505054817 08/21/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	CONFIRMATORY ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ALEKSANDER S. POPEL	08/13/2018

RECEIVING PARTY DATA

Name:	THE JOHNS HOPKINS UNIVERSITY
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PROPERTY NUMBERS Total: 6

Property Type	Number
Application Number:	61421706
Application Number:	61546314
PCT Number:	US2011064475
Application Number:	14708829
Application Number:	15395648
Application Number:	13992998

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NAME OF SUBMITTER:	EDMUND J. KOUNDAKJIAN
SIGNATURE:	/EDMUND J. KOUNDAKJIAN/
DATE SIGNED:	08/21/2018

PATENT 505054817 REEL: 046884 FRAME: 0400

Total Attachments: 3

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PATENT REEL: 046884 FRAME: 0401

CONFIRMATORY ASSIGNMENT

I, the undersigned, inventor:

ALEKSANDER S. POPEL

hereinafter referred to as "Assignor" confirms, by virtue of an employment agreement, that I have transferred the entire right, title and interest in certain inventions for which patents have been granted or patent applications are pending, in various jurisdictions, as provided in the attached SCHEDULE A to **The Johns Hopkins University**, a University having a place of business at 3400 North Charles Street, Baltimore, Maryland, 21218, its successors, assigns, and legal representatives, the full and exclusive right to said invention and said application and to any and all inventions described in said application and to any and all inventions described in said application for the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States, its territorial possessions and all foreign countries; and in and to any and all provisionals, continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, and all other applications for Letters Patent relating thereto which have been or shall be filed in the United States, its territorial possession and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, act, and treaties, including all future conventions, unions, agreements, acts, and treaties;

agree that **The Johns Hopkins University**, hereinafter referred to as Assignee, may apply for and receive Letters Patent for said invention and said inventions, hereinafter referred to as said invention, in its own name, in the United States, its territorial possessions, and all foreign countries; and that, when requested to carry out in good faith the intent and purpose of this assignment, at the expense of said Assignee, its successors, assigns and legal representatives, the undersigned will execute all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, execute all rightful oaths, assignments, powers of attorney and other papers, testify in any legal or quasi legal proceedings; communicate to said Assignee, its successors, assigns or legal representatives all facts known to the undersigned relating to said invention and the history thereof; and generally do everything possible which said Assignee, its successors, assigns, or legal representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said invention and for vesting title to said invention and all applications for patents on said invention in said Assignee, successors, assigns, or legal representatives; and

covenant with said Assignee, its successors, assigns, or legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same has herein expressed is possessed by the undersigned.

Assignor hereby grants 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:

MORGAN, LEWIS & BOCKIUS LLP

Assignor acknowledges an obligation of assignment of this invention to Assignee at the time the invention was made.

IN THE TESTIMONY WHEREOF I have hereunto set my signature on the date indicated below.

ALEKSANDER S. POPEĽ

Date: 8-13-2018

Schedule A:

US 61/421,706, filed Dec 10, 2010
US 61/546,314, filed October 12, 2011
PCT/US2011/064475, filed Dec 12, 2011
US 13/992,998 filed Aug 7, 2013, now: US 9,056,923
US 14/708,829, filed May 11, 2015
US 15/395,648, filed Dec 30, 2016

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PATENT REEL: 046884 FRAME: 0404

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