506222130 08/26/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6268873

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-----------------------|----------------|
| GEORGE LATIMER WILCOX | 09/20/2018 |
| DANIEL JOHN BRUCE | 09/19/2018 |
| CAROLYN ANN FAIRBANKS | 09/20/2018 |
| PHILIP S. PORTOGHESE | 09/19/2018 |
| EYUP AKGUN | 09/19/2018 |

RECEIVING PARTY DATA

| Name: | REGENTS OF THE UNIVERSITY OF MINNESOTA |
|-------------------|--|
| Street Address: | 600 MCNAMARA ALUMNI CENTER |
| Internal Address: | 200 OAK STREET SE |
| City: | MINNEAPOLIS |
| State/Country: | MINNESOTA |
| Postal Code: | 55455-2020 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 16088000 |

CORRESPONDENCE DATA

Fax Number: (952)876-4098

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: 95287640

docketing@vhpmlaw.com, jcrandall@vhpmlaw.com Email:

VIKSNINS HARRIS PADYS MALEN LLP **Correspondent Name:**

7851 METRO PARKWAY Address Line 1:

Address Line 2: **SUITE 325**

Address Line 4: **BLOOMINGTON, MINNESOTA 55425**

| ATTORNEY DOCKET NUMBER: | 09531.414US1 |
|-------------------------|-------------------|
| NAME OF SUBMITTER: | JO ANN CRANDALL |
| SIGNATURE: | /Jo Ann Crandall/ |
| DATE SIGNED: | 08/26/2020 |

PATENT REEL: 053604 FRAME: 0639 506222130

Total Attachments: 15 source=09531_414US1_Assignments_ALL#page1.tif source=09531 414US1 Assignments ALL#page2.tif source=09531_414US1_Assignments_ALL#page3.tif source=09531_414US1_Assignments_ALL#page4.tif source=09531_414US1_Assignments_ALL#page5.tif source=09531_414US1_Assignments_ALL#page6.tif source=09531_414US1_Assignments_ALL#page7.tif source=09531_414US1_Assignments_ALL#page8.tif source=09531 414US1 Assignments ALL#page9.tif source=09531_414US1_Assignments_ALL#page10.tif source=09531_414US1_Assignments_ALL#page11.tif source=09531_414US1_Assignments_ALL#page12.tif source=09531 414US1 Assignments ALL#page13.tif source=09531 414US1 Assignments ALL#page14.tif source=09531_414US1_Assignments_ALL#page15.tif

PATENT REEL: 053604 FRAME: 0640



WHEREAS, I, GEORGE LATIMER WILCOX, have invented certain new and useful improvements in COMBINATION FOR TREATING PAIN, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: Provisional application no. 62/311,781 on March 22, 2016; PCT/US2017/023647 on March 22, 2017(the "Application(s)");

Whereas, REGENTS OF THE UNIVERSITY OF MINNESOTA ("Assignee"), having offices at 600 McNamara Alumni Center, 200 Oak Street SE, Minneapolis, Minnesota 55455-2020, is desirous of documenting the acquisition of the entire right, title and interest in and to said invention, said Application(s) and in, to and under any and all Letters Patent to be obtained therefor;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, and to the extent that I have not done so already via a prior agreement with the Assignee, or if I have already done so via a prior agreement with the Assignee then in confirmation of said prior agreement, I have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto Assignee, its successors and assigns, the entire right, title and interest in and to the inventions set forth hereinabove and the entire right, title and interest in and to any and all Letters Patent of the United States and any foreign countries which may be granted therefor on the Application(s) including my rights under the Paris Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Application(s) and Letters Patent that may be granted, including all rights to claim priority therefrom, and specifically including the right to enforce such Letters Patent in the name of Assignee and to recover damages for past infringement of the rights conveyed herein, the same to be held and enjoyed by Assignee for its own use and benefit and use and benefit of its successors and assigns to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made.

I hereby authorize said Assignce, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent, in its own name if desired, in any and all foreign countries, and additionally to claim the filing date of any the Application(s) and/or otherwise take advantage of the provisions of the Paris Convention.

Attorney Docket Number: 09531.414WO1

UM Case No. 20160199

1

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Assignee in accordance with this instrument.

| IN WITNESS WHEREOF, I have her | reunto set my hand on this 20^4 | day of |
|--------------------------------|-----------------------------------|--|
| <u>September</u> , 2018. | 1100 | |
| | GEODGE LATIMED WILL | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |

COUNTY OF HEALIEFIA)

On this ZOH day of Leable , 2018, before me personally appeared GEORGE LATIMER WILCOX, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.

LAUREL MARIA CORGARD
NOTARY PUBLIC - MINNESOTA
MY COMMISSION EXPIRES 01/31/20

Kalirel Maria Corgard

Attorney Docket Number: 09531.414WO1

| | have hereunto set my hand on this day of malf of Assignee Regents of the University of Minnesota |
|--|--|
| | Paul B. Savereite Senior Associate General Counsel per Presidential Delegation DA_028016 |
| STATE OF MINNESOTA |) |
| COUNTY OF HENNEPIN |)) |
| Paul B. Savereide, to me known to | Scales, 2018, before me personally appeared be the person described in and who executed the foregoing he executed the same as his/her free act and deed. |
| IN WITNESS WHEREOF, I my office, the day and year above wi | I have hereunto affixed my official signature with the seal of ritten. |
| | Runger Dileta |
| | Notary Public |
| | |



Attorney Docket Number: 09531.414WO1 UM Case No. 20160199



WHEREAS, I, DANIEL JOHN BRUCE, have invented certain new and useful improvements in COMBINATION FOR TREATING PAIN, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: Provisional application no. 62/311,781 on March 22, 2016; PCT/US2017/023647 on March 22, 2017(the "Application(s)");

Whereas, REGENTS OF THE UNIVERSITY OF MINNESOTA ("Assignce"), having offices at 600 McNamara Alumni Center, 200 Oak Street SE, Minneapolis, Minnesota 55455-2020, is desirous of documenting the acquisition of the entire right, title and interest in and to said invention, said Application(s) and in, to and under any and all Letters Patent to be obtained therefor;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, and to the extent that I have not done so already via a prior agreement with the Assignee, or if I have already done so via a prior agreement with the Assignee then in confirmation of said prior agreement, I have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto Assignee, its successors and assigns, the entire right, title and interest in and to the inventions set forth hereinabove and the entire right, title and interest in and to any and all Letters Patent of the United States and any foreign countries which may be granted therefor on the Application(s) including my rights under the Paris Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Application(s) and Letters Patent that may be granted, including all rights to claim priority therefrom, and specifically including the right to enforce such Letters Patent in the name of Assignee and to recover damages for past infringement of the rights conveyed herein, the same to be held and enjoyed by Assignee for its own use and benefit and use and benefit of its successors and assigns to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made.

I hereby authorize said Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent, in its own name if desired, in any and all foreign countries, and additionally to claim the filing date of any the Application(s) and/or otherwise take advantage of the provisions of the Paris Convention.

Attorney Docket Number: 09531.414WO1

UM Case No. 20160199

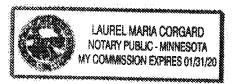
1

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Assignee in accordance with this instrument.

| IN WITNESS WHEREOF, I have | hereunto set my hand on this 19th day of |
|----------------------------|--|
| September, 2018. | |
| | Joniel Druce |
| | DANIEL IOHN BRUCE |

COUNTY OF HEALIEPIN ?

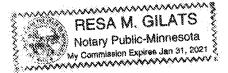
IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.



Karl Maria Corganol Notary Public

Attorney Docket Number: 09531.414WO1

IN WITNESS WHEREOF, I have hereunto set my hand on this , 2018 on behalf of Assignee Regents of the University of Minnesota accepting this assignment. REGENTS OF THE UNIVERSITY OF MINNESOTA Paul B. Savereide Senior Associate General Counsel per Presidential Delegation DA_028016 STATE OF MINNESOTA COUNTY OF HENNEPIN On this 19th day of Splender, 2018, before me personally appeared Paul B. Savereide, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed. IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written. can Gilat



Attorney Docket Number: 09531.414WO1



WHEREAS, I, CAROLYN ANN FAIRBANKS, have invented certain new and useful improvements in COMBINATION FOR TREATING PAIN, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: PCT/US2017/023647 on March 22, 2017(the "Application(s)");

Whereas, REGENTS OF THE UNIVERSITY OF MINNESOTA ("Assignee"), having offices at 600 McNamara Alumni Center, 200 Oak Street SE, Minneapolis, Minnesota 55455-2020, is desirous of documenting the acquisition of the entire right, title and interest in and to said invention, said Application(s) and in, to and under any and all Letters Patent to be obtained therefor;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, and to the extent that I have not done so already via a prior agreement with the Assignee, or if I have already done so via a prior agreement with the Assignee then in confirmation of said prior agreement, I have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto Assignee, its successors and assigns, the entire right, title and interest in and to the inventions set forth hereinabove and the entire right, title and interest in and to any and all Letters Patent of the United States and any foreign countries which may be granted therefor on the Application(s) including my rights under the Paris Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Application(s) and Letters Patent that may be granted, including all rights to claim priority therefrom, and specifically including the right to enforce such Letters Patent in the name of Assignee and to recover damages for past infringement of the rights conveyed herein, the same to be held and enjoyed by Assignee for its own use and benefit and use and benefit of its successors and assigns to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made.

I hereby authorize said Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent, in its own name if desired, in any and all foreign countries, and additionally to claim the filing date of any the Application(s) and/or otherwise take advantage of the provisions of the Paris Convention.

Attorney Docket Number: 09531.414WO1

UM Case No. 20160199

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I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Assignee in accordance with this instrument.

| IN WITNESS WHEREOF, I ha | ave hereunto set my hand on this 20th day of |
|---|--|
| | CAROLYN ANN FAIRBANKS |
| STATE OF Minnes of |) |
| *************************************** |) |
| COUNTY OF Hunepin |) |
| On this 20th day of Se | , 2018, before me personally appeared known to be the person described in and who executed |
| CAKULYN ANN PAIKHANKS, to B | he known to be the person described in and who executed |

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.

the foregoing instrument and acknowledged that s/he executed the same as his/her free act and

Notary Public

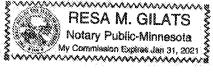


Attorney Docket Number: 09531.414WO1

UM Case No. 20160199

deed.

| IN WITNESS WHEREOF, I have hereunto set my hand on this |
|--|
| REGENTS OF THE UNIVERSITY OF MINNESOTA Faul B. Savereide |
| Senior Associate General Counsel per Presidential Delegation DA 028016 |
| STATE OF MINNESOTA COUNTY OF HENNEPIN On this 20th day of 30th d |
| Notary Public |
| W\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ |



Attorney Docket Number: 09531.414WO1 UM Case No. 20160199



WHEREAS, I, PHILIP S. PORTOGHESE, have invented certain new and useful improvements in COMBINATION FOR TREATING PAIN, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: PCT/US2017/023647 on March 22, 2017(the "Application(s)");

Whereas, REGENTS OF THE UNIVERSITY OF MINNESOTA ("Assignee"), having offices at 600 McNamara Alumni Center, 200 Oak Street SE, Minneapolis, Minnesota 55455-2020, is desirous of documenting the acquisition of the entire right, title and interest in and to said invention, said Application(s) and in, to and under any and all Letters Patent to be obtained therefor;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, and to the extent that I have not done so already via a prior agreement with the Assignee, or if I have already done so via a prior agreement with the Assignee then in confirmation of said prior agreement, I have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto Assignee, its successors and assigns, the entire right, title and interest in and to the inventions set forth hereinabove and the entire right, title and interest in and to any and all Letters Patent of the United States and any foreign countries which may be granted therefor on the Application(s) including my rights under the Paris Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Application(s) and Letters Patent that may be granted, including all rights to claim priority therefrom, and specifically including the right to enforce such Letters Patent in the name of Assignee and to recover damages for past infringement of the rights conveyed herein, the same to be held and enjoyed by Assignee for its own use and benefit and use and benefit of its successors and assigns to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made.

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Attorney Docket Number: 09531.414WO1

UM Case No. 20160199

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I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Assignee in accordance with this instrument.

| IN WITNESS WHEREOF, I have hereunto | set my hand on this @ day of |
|--|--|
| <u>September</u> , 2018. | Philip S. Potoghere |
| | PHILIP S. PORTOGHESE |
| STATE OF Miraesofa) | |
| COUNTY OF Henrepin) | |
| On this 19th day of September PHILIP S. PORTOGHESE, to me known to be to | , 2018, before me personally appeared |
| PHILIP S. PORTOGHESE, to me known to be t | he person described in and who executed the |
| foregoing instrument and acknowledged that s/he ex | recuted the same as his/her free act and deed. |

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.



Attorney Docket Number: 09531.414WO1

IN WITNESS WHEREOF, I have hereunto set my hand on this , 2018 on behalf of Assignee Regents of the University of Minnesota accepting this assignment. REGENTS OF THE UNIVERSITY OF MINNESOTA Paul B. Savereide Senior Associate General Counsel per Presidential Delegation DA_028016 STATE OF MINNESOTA COUNTY OF HENNEPIN On this day of pkentler, 2018, before me personally appeared Paul B. Savereide, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed. IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written. Zecan Gilat ******* RESA M. GILATS

RESA M. GILATS
Notary Public-Minnesota
My Commission Expires Jan 31, 2021

Attorney Docket Number: 09531.414WO1



WHEREAS, I, EYUP AKGUN, have invented certain new and useful improvements in COMBINATION FOR TREATING PAIN, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: PCT/US2017/023647 on March 22, 2017(the "Application(s)");

Whereas, REGENTS OF THE UNIVERSITY OF MINNESOTA ("Assignee"), having offices at 600 McNamara Alumni Center, 200 Oak Street SE, Minneapolis, Minnesota 55455-2020, is desirous of documenting the acquisition of the entire right, title and interest in and to said invention, said Application(s) and in, to and under any and all Letters Patent to be obtained therefor;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, and to the extent that I have not done so already via a prior agreement with the Assignee, or if I have already done so via a prior agreement with the Assignee then in confirmation of said prior agreement, I have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto Assignee, its successors and assigns, the entire right, title and interest in and to the inventions set forth hereinabove and the entire right, title and interest in and to any and all Letters Patent of the United States and any foreign countries which may be granted therefor on the Application(s) including my rights under the Paris Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Application(s) and Letters Patent that may be granted, including all rights to claim priority therefrom, and specifically including the right to enforce such Letters Patent in the name of Assignee and to recover damages for past infringement of the rights conveyed herein, the same to be held and enjoyed by Assignee for its own use and benefit and use and benefit of its successors and assigns to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made.

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Attorney Docket Number: 09531.414WO1

UM Case No. 20160199

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I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Assignee in accordance with this instrument.

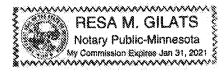
| IN WITNESS WHEREOF, | I have hereunto set my hand on this 19 # day of |
|---------------------|---|
| September, 2018. | Ki B |
| | 1 find |
| la a co | EYUP AKGUN |
| STATE OF Mhnesofa |) |

COUNTY OF Hemephin)

On this day of September, 2018, before me personally appeared EYUP AKGUN, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.

Bearn Gileto Notary Public



Attorney Docket Number: 09531.414WO1

IN WITNESS WHEREOF, I have hereunto set my hand on this , 2018 on behalf of Assignee Regents of the University of Minnesota accepting this assignment. REGENTS OF THE UNIVERSITY OF MINNESOTA Paul B. Savereide Senior Associate General Counsel per Presidential Delegation DA_028016 STATE OF MINNESOTA COUNTY OF HENNEPIN On this 19th day of September, 2018, before me personally appeared Paul B. Savereide, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed. IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written. Notary Public RESA M. GILATS Notary Public-Minnesota My Commission Expires Jan 31, 2021

Attorney Docket Number: 09531.414WO1