: 0597

TECHNOLOGY ASSIGNMENT

WU Case: 013230

ASSIGNORS:

Lester Smith

Stavros Thomopoulos

WHEREAS, the aforementioned individuals (the "ASSIGNORS") have developed a certain INVENTION having WU OTM Case No. 013230 and being entitled Collagen matrix possessing locally controllable internal and surface mineral content (collectively, with all future enhancements and improvements thereto as well as all related original works of authorship related thereto other than those solely of an artistic, literary or scholarly nature, as the "INVENTION");

WHEREAS, the ASSIGNORS have executed an application for a United States Patent based on the INVENTION, entitled COLLAGEN MATRIX LOCALLY CONTROLLED INTRAFIBRILLAR AND EXTRAFIBRILLAR MINERAL CONTENT AND METHODS OF PRODUCING, filed on January 31, 2014, and assigned application serial No. 14/169,573, (the "APPLICATION");

WHEREAS, Washington University, a corporation of the State of Missouri having its principal office and place of business at One Brookings Drive, St. Louis, Missouri, 63130, ("ASSIGNEE") is desirous of acquiring the entire and exclusive right, title, and interest in and to the INVENTION and the APPLICATION; as provided for in the Washington University Intellectual Property Policy;

NOW THEREFORE, for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the ASSIGNORS hereby sell, assign and transfer to ASSIGNEE the full and exclusive right, title and interest in the United States (including its territories and dependencies) and all countries foreign thereto in, to and under the INVENTION, the APPLICATION, and any other United States APPLICATIONS (including provisional, non-provisional, divisional, continuing and reissue APPLICATIONS) based in whole or in part on the APPLICATION or in whole or in part on the INVENTION, and any patents (including extensions thereof) of any country that have been or may be granted on any of the aforesaid

APPLICATIONS or on the INVENTION or any part thereof and including all rights to claim priority through any international convention or treaty and all copyrights on or related to the INVENTION;

ASSIGNORS each agree, to each creator's binding personal share of any income generated by the INVENTION as delineated in the attached Exhibit A, and that all future agreements regarding such personal shares shall be in writing and signed by all creators;

ASSIGNORS hereby warrant and represent to Assignee, its successors, legal representatives and assigns, that at the time of execution of this assignment, the ASSIGNORS listed above are the sole individuals employed by the ASSIGNEE who have made contributions to the INVENTION, that the ASSIGNORS are unencumbered and have good and full right and lawful authority to sell and convey the same in the manner herein set forth, and that all works of authorship assigned herein are original works created solely by the ASSIGNORS and are free from plagiarized, libelous, obscene or infringing material;

ASSIGNORS hereby authorize and request the Commissioner of Patents of the United States of America, to issue any and all United States Patents that may be granted on any assigned APPLICATION or on the INVENTION or any part thereof, in the name of ASSIGNEE;

ASSIGNORS hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this sale, assignment and transfer;

ASSIGNORS hereby grant to ASSIGNEE and its agents and attorneys the power and right to insert herein the title, serial number and filing date of the APPLICATION, the OTM case number and title of the INVENTION after this Assignment is executed by the ASSIGNORS; and

ASSIGNORS further covenant that upon ASSIGNEE's request they will provide promptly to ASSIGNEE all pertinent facts and documents relating to the aforesaid APPLICATIONS and the INVENTION as may be known and accessible to ASSIGNORS, and ASSIGNORS will testify as to the same in any interference or litigation related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives without further consideration any and all papers, instruments or affidavits required to apply for, obtain, maintain and enforce the aforesaid APPLICATIONS that may be deemed necessary or desirable by ASSIGNEE to carry out the purposes hereof.

For the event that ASSIGNEE is unable, after reasonable effort, to secure any ASSIGNOR's signature on any APPLICATION, paper or other instrument relating to any patent, patent APPLICATION, letters patent, copyright or other analogous protection relating to the

INVENTION in any country, whether because of the ASSIGNOR's mental incapacity, death or for any other reason whatsoever, each ASSIGNOR hereby irrevocably designates and appoints ASSIGNEE and its duly authorized officers and agents as each ASSIGNOR's agent and attorney in fact to act for and to execute and file any such APPLICATION, paper or other instrument on ASSIGNOR's behalf and to do all other lawfully permitted acts to further the prosecution and issuance of any patent, patent APPLICATION, letters patent, copyright or any other analogous protection related to the INVENTION with the same legal force and effect as if executed by such ASSIGNOR.

For the convenience of the parties, any number of counterparts of the Assignment may be executed by the parties hereto. Each such counterpart shall be and shall be deemed to be an original instrument but all such counterparts taken together shall constitute one and the same assignment.

IN WITNESS WHEREOF, the ASSIGNORS have hereunto set their hand to the foregoing assignment.

[Signature]
Signature -- Lester Smith

11/15/12
Date

Name: Lester Smith

Home Address: 4149A Chouteau Ave
St. Louis, MO 63110

ACKNOWLEDGMENT

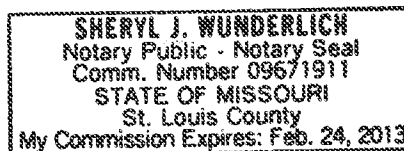
STATE OF Missouri)
County St. Louis) ss.
CITY OF St. Louis)

On this 15th day of November, 2012 before me, a Notary Public, personally appeared Lester Smith, known to me to be the person described, in and who executed, the foregoing assignment and acknowledged that he executed said instrument as his free act and deed.

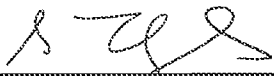
In Testimony Whereof, I have hereunto set my hand and affixed my official seal the day and year first above written.

[Signature]
Notary Public

My Commission Expires: 2-24-2013



_____ [SEAL]


Signature – Stavros Thomopoulos

11/15/12
Date

Name: Stavros Thomopoulos

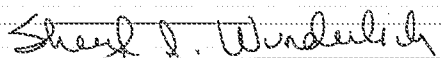
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CLAYTON, MO 63105

ACKNOWLEDGMENT

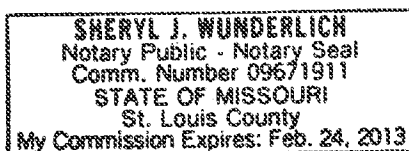
STATE OF Missouri)
County) SS.
CITY OF St. Louis)

On this 15th day of November, 2012, before me, a Notary Public, personally appeared Stavros Thomopoulos, known to me to be the person described, in and who executed, the foregoing assignment and acknowledged that he executed said instrument as his free act and deed.

In Testimony Whereof, I have hereunto set my hand and affixed my official seal the day and year first above written.


Notary Public

My Commission Expires: 2-24-2013



_____[SEAL]