502752013 04/03/2014 PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT2798609

SUBMISSION TYPE:		NEW ASSIGNMENT	NEW ASSIGNMENT		
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT		
CONVEYING PARTY DA	АТА	·			
		Name		Execution Date	
ROBERT F. SAVINELL				04/03/2014	
JESSE S. WAINRIGHT				04/03/2014	
RECEIVING PARTY DA	ТА				
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Application Number:	1	4122885			
Property Type		Number			
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DATE SIGNED:		04/03/2014			
Total Attachments: 5					
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Assignment of Patent Application

WHEREAS, I, Robert F. Savinell, having an address at 34504 Bramble Lane, Solon, OH, 44139, United States of America; and Jesse S. Wainright, having an address at 30280 Eddy Road, Willoughby Hills, OH 44092; hereinafter referred to as "Assignors," have invented, a new and useful invention, for which a U.S. Utility Patent Application was filed, Attorney Docket No. 12166-00108; and PCT Application (PCT/US2012/040429) was filed, Attorney Docket No. 12166-00091; U.S. Provisional Application No. 61/491,973 was filed, Attorney Docket No. 12166-00083, and any subsequent applications filed in connection with the above invention (the "Patent").

WHEREAS, Case Western Reserve University, having an address at 10900 Euclid Avenue, Sears Building, Sixth Floor, Cleveland, OH 44106, United States of America, hereinafter referred to as "Assignee," is desirous of acquiring the entire right, title and interest in and to said Patent;

WHEREAS, Case Western Reserve University, is a tax-exempt nonprofit organization duly organized and existing under the laws of the State of Ohio, having a place of business at Cleveland, County of Cuyahoga, State of Ohio;

WHEREAS, Case Western Reserve University, and Assignors have certain rights and responsibilities pursuant to the Case Western Reserve University Intellectual Property Policy; and

WHEREAS, the Case Western Reserve University Intellectual Property Policy provides that Case Western Reserve University owns the entire right, title and interest in and to the said improvements and all patents therefor to be obtained in the United States of America and countries foreign to the United States;

NOW THEREFORE, BE IT KNOWN that for valuable considerations to us paid, the receipt whereof is hereby acknowledged, we, the said Assignors, do hereby assign unto the said Case

Western Reserve University, its successors or assigns, the entire right, title and interest in and to the said invention and any and all inventions pertaining thereto, said Patent, all related applications including any utility, continuations, divisionals or continuation-in-part applications that may derive from this application, all patents granted therefor in the United States of America and elsewhere, and the right to apply for patents therefor in all countries foreign to the United States and to claim for such applications the priority of United States, and any official of any country or countries foreign to the United States whose duty it is to issue patents, to issue such patents to the said Case Western Reserve University, its successors or assigns; and Assignors further agree to execute such other applications and other instruments and do all other acts as may be deemed necessary by the said Case Western Reserve University, its successors or assigns in order to fully secure, protect and preserve its rights to the said improvements and to obtain patents therefor in the United States of America and all countries foreign to the United States, all without further consideration but at the expense of the said Case Western Reserve University, its successors or assigns.

Assignors warrant that they are the exclusive owners of the entire legal and equitable interest in the Patent and the invention disclosed therein, free and clear of all liens and encumbrances; and that they have full power, authority, and capacity to make this Assignment to Assignee. Assignors covenants and agrees, for themselves and their successors and assigns that, at Assignee's request, Assignors will cause to be executed and delivered any applications, affidavits, assignments, and other instruments as may be deemed necessary or desirable by Assignee to secure for or vest in Assignee, its successors or assigns, all right, title, and interest in and to any application, patent, or other right or property covered by this assignment, including the right to apply for and obtain patents in foreign countries under the provisions of the International Convention; and Assignors hereby

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PATENT REEL: 032593 FRAME: 0640

request and authorize the United States Commissioner of Patents and Trademarks to issue any and all United States patents granted on the Patent to Assignee as owner of the entire right, title, and interest in and to the same, and authorizes appropriately empowered officials of foreign countries to issue any letters patent granted on the Patent to Assignee as owner of the entire right, title, and interest in and to the same.

[Signature pages follow.]

Legal Name of Inventor: Robert F. Savinell

By: Robert F. Savinell /3 1201 4 Date: OF STATE OF) SS: COUNTY OF

Before me personally appeared, Robert F. Savinell, who acknowledged the foregoing instrument to be his free act and deed this $2^{\mathcal{H}}$ day of April, 2014.

HONGMAN CHEN NOTARY PUBLIC STATE OF OHIO Recorded in Cuyahoga County My Comm. Exp. 8/28/18

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Notary Public

Legal Name of Inventor: Jesse S. Wainright

By: Jesse S. Wainright Date: STATE OF \mathcal{O}) SS: COUNTY OF C

Before me personally appeared, Jesse S. Wainright, who acknowledged the foregoing instrument to be his free act and deed this $\frac{3\pi^2}{2}$ day of $\frac{2\pi^2}{2}$, 2014.



Notary Public

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RECORDED: 04/03/2014