

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
VIDYA CHIDAMBARAN	04/20/2018
SENTHILKUMAR SADHASIVAM	04/19/2018
LISA J MARTIN	04/20/2018
HONG JI	04/19/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	CHILDREN'S HOSPITAL MEDICAL CENTER
<b>Street Address:</b>	3333 BURNET AVENUE
<b>City:</b>	CINCINNATI
<b>State/Country:</b>	OHIO
<b>Postal Code:</b>	45229
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	16478706
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(513)636-8453
<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>	513-803-8578
<b>Email:</b>	innovation.ventures_patents@cchmc.org
<b>Correspondent Name:</b>	LORETTA SHIRK
<b>Address Line 1:</b>	3333 BURNET AVE.
<b>Address Line 2:</b>	MLC7032
<b>Address Line 4:</b>	CINCINNATI, OHIO 45229
<b>ATTORNEY DOCKET NUMBER:</b>	2016-0108C
<b>NAME OF SUBMITTER:</b>	LORETTA SHIRK
<b>SIGNATURE:</b>	/Loretta Shirk/
<b>DATE SIGNED:</b>	01/27/2021
<b>Total Attachments: 6</b>	
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## ASSIGNMENT OF INVENTION AND PATENT RIGHTS

WHEREAS, I, Vidya Chidambaran, a citizen of India, residing at 10647 Deerfield Road, Cincinnati, OH, 45242; Senthilkumar Sadhasivam, a citizen of The United States of America, residing at 3250 Whispering Pines Lane, Carmel, Indiana 46032; Lisa J Martin, a citizen of The United States of America, residing at 7938 Stillmeadow Dr., West Chester, OH, 45069; and Hong Ji, a citizen of The United States of America, residing at 11170 Huntwicke Place, Blue Ash, OH, 45241 (hereinafter referred to collectively as "ASSIGNOR"), have invented **DNA methylation at the Mu Opioid Receptor gene (OPRM1) promoter predicts preoperative, acute and chronic post-surgical pain after spine fusion**, for which they have executed an application for Letters Patent of the United States, Serial No. **62/448,540**, filed on **1/20/2017**; and

WHEREAS, **Children's Hospital Medical Center, d/b/a Cincinnati Children's Hospital Medical Center**, a non-profit corporation duly organized and existing under the laws of the State of Ohio, located at 3333 Burnet Avenue, Cincinnati, Ohio 45229-3039 (hereinafter referred to as "ASSIGNEE"), desires to acquire the entire right, title, and interest therein:

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, ASSIGNOR hereby sells, assigns, and transfers and sets over, unto the said ASSIGNEE, its successors, legal representatives and assigns, the entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals, and continuations thereof, and all patents of the United States which may be granted thereon and all reissues, reexaminations and extensions thereof; and all Patents of the United States which may be granted thereon and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models and designs, which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals, reexaminations and reissues thereof;

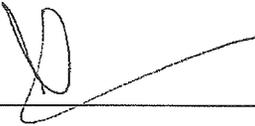
ASSIGNOR HEREBY authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

ASSIGNOR HEREBY grants the ASSIGNEE, its successors, legal representatives and assigns, the power to insert in this Assignment any further identification or information which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

ASSIGNOR HEREBY covenants and agrees that he/she has full rights to convey the entire interest herein assigned, and that he/she has not executed, and will not execute, any agreement in conflict herewith.

ASSIGNOR HEREBY further covenants and agrees that he/she will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to them respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue, reexamination and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

(Signatures begin on page 3)

  
\_\_\_\_\_

Vidya Chidambaran

4/20/18  
\_\_\_\_\_

Date

STATE OF Ohio )  
COUNTY OF Hamilton, ) SS:

Sworn to and subscribed before me this 20 day of April, 2018

Danielle Sipe  
\_\_\_\_\_



DANIELLE SIPE  
Notary Public, State of Ohio  
My Commission Expires  
September 5, 2021

Notary Public

Sworn to and subscribed before me this 19<sup>th</sup> day of April, 2018.

Amy M. Allison  
Notary Public

Senthilkumar 4/19/2018

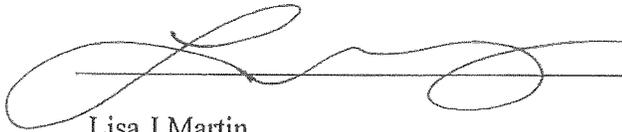
Senthilkumar Sadhasivam

Date

STATE OF Indiana  
COUNTY OF Marion

)  
) SS:



  
\_\_\_\_\_

Lisa J Martin

Docket No.: 2016-0108a  
Patent Serial No.: 62/448,540  
4/20/2018

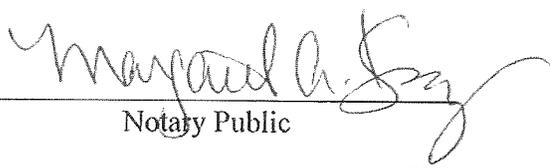
Date

STATE OF Ohio )

COUNTY OF Hamilton )

) SS:  
)

2018 Sworn to and subscribed before me this 20 day of April,  
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\_\_\_\_\_

Notary Public

**MARGARET A. KELLEY**  
Notary Public, State of Ohio  
My Commission Expires Apr. 21, 2019

\_\_\_\_\_  
Hong Ji

\_\_\_\_\_  
Date

STATE OF \_\_\_\_\_ )

COUNTY OF \_\_\_\_\_ )

) SS:  
)

Sworn to and subscribed before me this \_\_\_\_ day of \_\_\_\_\_,  
\_\_\_\_\_.

\_\_\_\_\_  
Notary Public

