505295908 01/25/2019

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE: NEW ASSIGNMENT NATURE OF CONVEYANCE: ASSIGNMENT

EPAS ID: PAT5342685

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------|----------------|
| MICHAEL F. CLARKE | 10/04/2001 |
| SEAN J. MORRISON | 10/03/2001 |
| MAX S. WICHA | 11/21/2001 |
| MUHAMMAD AL-HAJJ | 10/04/2001 |

RECEIVING PARTY DATA

| Name: | The Regents of The University of Michigan |
|-----------------|---|
| Street Address: | 1600 Huron Parkway, 2nd Floor |
| City: | Ann Arbor |
| State/Country: | MICHIGAN |
| Postal Code: | 48109-2590 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 15258419 |

CORRESPONDENCE DATA

Fax Number: (608)662-1276

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.

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Correspondent Name: JASON R. BOND

Address Line 1: 2275 DEMING WAY, SUITE 310 Address Line 4: MIDDLETON, WISCONSIN 53562

| ATTORNEY DOCKET NUMBER: | UM-09943/US-4/CON |
|-------------------------|-------------------|
| NAME OF SUBMITTER: | JASON R. BOND |
| SIGNATURE: | /Jason R. Bond/ |
| DATE SIGNED: | 01/25/2019 |

Total Attachments: 5

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> **PATENT** REEL: 048133 FRAME: 0897 505295908

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PATENT REEL: 048133 FRAME: 0898

ASSIGNMENT

We, Michael F. Clarke, Sean J. Morrison, Max S. Wicha, and Mohammad al-Hajj, all of Ann Arbor, Michigan, the undersigned, for good and valuable consideration, the receipt of which is hereby acknowledged, hereby assign, sell and transfer to the Regents of the University of Michigan, with offices at Wolverine Tower, Room 2071, 3003 South State Street, Ann Arbor, Michigan, United States, 48109-1280 and its successors, assigns and legal representatives, all hereinafter referred to as the ASSIGNEE: (1) our entire right, title and interest for the United States and in all countries, in and to any and all inventions, discoveries and applications which are disclosed in the application for United States Letters Patent entitled:

ISOLATION AND USE OF SOLID TUMOR STEM CELLS

filed with the U.S. Patent and Trademark Office on August 1, 2001 and assigned Serial No. 09/920,517, including any renewals, revivals, reissues, reexaminations, extensions, continuations and divisions thereof and any substitute applications therefor; (2) the full and complete right to file patent applications in the name of the ASSIGNEE, its designee, or in my/our names at the ASSIGNEE, or its designee's election, on the aforesaid inventions, discoveries and applications in all countries of the world; (3) the entire right, title and interest in and to any Letters Patent which may issue thereon in the United States or in any country, and any renewals, revivals, reissues, reexaminations and extensions thereof, and any patents of confirmation, registration and importation of the same; and (4) the entire right, title and interest in all Convention and Treaty Rights of all kinds thereon, including without limitation all rights of priority in any country of the world, in and to the above inventions, discoveries and applications.

We hereby authorize and request the competent authorities to grant and to issue any and all such Letters Patent in the United States and throughout the world to the ASSIGNEE of the entire right, title and interest therein, as fully and entirely as the same would have been held and enjoyed by me/us had this assignment, sale and transfer not been made.

We agree, at any time, upon the request of the ASSIGNEE, to execute and to deliver to the ASSIGNEE any additional applications for patents for said inventions and discoveries, or any part or parts thereof, and any applications for patents of confirmation, registration and importation based on any Letters Patent issuing on said inventions, discoveries, or applications and divisions, continuations, renewals, revivals, reissues, reexaminations and extensions thereof.

We further agree at any time to execute and to deliver upon request of the ASSIGNEE such additional documents, if any, as are necessary or desirable to secure patent protection on said inventions, discoveries and applications throughout all countries of the world, and otherwise to do the necessary to give full effect to and to perfect the rights of the ASSIGNEE under this Assignment, including the execution, delivery and procurement of any and all further documents evidencing this assignment, transfer and sale as may be necessary or desirable.

We hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

BST99 1233690-1.060173.0014

PATENT REEL: 048133 FRAME: 0899 We further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

| Date: | Michael F. Clarke |
|---|--------------------------------|
| IN WITNESS WHEREOF, We have here | ounto set hand and seal |
| Signature of witness: This Y day of October 202 Date of signing EVELYNK. MITCHELL DEFANT PUBLIC WASHTENAW CO., MITCHES SCO. 2, 2004 | <u> </u> |
| Date: | |
| | Signature of: Sean J. Morrison |
| IN WITNESS WHEREOF, We have here | into set hand and seal |
| | |
| Signature of witness: | |
| this day of | |

We further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

| Date: | |
|--|---|
| | Signature of: Michael F. Clarke |
| IN WITNESS WHEREOF, We have hereun | to set hand and seal |
| Signature of witness: | |
| this day of Date of signing | · |
| Date: 10/3/01 | Signature of: Sean J. Morrison |
| IN WITNESS WHEREOF, We have hereunto | |
| Signature of witness: | PSTYNN LHYMUN. |
| his 3 day of October 2001 Date of signing | RA CONTRESCON ELBANA CO" MI RELIGIO MARHIENNA CO" MI |
| Date of signing | |

| Date: 11/21/01 | Signature of: Max S. Wicha | ं |
|--|---|----------|
| IN WITNESS WHEREOF, We have he | ereunto set hand and seal | |
| Eurly & Metall Signature of witness: | NOTARY PUBLIC WASHTEINAW CO., MI NOTARY PUBLIC WASHTEINAW CO., MI NY COMMESCON ETPRES SEP 2, 2004 | |
| this 21 day of $\mu \circ U$ Date of signing | | |
| | | |
| Date: | | |
| | Signature of: Mohammad al-Hajj | |
| IN WITNESS WHEREOF, We have her | eunto set hand and seal | |
| | | |
| Signature of witness: | | |
| this day of | | |
| Date of signing | 100-00-00-00-00-00-00-00-00-00-00-00-00- | |

| Date: | , |
|---|---|
| | Signature of: Max S. Wicha |
| IN WITNESS WHEREOF, We have hereun | nto set hand and seal |
| | |
| Signature of witness: | |
| this day of | |
| this day of | |
| | |
| | |
| Date: | Muhammad A(-haj) Signature of: Mohammad al-Hajj Malammad al-Hajj |
| | Signature of: Mohammad al-Hajj |
| IN WITNESS WHEREOF, We have hereunt | MANAMMAA AL-HALL |
| Evely & Mitcheld | |
| Signaturé of witness: | |
| his 4th day of October 2014 | |
| Date of signing | <u> </u> |
| EVELYN K. MITCHELL NOTARY PUBLIC WASHTENAW CO., MI | |