

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4361860

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
RICHARD T. MARCONI	04/10/2017
LEE D. OLIVER	04/10/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	VIRGINIA COMMONWEALTH UNIVERSITY
<b>Street Address:</b>	800 EAST LEIGH STREET
<b>Internal Address:</b>	SUITE 3000
<b>City:</b>	RICHMOND
<b>State/Country:</b>	VIRGINIA
<b>Postal Code:</b>	23219
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15517179
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(703)787-7557
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Phone:</b>	703-787-9400
<b>Email:</b>	walter@wcc-ip.com
<b>Correspondent Name:</b>	WHITHAM, CURTIS & COOK, P.C.
<b>Address Line 1:</b>	11491 SUNSET HILLS ROAD
<b>Address Line 2:</b>	SUITE 340
<b>Address Line 4:</b>	RESTON, VIRGINIA 20190
<b>ATTORNEY DOCKET NUMBER:</b>	02941022US
<b>NAME OF SUBMITTER:</b>	MICHAEL E. WHITHAM
<b>SIGNATURE:</b>	/Michael E. Whitham/
<b>DATE SIGNED:</b>	04/11/2017
This document serves as an Oath/Declaration (37 CFR 1.63).	
<b>Total Attachments: 2</b>	
source=02941022us_decassgn#page1.tif	
source=02941022us_decassgn#page2.tif	

**DECLARATION (37 C.F.R. 1.63) FOR UTILITY PATENT APPLICATION USING AN  
APPLICATION DATA SHEET (37 C.F.R. 1.76) AND ASSIGNMENT**

Title of Invention: **STAGE SPECIFIC DIAGNOSTIC ANTIGENS, ASSAY AND VACCINE FOR  
LYME DISEASE**

As a below named inventor, I hereby declare that:

This declaration and assignment document is directed to:

☐ the attached application;

☒ United States application number 15/517,179 filed on April 6, 2017;

☒ PCT international application number PCT/US2015/054690 filed on October 8, 2015.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the application, including the claims.

I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR Section 1.56.

Whereas, the undersigned inventor(s) has/have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") disclosed in the above-identified patent application;

Whereas, **VIRGINIA COMMONWEALTH UNIVERSITY**, having a place of business at 800 East Leigh Street Suite 3000 Richmond, VA 23219 (herein referred to as "ASSIGNEE"), desires to acquire, and each undersigned inventor desires to grant to ASSIGNEE, the entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;

Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned inventor ("ASSIGNOR") hereby sells or has sold, assigns or has assigned, and otherwise transfers or has transferred to the ASSIGNEE, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, each undersigned inventor hereby authorizes and requests the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to ASSIGNEE, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the same to be held and enjoyed by ASSIGNEE, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made; and each undersigned inventor agrees to execute any and all documents and instruments and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the Invention and all

related patents and applications, in ASSIGNEE, its successors, legal representatives, and assigns, whenever requested by ASSIGNEE, its successors, legal representatives, or assigns.

Each undersigned inventor acknowledges their prior and ongoing obligations to sell, assign, and transfer the rights under this Assignment to ASSIGNEE and is unaware of any reason why they may not have the full and unencumbered right to sell, assign, and transfer the rights hereby sold, assigned, and transferred, and has not executed, and will not execute, any document or instrument in conflict herewith. Each undersigned inventor also hereby grants ASSIGNEE, its successors, legal representatives, and assigns, the right to insert in this Assignment any further identification (including, but not limited to, patent Application Number) which may be necessary or desirable for recordation of this Assignment.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

I hereby authorize and request any attorney of WHITHAM, CURTIS & COOK, P.C., Customer No. 30743, to insert or correct any information concerning the identity of ASSIGNOR, ASSIGNEE, or the above-mentioned application (including the serial no. and the filing date).

(1) Legal Name of Inventor: Richard T. Marconi

Signature: Richard T. Marconi Date: 4/10/17

(2) Legal Name of Inventor: Lee D. Oliver

Signature: Lee D. Oliver Date: 4/10/17