504949495 06/07/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SEAN R. KIRKPATRICK	04/30/2018
ALLEN R. KIRKPATRICK	04/30/2018
MICHAEL J. WALSH	04/30/2018
RICHARD C. SVRLUGA	05/04/2018

RECEIVING PARTY DATA

Name:	EXOGENESIS CORPORATION	
Street Address:	20 FORTUNE DRIVE	
City:	BILLERICA	
State/Country:	MASSACHUSETTS	
Postal Code:	01821	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15047553

CORRESPONDENCE DATA

Fax Number: (617)345-3299

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.

Phone: 617-345-3000

Email:docketing@burnslev.comCorrespondent Name:BURNS & LEVINSON, LLPAddress Line 1:125 SUMMER STREET

Address Line 4: BOSTON, MASSACHUSETTS 02110

ATTORNEY DOCKET NUMBER:	31198-169E CIP
NAME OF SUBMITTER:	DAVID GOMES
SIGNATURE:	/David Gomes/
DATE SIGNED:	06/07/2018

Total Attachments: 5

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PATENT 504949495 REEL: 046015 FRAME: 0973

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PATENT REEL: 046015 FRAME: 0974

ASSIGNMENT

WHEREAS, we, Sean R. Kirkpatrick, a resident of Littleton, MA; Allen R. Kirkpatrick, a resident of Carlisle, MA; Michael J. Walsh, a resident of Billerica, MA; and Richard C. Svrluga, a resident of Cambridge, MA (hereinafter referred to collectively as "Assignors"); have jointly made an invention entitled Method and Apparatus for Neutral Beam Processing Based on Gas Cluster Ion Beam Technology and Articles Produced Thereby, and for which an application for a United States Patent was filed on February 18, 2016 and accorded U.S. Patent Application Serial No. 15/047,553.

WHEREAS, Exogenesis Corporation, having its principal place of business at 20 Fortune Dr., Billerica, MA 01821 (hereinafter referred to as "Assignee"), is desirous of acquiring right, title and interest in said invention.

NOW, THEREFORE, in consideration of One Dollar (\$1.00), and other good and valuable consideration, the receipt of which is hereby acknowledged, Assignors by these presents, do sell, assign and transfer to Assignee, Assignors' entire right, title and interest, for the United States of America and its possessions and territories and for all foreign countries, in and to said invention, including all rights of priority created and conferred by any treaty or international convention which is available in connection with said invention, including the right to apply for patent rights, U.S. or foreign, and in any continuations, continuations-in-part, divisions, substitutes, renewals, reissues or other applications filed in the U.S. or abroad (including multinational filing arrangements of all kinds), and in any U.S. or foreign patents issued on any such applications and reissues, extensions and renewals thereof, to be held and enjoyed by Assignee, for its own use and behalf and for its successors and assigns, to the full ends of the terms or extended terms for which any Letters Patents or the like may be granted, as fully and entirely as the same would have been held by Assignors had this sale, assignment and transfer not been made.

Assignors hereby authorize and request the Commissioner of Patents of the United States, and any official of any country or countries (including multinational filing arrangements of all kinds), whose duty it is to receive and/or examine applications for patents or similar intellectual/industrial property, issue patents or other evidence or forms of intellectual/industrial property protection on applications as aforesaid, to issue the same to Assignee, its successors and assigns, in accordance with the terms of this instrument.

Assignors covenant with Assignee, its successors, assigns, and legal representatives that Assignors have full right to convey the entire interest herein assigned, and that Assignors have not executed any agreement in conflict herewith and will not execute any agreement or conveyance in conflict herewith.

Assignors further covenant and agree to communicate to Assignee, its successors, legal representatives and assigns, any facts known to Assignors respecting said invention, and testify in any legal proceeding, sign all lawful papers, including, without limitation,

application papers, assignments, powers of attorney, declarations, and other instruments, execute all divisional, continuing, substitute, reissue, renewal and foreign applications, make all truthful oaths, declarations and statements, and generally do everything reasonably requested of Assignors by Assignee, or its successors or assigns to aid Assignee, its successors or assigns, to obtain, enforce and/or exploit said invention.

[Assignors further authorize and direct BURNS & LEVINSON, LLP attorneys to insert the serial number and filing date of said application now identified by the attorney docket number and title set forth above as soon as the same shall have been made known to them by the United States Patent and Trademark Office.]

Executed this 36 h day of Apri	201 9 .
••••	Sean R. Kirkpatrick
Commonwealth of Massachusetts)	
County of Hilleres	85.
personally appeared Sean R. Kirkpatric identification, which were	ol 8, before me, the undersigned notary public, the proved to me through satisfactory evidence of the person to be the person
whose name is signed on the preceding that he/she signed it voluntarily for its	or attached document, and acknowledged to me stated purpose.
	- Shang
	Notary Public My commission expires <u>NOV / 1.1. QOD /</u>
SEAL	

SOPHANY U. SAR
Notory Public
Commonwealth of Massochusens
My Commission Expires
November 1, 2024

2013

Executed this 30th day of Apr	2012 <u>1. 2017</u>
	AMRKULASTICA
/	Allen R. Kirkpatrick
Commonwealth of Massachusetts) } 8\$.
County of Mickelle sed	
personally appeared Allen R. Kirkpa identification, which were	201 % , before me, the undersigned notary public, strick, proved to me through satisfactory evidence of
	Notary Public My commission expires 1864 /1 /2024
SEAL	
SOPHANY U. SAR Notary Public Commonwealth of Massachusens My Commission Expires November 1, 2024	

Commonwealth of Massachusetts)
) ss.
County of *Hicklese*)

On this 30 day of 24 2017, before me, the undersigned notary public, personally appeared Michael J. Walsh, proved to me through satisfactory evidence of identification, which were 344 22 to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Notary Public

My commission expires NOV/1/2024

SOPHANY U. SAR
Notary Public
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Executed this 4 th day of moy 2018.		
	Richard C. Svringa	
Commonwealth of Massachusetts) County of MalaleSex)		
On this $\frac{1}{2}$ day of $\frac{1}{2}$ 2018, before me, the undersigned notary public, personally appeared Richard C. Syrluga, proved to me through satisfactory evidence of identification, which were $\frac{1}{2}$ $\frac{1}{2}$, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.		
TOMMY T. YEM Notary Public Commonwealth of Massochusens My Commission Expires November 1, 2024	Notery Public My commission expires1/_1/2_v2\/	