504183915 01/18/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4230590

| SUBMISSION TYPE: | | NEW ASSIGNMENT | NEW ASSIGNMENT | | | |
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| NATURE OF CONVEYANCE: | | ASSIGNMENT | ASSIGNMENT | | | |
| CONVEYING PARTY | DATA | | | | | |
| | | Name | Execution Date | | | |
| THE BOARD OF TRU | STEES O | F THE UNIVERSITY OF ARKANSAS | 01/13/2017 | | | |
| RECEIVING PARTY D | ΑΤΑ | | | | | |
| Name: | BOAR | BOARD OF TRUSTEES OF THE UNIVERSITY OF ARKANSAS | | | | |
| Street Address: | 2404 N | NORTH UNIVERSITY AVENUE | | | | |
| City: | | LITTLE ROCK | | | | |
| State/Country: | ARKAI | ARKANSAS | | | | |
| Postal Code: | 72207 | | | | | |
| Name: | BIOVE | BIOVENTURES, LLC | | | | |
| Street Address: | 4301 V | 4301 W. MARKHAM ST., #831 | | | | |
| City: | | LITTLE ROCK | | | | |
| State/Country: | ARKAI | ARKANSAS | | | | |
| Postal Code: | 72205 | 72205-7199 | | | | |
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| Property Type Application Number: CORRESPONDENCE Fax Number: Correspondence will using a fax number, i | e DATA be sent t | Number 14256323 (314)231-1776 o the e-mail address first; if that is unsud; if that is unsuccessful, it will be sent | | | | |
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| Property Type Application Number: CORRESPONDENCE Fax Number: Correspondence will using a fax number, i Phone: Email: Correspondent Name Address Line 1: Address Line 2: | e DATA be sent t if provide | Number14256323(314)231-1776o the e-mail address first; if that is unsud; if that is unsuccessful, it will be sent314-889-8000ipdocket@polsinelli.comPOLSINELLI PC100 SOUTH FOURTH STREETSUITE 1000ST. LOUIS, MISSOURI 63102-1825 | | | | |
| Property Type Application Number: CORRESPONDENCE Fax Number: Correspondence will using a fax number, i Phone: Email: Correspondent Name Address Line 1: Address Line 2: Address Line 4: | e DATA be sent t if provide | Number14256323(314)231-1776o the e-mail address first; if that is unsud; if that is unsuccessful, it will be sent314-889-8000ipdocket@polsinelli.comPOLSINELLI PC100 SOUTH FOURTH STREETSUITE 1000ST. LOUIS, MISSOURI 63102-1825 | | | | |
| Property Type Application Number: CORRESPONDENCE Fax Number: Correspondence will using a fax number, i Phone: Email: Correspondent Name Address Line 1: Address Line 2: Address Line 4: | e DATA be sent t if provide | Number 14256323 (314)231-1776 o the e-mail address first; if that is unsud; if that is unsuccessful, it will be sent 314-889-8000 ipdocket@polsinelli.com POLSINELLI PC 100 SOUTH FOURTH STREET SUITE 1000 ST. LOUIS, MISSOURI 63102-1825 052595-469204 | | | | |

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| source=Executed Assignment - UAMS to BioVentures LLC#page5.tif |
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| source=Executed Assignment - UAMS to BioVentures LLC#page7.tif |

UNITED STATES PATENT ASSIGNMENT

1. WHEREAS, the Board of Trustees of the University of Arkansas, a University, with offices at 2404 North University Avenue, Little Rock, Arkansas 72207 ("Assignor"), is the owner of the entire right, title, and interest in and to certain letters patent and patent applications throughout the world and the inventions disclosed therein; and

2. WHEREAS, BIOVENTURES, LLC, an Arkansas limited liability company, with offices at 4301 W. Markham St., #831, Little Rock, Arkansas 72205-7199 ("Assignee"), is desirous of acquiring said right, title and interest of Assignor;

3. NOW, THEREFORE, in consideration of the sum of one dollar (\$1.00) and other good and valuable consideration by Assignee to Assignor in hand paid, receipt of all of which is hereby acknowledged. Assignor has agreed to and does hereby sell, assign and transfer unto Assignee, its successors and assigns, all of Assignor's right, title and interest in and throughout the world, in and to said letters patent and patent application and all reissues thereof and reexamination certificates therefore, and the inventions disclosed therein, including Assignor's full right to sue for and recover all damages recoverable from past infringements of said letters patent; including specifically, without limiting the generality of the foregoing, the worldwide letters patent and patent applications listed in Appendix A; and Assignor has further agreed to and does hereby sell, assign and transfer unto Assignee, its successors and assigns, all of Assignor's right, title and interest in and throughout the world in and to said inventions, any other patent applications (including provisional, non-provisional, divisional, continuing, or reissue applications) based in whole or in part on said worldwide letters patent or patent applications or in whole or in part on said inventions, and any and all letter patent (including extensions thereof) of any country which have been or may be granted on any of the aforesaid patent applications or on said inventions or any part thereof; including, specifically, without limiting the generality of the foregoing, the worldwide letters patent and patent applications listed in Appendix A.

4. TO BE HELD AND ENJOYED BY Assignee, its successors and assigns, to the full ends of the respective terms for which said patents have been or may be granted, as fully and entirely as the same would have been held and enjoyed by Assignor had this sale and assignment not been made.

5. AND Assignor hereby authorizes and requests the Patent Offices of the countries wherein said patent applications are filed to issue any and all letters patent which may be granted upon said foreign country patent applications to Assignee, its successors and assigns.

6. AND Assignor hereby agrees to execute without further consideration any further lawful documents and any further assurances, and any provisional, non-provisional, divisional, continuing, reissue or other applications for patents of any country, that may be deemed necessary by said Assignee, its successors or

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assigns fully to secure its interest as aforesaid in and to said inventions or any part thereof, and in and to said several patents or any of them.

7. AND Assignor covenants that Assignor has granted no right or license to make, use or sell said inventions to anyone except said Assignee, that prior to the execution of this deed, Assignor's right, title, and interest in said inventions has not been otherwise encumbered, and that Assignor has not executed and will not execute any instrument in conflict herewith.

| | SSIGNOR (BOARD OF TRUSTEES OF THE NIVERSITY OF ARKANSAS) |
|--|---|
| | Daniel WRah le: Chance Ila ate: 1/13/17 |
| | DWLEDGMENT |
| STATE OF HKANSAS) | |
| COUNTY OF Pulaski, | SS. |
| On this 13 day of Januar | $\frac{4}{2}$, 2017, before me, a Notary Public, |
| personally appeared Oaw to me to be the person described, in | el w kah |
| · · · · · · · | |

In Testimony Whereof, I have hereunto set my hand and affixed my official seal the day and year first above written.

Notary

My Commission Expires:

6-7-26 [SEAL]



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ASSIGNEE (BIOVENTURES, LLC)

BY: NANCY Title: Date: 1 ACKNOWLEDGMEN STATE OF) SS. COUNTY OF On this 10° day of (4000, 2017), before me, a Notary Public, Nana NOIL personally appeared to me to be the person described, in and who executed, the foregoing assignment and acknowledged that he/she executed said instrument as his/her free act and deed.

In Testimony Whereof, I have hereunto set my hand and affixed my official seal the day and year first above written.

Notary Public

My Commission Expires:

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ALISON M. GILL MY COMMISSION # 12376156 EXPIRES: April 15, 2020 Pulaski County

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PATENT REEL: 041007 FRAME: 0036

APPENDIX A

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PATENT REEL: 041007 FRAME: 0037

Schedule A

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| Ref # | Client Ref # | | Title | Serial # |
|-----------------|--------------|----|--|------------|
| 052592-458343 | 2012-25 | US | NUCLEIC ACID PROBES AND METHODS OF USING THE SAME | 14/056,497 |
| 052592-469204 | 2013-22 | US | METHODS FOR IMPROVING HEART FUNCTION | 14/256,323 |
| 052592-482199 | 2012-23 | US | COMPOSITIONS AND METHODS FOR NON-INVASIVE DETECTION AND TREATMENT OF HYPOXIC CELLS IN VIVO | 14/408,249 |
| 052592-484841 | 2011-27 | US | METHODS AND COMPOSITIONS FOR REGULATING MUSASHI FUNCTION | 14/559,514 |
| 052592-485853 | 2012-20 | US | IN VIVO PHOTOACOUSTIC AND PHOTOTHERMAL NANO-THERANOSTICS OF BIOFILMS | 14/552,143 |
| 052592-486770 | 2012-20 | US | DEVICE AND METHOD FOR IN VIVO PHOTOACOUSTIC DIAGNOSIS AND PHOTOTHERMAL PURGING OF INFECTED BLOOD | 14/668,418 |
| 052592-486772 | 2013-07 | US | SONOLYSIS WITH BIODEGRADABLE | 14/429,848 |
| 052592-489549-1 | 2014-21 | US | INHIBITORS OF OXIDIZED LOW-DENSITY LIPOPROTEIN RECEPTOR 1 AND METHODS OF | 62/248,586 |
| 052592-491330 | 2013-20 | US | INDOLE COMPOUNDS FOR USE IN TREATING INFLAMMATION AND CANCER | 14/651,113 |
| 052592-492794 | 2012-20 | US | IN VIVO PHOTOACOUSTIC AND PHOTOTHERMAL NANO-THERANOSTICS OF BIOFILMS | 14/728,849 |
| 052592-496236 | 2011-02 | US | DEVICE AND METHOD FOR IN VIVO NONINVASIVE MAGNETIC MANIPULATION OF CIRCULATING OBJECTS IN BIOFLOWS | 14/754,034 |
| 052592-496238 | 2012-17 | US | ANTIBODY-NANOPARTICLE CONJUGATES FOR THE TREATMENT OF DRUG ABUSE | 14/775,227 |
| 052592-498706 | 2013-25 | US | COMBRETASTATIN ANALOGS | 14/785,381 |
| 052592-498710 | 2013-27 | US | POLYMERASE, ENDONUCLEASE, AND HELICASE INHIBITORS AND METHODS OF USING THEREOF | 14/786,331 |
| 052592-499050 | 2013-24 | US | AMPHIBIAN OOCYTE OR EMBRYO BIOASSAY | 14/785,196 |
| 052592-499797 | 2013-24 | US | PARTHENOLIDE DERIVATIVES AND THEIR MODULATION OF PROCESSES CONTROLLED BY REGULATED TRANSLATION | 14/785,183 |
| 052592-500134 | 08-16D/CON | US | DEVICE AND METHOD FOR IN VIVO FLOW CYTOMETRY USING THE DETECTION OF | 14/939,039 |
| 052592-500139 | 2013-29 | US | METHODS AND COMPOSITIONS FOR EXPANDING LONG-TERM HEMATOPOIETIC STEM CELL | 14/903,548 |
| 052592-501657 | 2013-33 | US | DEHYDROLEUCODINE DERIVATIVES AND USES THEREOF | 14/903,545 |
| 052592-507030 | 2016-10 | US | METHODS TO CLASSIFY MULTIPLE MYELOMA | 62/253,537 |
| 052592-507911 | 2016-12 | US | SECURING DEVICE FOR INTRACRANIAL ELECTRODE | 62/357,697 |
| 052592-509092 | 2016-13 | US | DUAL-PURPOSE BIOPSY COLLECTION CONTAINER AND TISSUE PROCESSING CASSETTE | 62/289,624 |
| 052592-509967 | 2013-02 | US | METHODS AND KITS FOR ISOLATION AND ANALYSIS OF A CHROMATIN REGION | 15/012,535 |

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Schedule A

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| 052592-510198 | 2016-14 | US | TRIAZOLE DERIVATIVES OF MELAMPOMAGNOLIDE B AND METHODS OF USE THEREOF | 62/289,017 |
|---------------|------------------------------------|----|---|-------------------|
| 052592-511579 | 2016-20 | US | A Platform-independent Gene Expression Signature Differentiates Sessile Serrated Colon Polyps and Hyperplastic Polyps | 62/277,817 |
| 052592-540406 | 2013-30 | US | ACETAMINOPHEN ADDUCTS AND METHODS OF USE THEREOF | 15/118,297 |
| 052592-544264 | 2016-27 | US | COMPOUNDS THAT INDUCE DEGRADATION OF ANTI- APOPTOTIC BCL-2 FAMILY PROTEINS AND THE USES THEREOF | 62/325,856 |
| 052592-548889 | 2015-21 | US | COMPOSITIONS AND METHODS FOR GENERATING REVERSION FREE ATTENUATED AND/OR REPLICATION INCOMPETENT VACCINE VECTORS | 62/383,907 |
| 052592-550603 | 2013-02 | US | METHODS AND KITS FOR ISOLATION AND ANALYSIS OF A CHROMATIN REGION | 15/227,541 |
| 052592-550606 | 2015-11 | US | MELAMPOMAGNOLIDE B DERIVATIVES | 15/251,889 |
| 052592-550607 | | US | MELAMPOMAGNOLIDE B DERIVATIVES | 15/254,849 |
| 052592-551625 | 2011-11 | US | DEVICE AND METHOD FOR IN VIVO DETECTION OF CLOTS WITHIN CIRCULATORY VESSELS | 15/240,712 |
| 052592-551959 | 2014-29 | US | DISUBSTITUTED TRIAZOLE ANALOGS | 15/282,312 |
| 052592-554793 | 2014-32 | US | COMPOSITIONS AND METHODS FOR MODULATING NEURONAL DEGENERATION | 15/320,148 |
| 052592-555692 | 2014-28 | US | COMPOSITIONS AND METHODS FOR INHIBITING ANTIAPOPTOTIC BcI-2 PROTEINS AS ANTI-AGING AGENTS | 15/308,552 |
| 052592-483291 | 2015-04 | wo | METHODS TO DETECT IMMUNOGLOBULIN HEAVY CHAIN AND METHODS OF USE THEREOF | PCT/US2014/063719 |
| 052592-491007 | 2014-28 | wo | COMPOSITIONS AND METHODS FOR INHIBITING ANTIAPOPTOTIC Bcl-2 PROTEINS AS ANTI-AGING AGENTS | PCT/US2015/029208 |
| 052592-491673 | 2014-32 | wo | COMPOSITIONS AND METHODS FOR MODULATING NEURONAL DEGENERATION | PCT/US2015/036755 |
| 052592-492342 | 2015-02 (44237- 727.601) | wo | COMPOSITIONS AND METHODS FOR SELECTIVELY DEPLETING SENESCENT CELLS | PCT/US2015/041470 |
| 052592-500485 | 2015-05 | wo | MELAMPOMAGNOLIDE B DIMERS | PCT/US2015/063792 |
| 052592-501686 | 2014-04 | WO | ANTI-ACETAMINOPHEN ANTIBODIES AND ACETAMINOPHEN PROTEIN ADDUCTS | PCT/US2015/063786 |
| 052592-509324 | 2014-24 | wo | DEVICES AND METHODS FOR FRACTIONATED PHOTOACOUSTIC FLOW CYTOMETRY | PCT/US2015/068341 |
| 052592-511719 | 2015-08 (WSGR44237- 742.601) | wo | FLIP - A SELECTIVE MOLECULAR TARGET OF SENESCENT CELLS | PCT/US2016/014518 |
| 052592-511720 | 2015-09 (WSGR44237- 743.601) | wo | FAS AND DRS ARE NOVEL MOLECULAR TARGETS OF SENESCENT CELLS | PCT/US2016/014510 |

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Schedule A

| 052592-542434 | 2012-20 | wo | IN VIVO PHOTOACOUSTIC AND PHOTOTHERMAL NANO-THERANOSTICS OF BIOFILMS | PCT/US2016/035512 |
|---------------|---------|----|--|-------------------|
| 052592-544590 | 2015-20 | wo | COMPOSITIONS AND METHODS FOR DETECTING SESSILE SERRATED ADENOMAS/POLYPS | PCT/US2016/032466 |
| 052592-550602 | 2015-25 | wo | ELECTRODE FOR PERIPHERAL NERVE STIMULATION | PCT/US2016/052488 |
| 052592-551032 | 2016-10 | wo | METHODS TO CLASSIFY MULTIPLE MYELOMA | PCT/US2016/061323 |
| 052592-554538 | 2014-21 | WO | INHIBITORS OF OXIDIZED LOW-DENSITY LIPOPROTEIN RECEPTOR 1 AND METHODS OF USING THEREOF | PCT/US2016/059415 |
| 052592-554794 | 2016-08 | wo | HETERO-SUBSTITUTED CYCLIC LACTONE ANALOGUES AND USES THEREOF | PCT/US2016/060318 |

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