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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KAITLYN HARFMANN	10/10/2013
DEVIN O'BRIEN-COON	09/16/2013
DAVID HARROW	09/06/2013
TING-YU LAI	09/17/2013
ADAM LIGHTMAN	09/08/2013
YOUSEPH YAZDI	09/09/2013

RECEIVING PARTY DATA

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PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14761694

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NAME OF SUBMITTER:	JEFFREY W. CHILDERS
SIGNATURE:	/JEFFREY W. CHILDERS/
DATE SIGNED:	02/22/2016

PATENT REEL: 037786 FRAME: 0386 503702581

Total Attachments: 7 source=Assignment#page1.tif source=Assignment#page2.tif source=Assignment#page3.tif source=Assignment#page4.tif source=Assignment#page5.tif source=Assignment#page6.tif source=Assignment#page7.tif

PATENT REEL: 037786 FRAME: 0387

PATENT ASSIGNMENT

This Assignment is made by Kaitlyn Harfmann, of Baltimore, Maryland; Devin O'Brien-Coon, of Baltimore, Maryland; David Narrow, of Baltimore, Maryland; Ting-Yu Lai, of Baltimore, Maryland; Adam Lightman, of Baltimore, Maryland; and Yousef Yazdi, of Ellicott City, Maryland; (hereinafter "Assignors"), to The Johns Hopkins University, a non-profit organization existing under the laws of the State of Maryland having its principal office and place of business at 3400 N. Charles Street, Baltimore, Maryland 21218 (hereinafter "Assignee").

WHEREAS, Assignors have invented, or are the owners of the entire right and title in, certain new and useful improvements concerning Guiding Indication Systsm for Monitoring Vascular Flow and Patency Under Ultrasound, the invention being described in and identified by an application for United States Letters Patent, filed May 6, 2013 as U.S. Provisional Patent Application Serial No. 61/819,979.

AND, WHEREAS, Assignee desires to acquire the entire right, title, and interest in the application and the invention and improvements on the invention, and in Letters Patent on the same when granted in the United States and foreign countries.

NOW, THEREFORE, To Whom It May Concern, be it known that for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignors by these presents do hereby sell, assign, transfer and convey unto the Assignee, its successors and assigns, the entire right, title and interest in and to the application and the invention, and in any improvements on the invention previously or in the future made or acquired by Assignors, and to all rights of priority to the same pursuant to the International Convention for the Protection of Industrial Property, and in and to any and all United States patent applications filed pursuant to 35 U.S.C. § 111 pertaining to said invention and/or which claim priority to the United States provisional patent application referenced above, and in and to any and all foreign patent applications filed on the invention, and in and to any continuations, continuations-in-part, or divisions of any U.S. or foreign patent application filed on the invention, and in and to any and all Letters Patent of the United States of America and all foreign countries or reissues thereof which may be granted therefor or thereon, for the full end of the term for which said Letters

PATENT REEL: 037786 FRAME: 0388 Patent may be granted, the same to be held and enjoyed by said Assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by Assignor if this assignment not been made.

Assignors further warrant and represent that, at the time of the execution and delivery of these presents, Assignors possess their full title to the invention and application above-mentioned, and that they have the unencumbered right and authority to make this assignment.

Assignors further covenant and agree, and likewise bind their heirs, legal representatives and assigns, to promptly communicate to said Assignee or its representatives any facts known to them relating to said invention, to testify in any interference or legal proceedings involving said invention, to execute any additional papers which may be requested to confirm the right of the Assignee, its representatives, successors and assigns to secure patent or similar protection for said invention in all countries and to vest in the Assignee complete title to the invention and Letters Patent, without further compensation, but at the expense of said Assignee, its successors, assigns and other legal representatives.

	Executed th	nis <u>IV</u> day	of <u>MAMMA</u>	, 2013.
	Kaul	(5)	XX	
	(Kaithyn Ha	rimann 🗸		
Witnessed by:				
Name			Date	
Name			Date	

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	Executed this 16th day of 10th	<u>L, 2013.</u>
	Executed this 16th day of 19thmber Devin O'Brien-Coon	
Witnessed by		
Witnessed by:		
Name	Date	
Name	Date	
	Executed this day of	, 2013.
	David Narrow	
Witnessed by:		
Name	Date	
Name	Date	

	Executed this 6 day of $5e$	_, 2013.
	Devin O'Brien-Coon	•
Witnessed by:		
Name	Date	
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	ch Since	
	Executed this 6th day of SEPTEMBER David Narrow	, 2013.
Witnessed by:		
Name	9 (6 13 Date	
Meecz 3	Date 9/6/13	

Attorney File No. 111232-00113.P12305-02

	Executed this	Lay of <u>September</u>	_, 2013.
	Ting-Yu Lbi		
Witnessed by: All Oheng Name All Oheng Name Name	- Kuang - Chen	2/12 2013 Date Date	
	Executed this	day of	, 2013.
	Adam Lightman		·····
Witnessed by:			
Name		Date	
Name			

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	Executed this day of	2013.
	Ting-Yu Lai	
Witnessed by:		
Name	Date	
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	Executed this <u>E</u> day of <u>Septem</u>	<u>47</u> , 2013.
	Adam Lightman	
Witnessed by:		
Ryan Freeling Name	ANTO THE INT	5
Glas Ba	4/11/14 9/8/13	

Attorney File No. 111232-00113.P12305-02

		Executed this 91	<u>L</u> day gif	September.	2013.
		WA	$\sqrt{}$		
		Yousaph Wazdi	manufacture of	\$	
Witnessed by:	4	/ Vanerija	9/9/	1.Z	
Name		1		Date	
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