PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
SEQUENCE:	1

CONVEYING PARTY DATA

Name	Execution Date
SUMIT VERMA	10/31/2017
KEVIN B. GRAVES	05/31/2017
BRYAN S. PETROFSKY	05/16/2017
JAMES RICHARD SPIEKER JR.	11/02/2017

RECEIVING PARTY DATA

Name:	MALLINCKRODT NUCLEAR MEDICINE LLC
Street Address:	2703 WAGNER PLACE
City:	MARYLAND HEIGHTS
State/Country:	MISSOURI
Postal Code:	63043

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15410505

CORRESPONDENCE DATA

Fax Number: (314)612-2307

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: 314-621-5070

Email: uspatents@armstrongteasdale.com, clager@armstrongteasdale.com

Correspondent Name: PATENT DOCKET DEPT ARMSTRONG TEASDALE LLP

Address Line 1: 7700 FORSYTH BOULEVARD

Address Line 2: SUITE 1800

Address Line 4: ST. LOUIS, MISSOURI 63105

ATTORNEY DOCKET NUMBER:	35800-38 (H-MI-00392)
NAME OF SUBMITTER:	MICHAEL G. MUNSELL
SIGNATURE:	/Michael G. Munsell/
DATE SIGNED:	03/18/2019

Total Attachments: 5

PATENT REEL: 048625 FRAME: 0768

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PATENT REEL: 048625 FRAME: 0769

ASSIGNMENT

WHEREAS, I Sumit Verma of Chesterfield, Missouri, Kevin B. Graves of Catawissa, Missouri, Bryan S. Petrofsky of St. Louis, Missouri, and James Richard Spieker, Jr. of O'Fallon, Missouri, have invented the subject matter described in U.S. Non-Provisional Patent Application Serial No. 15/410,505 filed in the United States Patent and Trademark Office on January 19, 2017, and U.S. Provisional Patent Application Serial No. 62/331,611 filed in the United States Patent and Trademark Office on May 4, 2016, each entitled SYSTEMS AND METHODS FOR STERILITY TESTING OF RADIONUCLIDE GENERATOR COLUMN ASSEMBLIES (hereafter, the "invention").

WHEREAS, Mallinckrodt Nuclear Medicine LLC, 2703 Wagner Place, Maryland Heights, Missouri 63043, a corporation of the State of Delaware, is desirous of acquiring the entire right, title and interest of each of the above-named inventors in and to the invention and any and all patents to be obtained therefor;

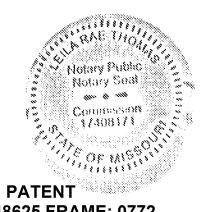
NOW, THEREFORE, for good and valuable consideration, I do hereby sell, assign and transfer unto Mallinckrodt Nuclear Medicine LLC, its successors and assigns, our entire right, title and interest in and to the invention, as described in the aforesaid applications, in any form or embodiment thereof, and in and to the aforesaid applications; and in and to any applications filled in any foreign country based thereon, including the right to file the foreign applications under the provisions of the International Convention; also any improvements on the invention now or hereafter made by me during the period of my employment; also the entire right, title and interest in and to any and all patents or reissues or extensions thereof to be obtained in this or any foreign country upon the invention and any divisional, continuation, continuation-in-part or substitute applications which may be filed upon the invention or claim priority to the above-referenced patent applications for the invention in this or any foreign country; and we hereby authorize and request the issuing authority to issue any and all patents on the application(s) to Mallinckrodt Nuclear Medicine LLC, as assignee of our entire interest.

I further agree, without any payment by Mallinckrodt Nuclear Medicine LLC other than expenses incurred by the undersigned, to communicate to Mallinckrodt Nuclear Medicine LLC, its representatives or agents, any fact relating to the invention, including evidence for interference purposes or for other legal proceedings, whenever requested; testify in any interference or other

Page 1 of 6 - H-MI-00392

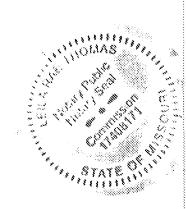
IN TESTIMONY WHEREOF, I have hereunto set my hand and seal on the date set after my signature.
I,, dated this day of DCTBSER_ , 2017. Sumit Verma
<u>ACKNOWLEDGEMENT</u>
On this 31 day of OCTOBER , 2017 before me personally appeared
Sumit Verma to me known to be the person described in and who executed the foregoing
instrument, and acknowledge that he executed the foregoing instrument, and acknowledge that he
executed the same as his free act and deed. In testimony whereof I have hereunto set my hand
and official seal the day and year last above written.
(Seal)
JANET L. DOHM Notary Public — Notary Seal St Louis County - State of Missouri Commission Number 13515910 My Commission Expires Aug 18, 2021 Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal on the date set after
my signature.
I, <u>Kwin B. かいら</u> , dated this <u>31</u> day of <u>May</u> , 2017. Kevin B. Graves
<u>ACKNOWLEDGEMENT</u>
On this $3l$ day of MAY , 2017 before me personally appeared
Kevin B. Graves to me known to be the person described in and who executed the foregoing
instrument, and acknowledge that he executed the foregoing instrument, and acknowledge that he
executed the same as his free act and deed. In testimony whereof I have hereunto set my hand
and official seal the day and year last above written.
(Seal)
4.40
Notary Public



Page 4 of 6 - H-MI-00392

IN TESTIMONY WHEREOF, I have hereu	into set my hand and seal on the date set after
my signature. I, Bryan S. Petrofsky	_, dated this <u>//</u> day of _ <i>MAY</i> , 2017.
<u>ACKNO</u>	WLEDGEMENT
On this day of MAY Bryan S. Petrofsky to me known to be the perso instrument, and acknowledge that he executed the executed the same as his free act and deed. In te and official seal the day and year last above written	e foregoing instrument, and acknowledge that he estimony whereof I have hereunto set my hand
(Seal)	
	Notary Public



IN TESTIMONY WHEREOF, I have hereunto set my hand and seal on the date set after
my signature.
ا,, dated this day of, 2017 James Richard Spieker, Jr.
<u>ACKNOWLEDGEMENT</u>
On this May of Maurica, 2017 before me personally appeared James Richard Spieker, Jr. to me known to be the person described in and who executed the foregoing instrument, and acknowledge that he executed the foregoing instrument, and acknowledge that he executed the same as his free act and deed. In testimony whereof I have hereunto set my hand and official seal the day and year last above written.
(Seal) JANET L, DOHM Notary Public - Notary Seal St Louis County - State of Missouri Commission Number 13515910 My Commission Expires Aug 18 2033