

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
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EPAS ID: PAT5069805

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
RAGHU KALLURI	03/31/2017
SÓNIA MELO	07/01/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	BOARD OF REGENTS, THE UNIVERSITY OF TEXAS SYSTEM
<b>Street Address:</b>	210 WEST 7TH STREET
<b>City:</b>	AUSTIN
<b>State/Country:</b>	TEXAS
<b>Postal Code:</b>	78701
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15801269
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(512)334-2999
<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>	(512) 334-2900
<b>Email:</b>	jnorman@phiplaw.com
<b>Correspondent Name:</b>	PARKER HIGHLANDER PLLC
<b>Address Line 1:</b>	1120 S. CAPITAL OF TEXAS HWY.
<b>Address Line 2:</b>	BUILDING ONE, SUITE 200
<b>Address Line 4:</b>	AUSTIN, TEXAS 78746
<b>ATTORNEY DOCKET NUMBER:</b>	UTSC.P1233US.C1
<b>NAME OF SUBMITTER:</b>	JENNIFER NORMAN-WOLFE
<b>SIGNATURE:</b>	/Jennifer Norman-Wolfe/
<b>DATE SIGNED:</b>	07/26/2018
<b>Total Attachments: 10</b>	
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source=UTSC.P1233US.C1 - Executed Assignments From Parent (00495305xCCC41)#page10.tif

**ASSIGNMENT**

We, Raghu KALLURI, of 3726 Maroneal St., Houston, Texas 77025, a citizen of United States of America, and Sónia MELO, of Rua Dona Unisco Mendes, 24, 4 floor, Maia, Porto, Portugal, a citizen of Portugal, have invented **ANALYSIS OF GENOMIC DNA, RNA, AND PROTEINS IN EXOSOMES FOR DIAGNOSIS AND THERANOSIS**. This is an Assignment of the following rights, title and interest (check all that apply):

- ☒ United States of America rights, title and interest in the invention
- ☒ Foreign rights, title and interest in the invention
- ☐ An application to the Commissioner for Patents of the United States of America filed herewith
- ☒ United States Provisional Patent Application Serial No. 61/911,863 filed on December 4, 2013
- ☒ United States Patent Application Serial No. 15/101,857 filed on June 3, 2016
- ☐ United States Patent No(s).
- ☒ International (PCT) Patent Application Serial No. PCT/US2014/068630 filed on December 4, 2014
- ☐ Other (specify):

We were employed by The University of Texas M. D. Anderson Cancer Center, a State Institution of Higher Education established under the laws of the State of Texas within The University of Texas System, at the time the invention was made. The conditions under which said invention was made are such that the Board of Regents, The University of Texas System (hereinafter SYSTEM), having a place of business at 201 West 7<sup>th</sup> St., Austin, TX 78701, owns the entire right, title, and interest in the invention, in the United States and all other countries throughout the world.

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we, the undersigned, have voluntarily sold, assigned, and transferred and do voluntarily sell, assign, and transfer to SYSTEM, and successors and assigns, our full and exclusive right, title and interest in and to the invention(s) disclosed in said application throughout the world, including the United States and its territorial possessions and in all foreign countries, including all rights to claim priority, in and to any and all improvements which are disclosed in said application. This includes an assignment of all Letters Patent that may be granted on the invention in the United States of America and all countries throughout the world, and any divisional, renewal, continuation in whole or in part, substitution, conversion, reexamination, reissue, prolongation or extension thereof; and the right to claim priority from the patent application as provided for by United States law, the Patent Cooperation Treaty, the European Patent Convention, the Paris Convention, or other applicable law.

We have authorized SYSTEM to file and prosecute this patent application, as well as any corresponding international or national applications that claim priority from it. SYSTEM has the right to select attorneys or agents of its choice to prosecute at its discretion these applications on its behalf. We authorize and request the issuance of said Letters Patent to SYSTEM, as assignee of the entire right, title, and interest to be held as fully and entirely as the same would have been held by us had this assignment not been made.

We warrant that there are no outstanding assignments, grants, liens, encumbrances, or agreements either written, oral, or implied that will impair, diminish, limit, or abridge the interest herein conveyed at the time of the execution of the present assignment. We shall not communicate nor cooperate in any manner with any third party, other than SYSTEM, that claims any rights in and to said invention(s) and said application.

We also hereby assign all rights, title and interest to any improvements related to said invention(s) to SYSTEM and agree to promptly and fully communicate to SYSTEM any facts and information known to us respecting any improvements related to said invention(s) and said application while any patent application anywhere in the world is still pending that claims priority, whether directly or indirectly, from said invention(s) or said application(s). We will maintain any such facts and information in confidence and will only reveal such facts and information to SYSTEM or its assigns.

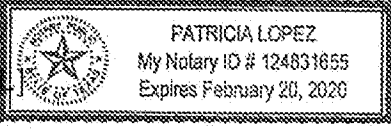
We also covenant that we will communicate to SYSTEM, its representatives, assigns or agents, any facts known to us respecting said invention(s) or said application(s), and to testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths, provide all requested documents, and do everything reasonably possible to aid SYSTEM and its assigns to obtain and enforce proper patent protection for said invention(s) or said application(s) in the United States or any foreign country. These provisions are binding upon our heirs, legal representatives, administrators and assigns.

We grant SYSTEM, the power to insert on this Assignment any further information that may be necessary or desirable in order to comply with all applicable legal requirements, including the rules of the United States Patent and Trademark Office, for submitting and recording this document.

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated: 3/31/17  
STATE OF TEXAS )  
COUNTY OF HARRIS ) ss.  
Raghu KALLURI

This 31<sup>st</sup> day of MARCH 2017, before me personally came the above-named Raghu KALLURI, who executed the foregoing Assignment in my presence, and who acknowledged to me that it was executed under that person's own free will for the purposes set forth therein.

[SEA]  Notary Public for TEXAS  
My commission expires: FEBRUARY 20, 2020



## ASSIGNMENT

We, Raghu KALLURI, of 3726 Maroneal St., Houston, Texas 77025, a citizen of United States of America, and Sónia MELO, of Porto, Portugal, a citizen of Portugal, have invented **ANALYSIS OF GENOMIC DNA, RNA, AND PROTEINS IN EXOSOMES FOR DIAGNOSIS AND THERANOSIS**. This is an Assignment of the following rights, title and interest (check all that apply):

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- ☐ United States Patent Application Serial No. \_\_\_\_\_ filed on \_\_\_\_\_
- ☐ United States Patent No(s) \_\_\_\_\_
- ☒ International (PCT) Patent Application Serial No. PCT/US2014/068630 filed on December 4, 2014
- ☐ Other (specify): \_\_\_\_\_

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For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we, the undersigned, have voluntarily sold, assigned, and transferred and do voluntarily sell, assign, and transfer to SYSTEM, and successors and assigns, our full and exclusive right, title and interest in and to the invention(s) disclosed in said application throughout the world, including the United States and its territorial possessions and in all foreign countries, including all rights to claim priority, in and to any and all improvements which are disclosed in said application. This includes an assignment of all Letters Patent that may be granted on the invention in the United States of America and all countries throughout the world, and any divisional, renewal, continuation in whole or in part, substitution, conversion, reexamination, reissue, prolongation or extension thereof; and the right to claim priority from the patent application as provided for by United States law, the Patent Cooperation Treaty, the European Patent Convention, the Paris Convention, or other applicable law.

We have authorized SYSTEM to file and prosecute this patent application, as well as any corresponding international or national applications that claim priority from it. SYSTEM has the right to select attorneys or agents of its choice to prosecute at its discretion these applications on its behalf. We authorize and request the issuance of said Letters Patent to SYSTEM, as assignee of the entire right, title, and interest to be held as fully and entirely as the same would have been held by us had this assignment not been made.

{00321795}

We warrant that there are no outstanding assignments, grants, liens, encumbrances, or agreements either written, oral, or implied that will impair, diminish, limit, or abridge the interest herein conveyed at the time of the execution of the present assignment. We shall not communicate nor cooperate in any manner with any third party, other than SYSTEM, that claims any rights in and to said invention(s) and said application.

We also hereby assign all rights, title and interest to any improvements related to said invention(s) to SYSTEM and agree to promptly and fully communicate to SYSTEM any facts and information known to us respecting any improvements related to said invention(s) and said application while any patent application anywhere in the world is still pending that claims priority, whether directly or indirectly, from said invention(s) or said application(s). We will maintain any such facts and information in confidence and will only reveal such facts and information to SYSTEM or its assigns.

We also covenant that we will communicate to SYSTEM, its representatives, assigns or agents, any facts known to us respecting said invention(s) or said application(s), and to testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths, provide all requested documents, and do everything reasonably possible to aid SYSTEM and its assigns to obtain and enforce proper patent protection for said invention(s) or said application(s) in the United States or any foreign country. These provisions are binding upon our heirs, legal representatives, administrators and assigns.

We grant SYSTEM, the power to insert on this Assignment any further information that may be necessary or desirable in order to comply with all applicable legal requirements, including the rules of the United States Patent and Trademark Office, for submitting and recording this document.

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated: \_\_\_\_\_

STATE OF \_\_\_\_\_ )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

\_\_\_\_\_  
Raghu KALLURI

This \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me personally came the above-named Raghu KALLURI, who executed the foregoing Assignment in my presence, and who acknowledged to me that it was executed under that person's own free will for the purposes set forth therein.

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

[SEAL]

My commission expires: \_\_\_\_\_

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated: \_\_\_\_\_

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

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

Sônia Melo  
Sônia MELO

This     day of                      20\_\_\_, before me personally came the above-named Sônia MELO, who executed the foregoing Assignment in my presence, and who acknowledged to me that it was executed under that person's own free will for the purposes set forth therein.

Claudio B. B. B.  
Notary Public for \_\_\_\_\_

My commission expires: \_\_\_\_\_

[SEAL]



*Claudia Barbas*  
NOTÁRIA

## TERMO DE AUTENTICAÇÃO

No dia um de julho de dois mil e dezasseis, perante mim, Licenciada Cláudia Sofia Duarte da Silva Barbas, notária, no respetivo Cartório sito na Rua Doutor Carlos Felgueiras, número cento e três, primeiro andar, sala cinco, na Maia, compareceu como outorgante: \_\_\_\_\_

\_\_\_\_\_ **SÓNIA MARIA ALMEIDA GUEDES DE MELO**, casada com Jorge Nuno Gomes de Araújo Barros sob o regime de comunhão de adquiridos, natural da freguesia de Paranhos, concelho do Porto, residente na Rua Dona Unisco Mendes, número 24, 4.º andar, na Maia, contribuinte fiscal 227.407.555, titular do cartão de cidadão 11827299 3 ZX5, válido até 11 de fevereiro de 2020, a qual para fim de autenticação me apresentou a presente "Transmissão" ("Assignment"), escrita em Inglês, que disse haver lido e assinado e que a mesma exprime a sua vontade. \_\_\_\_\_

\_\_\_\_\_ Este instrumento foi lido à interveniente e o seu conteúdo explicado.

\_\_\_\_\_ Verifiquei a identidade da outorgante pela exibição do mencionado documento de identificação. \_\_\_\_\_

*A Notária,*  
*Claudia Barbas*  
\_\_\_\_\_

Carta n.º P- 14718 Foi emitido recibo.

**Pedro Araújo Barros**  
ADVOGADO  
CP-8743P / NIF. 205 753 132  
Rua de S. Tomás, 908 4200-488 PORTO  
Tel / Fax - 222 442 888 Telex. 93 336 11 17  
paraajob Barros-8743p@adv.ao.pt

\*\*\*\*\*

-----"AUTHENTICATION"-----

-----On the first of July of two thousand and sixteen, before me, Licen-  
see Cláudia Sofia Duarte da Silva Barbas, Notary, in my Office located at  
Rua Doutor Carlos Felgueiras, number one hundred and three, first floor,  
office number five, in Maia have appeared as grantor:

-----SÓNIA MARIA ALMEIDA GUEDES DE MELO, married to Jorge  
Nuno Gomes de Araújo Barros under the acquired assets regime, born in  
Paranhos, city of Porto, resident at Rua Dona Unisco Mendes, 24, 4º floor,  
in Maia, holder of the tax registration number 227.407.555, and citizen card  
number 11827299 2 ZX5, valid until 11 of February of 2020, which have  
presented to me, for authentication, this Assignment, written in the English  
language, that she confirmed to have read and signed and that it corre-  
sponds to her will. -----

-----This instrument has been read to the intervenient and its content ex-  
plained. -----

-----I have checked the grantor identity by the exhibition of the above  
mentioned identity card -----

-----Signature of the grantor. -----

-----The Notary, -----

-----Signature of the Notary. -----

-----Account number P-1471 Receipt was issued (short signature). -----

PATENT

REEL: 046475 FRAME: 0647

ARLIV / ADVOGADOS  
PEDRO ARAÚJO BARROS  
MIGUEL REÇA  
LUISS MARIA BORGES  
ANDRÉ LEMOS  
MARTA VILARINHO

RUA DE S. TOMÉ, N.º 906  
4100-486, PORTO  
TIF 222 442 958

## Certification of translation

Pedro Jorge Gomes Araújo Barros

Lawyer

Office: Rua de S. Tomé 906, Porto, Portugal

I, Pedro Jorge Gomes Araújo Barros, holder of the Portuguese Bar Association Identity Card n.º 9743-P, certify that the attached document issued by Cláudia Sofia Duarte da Silva Barbas, notary public for Maia, was presented to me for certification of its translation. The document, entitled "TERMO DE AUTENTICAÇÃO" consisting of one page, is written in the Portuguese language and its translation to English (also one page) is faithful to the original and reflects the meaning intended.

The present certification was registered at the Portuguese Bar Association at 16/06/2016 with the number 9743P/213.

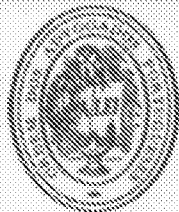
Porto (Portugal), July the 1st, 2016,

**Pedro Araújo Barros**  
ADVOGADO  
CP: 9743P / NIF: 205 753 132  
Rua de S. Tomé, 906 4100-486 PORTO  
Tel / Fax - 222 442 958 Telex: 83 335 11 17  
paraajob Barros-9743p@adv.os.pt



**PATENT**

**REEL: 046475 FRAME: 0648**



## ORDEM DOS ADVOGADOS

### REGISTO ONLINE DOS ACTOS DOS ADVOGADOS

Artigo 38.º do Decreto-Lei n.º 76-A/2006, de 29-03

Portaria n.º 857-B/2006, de 29-06

**Dr.(a) Pedro Araújo Barros**

CÉDULA PROFISSIONAL: 9743P

**IDENTIFICAÇÃO DA NATUREZA E ESPÉCIE DO ACTO**

*Certificação de traduções de documentos*

**IDENTIFICAÇÃO DOS INTERESSADOS**

*Sónia Maria Almeida Guedes de Melo*

*Cartão de Cidadão n.º. 118272993xx5*

**OBSERVAÇÕES**

*Certification of translation.*

EXECUTADO A: 2016-07-01 17:20

REGISTADO A: 2016-07-01 17:28

COM O N.º: 9743P/213

Poderá consultar este registo em <http://oa.pt/atos>  
usando o código 24162758-685932

**Pedro Araújo Barros**

ADVOGADO

CP-9743P / NIF: 208 783 132

Rua de S. Tomás, 808 4200-488 PORTO

Tel / Fax: 222 442 958 Telem. 93 335 11 17

[parauiob Barros-9743p@adv.oa.pt](mailto:parauiob Barros-9743p@adv.oa.pt)