

<b>PATENT ASSIGNMENT COVER SHEET</b>
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Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT3438513

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
ANDREA LEONE-BAY	12/20/2011
JOSEPH J. GUARNERI	12/20/2011
GRAYSON W. STOWELL	12/22/2011
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	MANKIND CORPORATION
<b>Street Address:</b>	28903 NORTH AVENUE PAINE
<b>City:</b>	VALENCIA
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	91355
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14622660
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(949)253-0902
<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>	949-253-0900
<b>Email:</b>	stephanie.new@klgates.com
<b>Correspondent Name:</b>	K&L GATES LLP
<b>Address Line 1:</b>	1 PARK PLAZA, TWELFTH FLOOR
<b>Address Line 4:</b>	IRVINE, CALIFORNIA 92614
<b>ATTORNEY DOCKET NUMBER:</b>	1951300.00180
<b>NAME OF SUBMITTER:</b>	STEPHANIE NEW
<b>SIGNATURE:</b>	/Stephanie New/
<b>DATE SIGNED:</b>	07/14/2015
<b>Total Attachments: 5</b>	
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## ASSIGNMENT

**THIS ASSIGNMENT** is made by **Andrea Leone-Bay, Joseph Guarneri, and Grayson W. Stowell** (hereafter, together with any successors, legal representatives, or assigns thereof, "ASSIGNORS") to **MannKind Corporation** a corporation duly organized and existing under and by the laws of the State of Delaware and having its principal place of business at 28903 North Avenue Paine, Valencia, California 91355, (hereafter, together with any successors, legal representatives, or assigns thereof, "ASSIGNEE").

**WHEREAS**, ASSIGNORS have invented and own rights in, to and under a new and useful invention for which an application for Letters Patent of the United States entitled "Methods and Compositions for Treating Pain" was filed on October 24, 2011, bearing Serial No. 61/550,860 (hereafter "Patent Rights");

**WHEREAS**, ASSIGNORS believes themselves to be the original and true inventors of the Patent Rights;

**WHEREAS**, ASSIGNEE wants to acquire Patent Rights and improvements thereto owned by ASSIGNORS;

**AND WHEREAS**, ASSIGNORS and ASSIGNEE desire to have a recordable instrument assigning ASSIGNEE as owners of the entire right, title and interest in, to, and under the Patent Rights and improvements thereto owned by ASSIGNORS;

**NOW, THEREFORE**, for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, ASSIGNORS do hereby assign, transfer, endorse, sell, set over and convey unto ASSIGNEE its full and entire right, title and interest in, to and under the Patent Rights including its full and entire right, title and interest in, to and under 1) any patent application which has been or will be filed that is entitled to a benefit of priority to the patents and patent applications listed in the Patent Rights, or any other legal instrument equivalent thereof including, without limitation, continuation, division, continuation-in-part, substitute, reexamination, renewal, inventor's certificate, utility model or any other legal instrument equivalent thereto, which may be submitted therefor and thereon in the United States of America, its territorial possessions or in any and all foreign countries and any letters patent or any other legal instrument equivalent thereof which may be granted therefor and thereon in the United States of America, its territorial possessions, or in any and all foreign countries, under national laws or under the provisions of the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, and any other international treaty equivalent thereof, for the full term or terms for which the same may be granted; 2) any reissue, extension, or any other legal instrument equivalent thereof of the patents and patent applications listed in the Patent Rights which has been or may be granted therefor and thereon in the United States of America, its territorial possessions, or in any and all foreign countries, under national laws or under the provisions of the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, and any other international treaty equivalent thereof; the same right, title and interest in, to and under the Patent Rights to be held and enjoyed by ASSIGNEE for the use of ASSIGNEE for the full term or terms for which the same may be granted, as fully and entirely as the same would have been held and enjoyed by ASSIGNORS had this Assignment not been made;

ASSIGNORS hereby further covenant and agree to and with ASSIGNEE that where lawful and desirable and whenever requested by ASSIGNEE, without charge to ASSIGNOR, but at the

cost and expense of ASSIGNEE, ASSIGNORS will generally perform any action which may be necessary and desirable to secure and to vest in ASSIGNEE the full and entire right, title and interest in, to and under the Patent Rights hereto assigned in the manner herein set forth, including, but not limited to promptly communicating and providing any and all known and accessible facts, data or any other pertinent information thereof; promptly executing and delivering any and all papers, documents, forms, declarations, oaths, affidavits and other legal instrument thereof; promptly assisting and participating in any and all depositions, hearings, proceedings, trials, appeals, or other legal procedure thereof; promptly testifying under oath in any and all interference, litigation or any other judicial proceeding thereof; and promptly completing any and all actions necessary or desirable to carry out any and all purposes thereof, relating to any and all proceedings in connection with the submission, procurement, issuance, maintenance, enforcement or defense relating to the transferred right, title and interest in, to and under the Patent Rights hereto assigned in the manner herein set forth.

IN TESTIMONY WHEREOF, I hereunder set my hand this 20 day of December, 2011.

ANDREA LEONE-BAY

By: \_\_\_\_\_

~~MARIA T. HALL~~  
NOTARY PUBLIC  
MY COMMISSION EXPIRES DEC. 31, 2014

State of Connecticut

ss.:

County of Fairfield

On this 20 day of December, 2011, before me, Maria T. Hall, personally appeared Andrea Leone-Bay of MannKind Corp., personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. I certify under penalty of perjury under the laws of the State of Connecticut that the foregoing paragraph is true and correct.

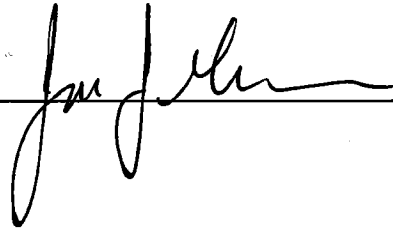
Witness my hand and official seal.

\_\_\_\_\_  
*Maria T. Hall*

MARIA T. HALL  
NOTARY PUBLIC  
MY COMMISSION EXPIRES DEC. 31, 2014

IN TESTIMONY WHEREOF, I hereunder set my hand this 20<sup>th</sup> day of December, 2011.

JOSEPH J. GUARNERI

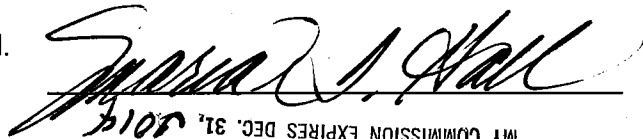
By: 

State of Connecticut  
County of Fairfield

ss.:

On this 20 day of December, 2011, before me, Maria T. Hall, personally appeared Joseph J. Guarneri of ManoKind Corp., personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. I certify under penalty of perjury under the laws of the State of Connecticut that the foregoing paragraph is true and correct.

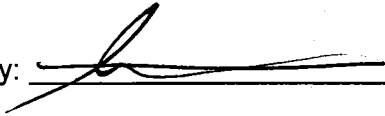
Witness my hand and official seal.



MARIA T. HALL  
NOTARY PUBLIC  
MY COMMISSION EXPIRES DEC. 31, 2014

IN TESTIMONY WHEREOF, I hereunder set my hand this 22<sup>nd</sup> day of December, 2011.

GRAYSON W. STOWELL

By: 

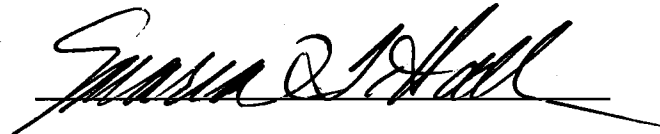
State of Connecticut )

County of Fairfield )

ss.:

On this 22 day of December, 2011, before me, Maria T. Hall, personally appeared Grayson W. Stowell, Plaintiff, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. I certify under penalty of perjury under the laws of the State of Connecticut that the foregoing paragraph is true and correct.

Witness my hand and official seal.



MARIA T. HALL  
NOTARY PUBLIC

MY COMMISSION EXPIRES DEC. 31, 2014

ACKNOWLEDGED AND CONFIRMED, I hereunder set my hand this 22 day of Dec., 2011 as a duly authorized representative of ASSIGNEE.

MannKind Corporation

By: Thelma Chen Cleland

Name: Thelma Chen Cleland

Title: Director, IP

State of Connecticut

County of Fairfield

ss.:

On this 22 day of December, 2011, before me, Maria T. Hall, personally appeared Thelma Chen Cleland of MannKind Corp, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. I certify under penalty of perjury under the laws of the State of Connecticut that the foregoing paragraph is true and correct.

Witness my hand and official seal.



MARIA T. HALL  
NOTARY PUBLIC  
MY COMMISSION EXPIRES DEC. 31, 2014