PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT5383748

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
LEWIS PANNELL	11/08/2018
JACK DI PALMA	11/15/2018
CARLO CONTRERAS	11/28/2018
JANA ROCKER	11/21/2018

RECEIVING PARTY DATA

Name:	UNIVERSITY OF SOUTH ALABAMA (USA)
Street Address:	307 N. UNIVERSITY BOULEVARD
City:	MOBILE
State/Country:	ALABAMA
Postal Code:	36688-0002

PROPERTY NUMBERS Total: 2

Property Type	Number
Application Number:	14344399
PCT Number:	US2011051269

CORRESPONDENCE DATA

(617)607-9200 Fax Number:

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.

MANEESH GULATI

Phone: 212-609-6800

mdefalco@mccarter.com, mgulati@mccarter.com, Email:

syip@mccarter.com, docket@mccarter.com

Correspondent Name: MANEESH GULATI

Address Line 1: MCCARTER & ENGLISH, LLP

Address Line 2: 265 FRANKLIN STREET

Address Line 4: BOSTON, MASSACHUSETTS 02110

ATTORNEY DOCKET NUMBER: 121940-00101

SIGNATURE: /Maneesh Gulati/

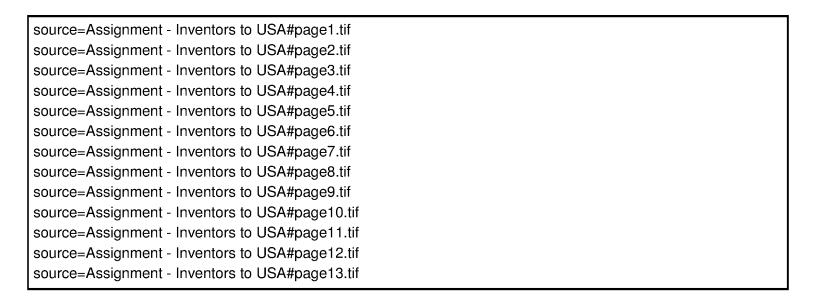
DATE SIGNED: 02/20/2019

Total Attachments: 13

NAME OF SUBMITTER:

PATENT REEL: 048383 FRAME: 0901

505336967



PATENT REEL: 048383 FRAME: 0902

ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor (hereinafter referred to singly and collectively as "ASSIGNOR") has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto

UNIVERSITY OF SOUTH ALABAMA (USA) 307 N. University Boulevard Mobile, Alabama 36688-0002

(hereinafter referred to as "ASSIGNEE") its successors and assigns, the full and exclusive right, title and interest for the United States, its territories and possessions, and all foreign countries in and to this invention relating to

NON-INVASIVE METHODS OF DETECTING TARGET MOLECULES

as set forth in the following Patent Application:

United States Patent Application No. 14/344,399, filed March 12, 2014

which claims the benefit of the following application:

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as well as in and to (a) all improvements and modifications of the above-identified invention or inventions, (b) the above-identified applications and all other applications for Letters Patent of the United States and countries foreign thereto for above-identified invention or inventions and all improvements and modifications thereof (including national phase applications of the above-referenced international patent application in Canada, China, Europe, Hong Kong, and Japan), (c) all Letters Patent which may issue from said applications in the United States and countries foreign thereto, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the International Convention and any other international agreement to which the United States adheres; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

Page 1 of 5

ASSIGNOR HEREBY AUTHORIZES ASSIGNEE to file patent applications in any or all countries on the above-identified invention or inventions in the name of the undersigned or in the name of ASSIGNEE or otherwise as ASSIGNEE may deem advisable under the International Convention or otherwise.

ASSIGNOR HEREBY AUTHORIZES AND REQUESTS the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns.

ASSIGNOR HEREBY AGREES (a) to communicate to ASSIGNEE, its successors and assigns, or their representative or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States or a country foreign thereto; (c) to execute and deliver, upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, oaths, affidavits, and declarations, depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States and countries foreign thereto.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the law firm of McCarter & English, LLP the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of McCarter & English, LLP do not personally represent ASSIGNOR OR ASSIGNORS' legal interests, but instead represent the interests of ASSIGNEE; since said attorneys and agents cannot provide legal advice to ASSIGNOR with respect to this Assignment, ASSIGNOR acknowledges its right to seek its own independent legal counsel.

Executed this day of	Lewis Pa	canel (
United States of America State of Alabama County of Mimile On this 2th day of November,	2018	before me,
the undersigned notary public, personally appeared	Lewis Pa	annell
(name of document signer), proved to me through satisfactory of		
which was driver's license-AL 75/3956	, to be the pe	erson whose name
is signed on the preceding or attached document in my presence	e.	
Lighelle Morle cofficial sign	nature and	MICHELLE MOCK My Commission Expires July 27, 2019
My commission expires 07/27/2019		

Executed this 15th day of 10vember, 2018.
- Fall of Dr
Jack Di Palma
United States of America
State of Habana County of Mobile Habana
On this 5 th day of 0 very 2018 before me, the undersigned notary public, personally appeared Jack Di Palma
(name of document signer), proved to me through satisfactory evidence of identification, which was driver's license # 5554841, to be the person whose name
is signed on the preceding or attached document in my presence.
(official signature and seal of notary)
My commission expires CAROL LAMBERT My Commission Expires May 31, 2021
*** Company of the Co

Acceptance of Assignment by the Assignee:
Executed this Of day of July, 2019
UNIVERSITY OF SOUTH ALABAMA (USA)
Name: Lynne Chronister
Title: VP for Office of Research and Economic Development
United States of America State of Alabama County of Mobile On this / st day of February, 2018 9 before me, the undersigned notary public, personally appeared (name of document signer), proved to me through satisfactory evidence of identification, which was employee identification, to be the person whose name is signed on the preceding or attached document in my presence.
(official signature and seal of notary) My commission expires April 7, 2019

ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor (hereinafter referred to singly and collectively as "ASSIGNOR") has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto

UNIVERSITY OF SOUTH ALABAMA (USA) 307 N. University Boulevard Mobile, Alabama 36688-0002

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Page 1 of 4

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Executed this 28th day of November, 2018.
Carlo Contreras
United States of America State of County of Lefterson
On this day of November, 2018 before me,
the undersigned notary public, personally appeared Carlo Contreras
(name of document signer), proved to me through satisfactory evidence of identification,
which was <u>known to me</u> , to be the person whose name
s signed on the preceding or attached document in my presence.
Jush Hally (official signature and seal of notary) My commission expires March 29, 2021.

Acceptance of Assignment by the Assignee: Executed this
Jefne July VNIVERSITY OF SOUTH ALABAMA (USA)
Name: Lynne Chronister
Title: VP for Office of Research and Economic Development
United States of America State of County of On this State of Alabama
the undersigned notary public, personally appeared
(name of document signer), proved to me through satisfactory evidence of identification,
which was <u>employee identification</u> , to be the person whose name is signed on the preceding or attached document in my presence.
My commission expires (official signature and seal of notary) (Approach (A
WIND OF ALASSININ

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Executed this 21st day of November, 2018. Que Mula
Jana Rocker
United States of America State of County of Mobile Output Alabama County of
On this
is signed on the preceding or attached document in my presence. **Mathrup Cevence** (official signature and seal of notary) My commission expires 5-9-22.

	Acceptance of Assignment by the Assignee: Executed this <u>0</u> day of 7.0- 20/9.
l _e	UNIVERSITY OF SOUTH ALABAMA (USA)
	Name: Lynne Chronister
	Title: VP for Office of Research and Economic Development
	United States of America
	State of Alabama
	County of Mobile
	On this 1st day of Fabruary, 2018 9 before me,
	the undersigned notary public, personally appeared/
	(name of document signer), proved to me through satisfactory evidence of identification,
	which was <u>employee</u> identification, to be the person whose name is signed on the preceding or attached document in my presence.
	The signed on the preceding of underted document in my presence.
<u>~</u>	Deer falmel (official signature and seal of notary)
	My commission expires / 7, 30/9
	WINNEHMININ A PARTITION

RECORDED: 02/20/2019