

# PATENT ASSIGNMENT

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<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
David J. Hackam	11/28/2011
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	Univeristy of Pittsburgh - of The Commonwealth System of Higher Education
<b>Street Address:</b>	200 Gardner Steel Conference Center
<b>Internal Address:</b>	Thackeray and O'Hara Streets
<b>City:</b>	Pittsburgh
<b>State/Country:</b>	PENNSYLVANIA
<b>Postal Code:</b>	15260
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	13068553
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(212)259-2482
<b>Phone:</b>	212 408 2500
<b>Email:</b>	nydocket@bakerbotts.com
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Correspondent Name:</b>	Baker Botts LLP
<b>Address Line 1:</b>	30 Rockefeller Plaza
<b>Address Line 2:</b>	44th Floor
<b>Address Line 4:</b>	New York, NEW YORK 10112
<b>ATTORNEY DOCKET NUMBER:</b>	072396.0438
<b>NAME OF SUBMITTER:</b>	Lillian Garcia
<b>Total Attachments: 2</b> source=Assignment_072396_0438#page1.tif source=Assignment_072396_0438#page2.tif	

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### ASSIGNMENT

WHEREAS, I/WE, **DAVID J. HACKAM**, a citizen of the United States, having a post office address at 5506 Aylesboro, Pittsburgh, PA 15217, (hereinafter "ASSIGNORS"), have made an invention entitled "**USE OF TOLL-LIKE RECEPTOR-9 AGONISTS, TOLL-LIKE RECEPTOR-4 ANTAGONISTS, AND/OR NUCLEAR OLIGOMERIZATION DOMAIN-2 AGONISTS FOR THE TREATMENT OR PREVENTION OF TOLL-LIKE RECEPTOR-4-ASSOCIATED DISORDERS**" as set forth and described in application for Letters Patent of the United States, Application Serial No. 13/068,553, filed May 13, 2011; and

WHEREAS, **UNIVERSITY OF PITTSBURGH - OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION** (hereinafter "ASSIGNEE"), having its principal place of business at 200 Gardner Steel Conference Center, Thackeray and O'Hara Streets, Pittsburgh, PA is desirous of acquiring the whole right, title and interest of ASSIGNORS in and to said Letters Patent and any continuations, divisions, extensions, substitutions, reissues and reexaminations thereof;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN, BE IT KNOWN, that WE, the said ASSIGNORS, for and in consideration of the sum of One Dollar (\$1.00), lawful money of the United States, to us in hand paid by said ASSIGNEE, and other valuable considerations unto us moving from said ASSIGNEE, at or before the ensealing and delivery of these presents, the receipt of which is hereby acknowledged, have sold, assigned, transferred and conveyed and by these presents do sell, assign, transfer and convey, unto said ASSIGNEE, its successors and assigns, the entire right, title and interest in and to the said invention entitled "**USE OF TOLL-LIKE RECEPTOR-9 AGONISTS, TOLL-LIKE RECEPTOR-4 ANTAGONISTS, AND/OR NUCLEAR OLIGOMERIZATION DOMAIN-2 AGONISTS FOR THE TREATMENT OR PREVENTION OF TOLL-LIKE RECEPTOR-4-ASSOCIATED DISORDERS**" and any and all improvements thereon, and in and to said application and any division, continuation or continuation-in-part thereof, and in and to any Letters Patent of the United States which may be issued on any of said applications, and any reissues thereof, and in and to any and all applications for Letters Patent filed in foreign countries for said invention or improvements including all priority rights, and any and all Letters Patent which may be granted in foreign countries therefor, TO HAVE AND TO HOLD THE SAME to the full end of the term or terms for which any and all said Letters Patent may be granted;

AND WE, the said ASSIGNORS, do hereby authorize and request the Commissioner of Patents and Trademarks to issue the said Letters Patent of the United States to said ASSIGNEE, as the assignee of the entire right, title and interest in and to the same, for the sole use and benefit of said ASSIGNEE, its successors and assigns;

AND WE, the said ASSIGNORS, for the considerations aforesaid, do hereby covenant and agree to and with said ASSIGNEE, its successors and assigns, that we have the full power to make this assignment, and that the rights assigned are not encumbered by any grant, license or

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right heretofore given, and that we, our executors or administrators, shall and will do all lawful acts and things and make, execute and deliver without further compensation, any and all other instruments in writing, further applications, papers, affidavits, powers of attorney, assignments, and other documents which, in the opinion of counsel for said ASSIGNEE, its successors and assigns, may be required or necessary more effectively to secure to and vest in said ASSIGNEE, its successors and assigns, the entire right, title and interest in and to said invention and improvements, applications, Letters Patent, rights, titles, benefits, privileges, and advantages hereby sold, assigned, transferred and conveyed, and that we will sign any applications for reissue which may be desired by the owner of the patent or patents which may be issued for the said invention or improvements.

Date: NOVEMBER 28 2011

Witness: Luis McFadden [signature]

Luis McFadden [printed name]

6th floor AOB [address]

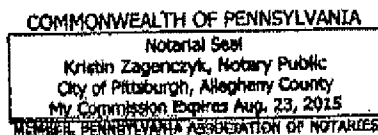
Children's Hospital of Pittsburgh

[Signature]

DAVID J. HACKAM

[Signature]

Notary Public



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