

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4913068

|                                  |                        |
|----------------------------------|------------------------|
| <b>SUBMISSION TYPE:</b>          | NEW ASSIGNMENT         |
| <b>NATURE OF CONVEYANCE:</b>     | ASSIGNMENT             |
| <b>CONVEYING PARTY DATA</b>      |                        |
| <b>Name</b>                      | <b>Execution Date</b>  |
| DANIEL LEVNER                    | 01/09/2018             |
| CHRISTOPHER DAVID HINOJOSA       | 01/10/2018             |
| NORMAN WEN                       | 01/10/2018             |
| JACOB FRASER                     | 01/10/2018             |
| JUSTIN NGUYEN                    | 01/10/2018             |
| RICCARDO BARRILE                 | 01/10/2018             |
| GERALDINE HAMILTON               | 01/10/2018             |
| CATHERINE KARALIS                | 01/23/2018             |
| HYOUNG SHIN PARK                 | 01/11/2018             |
| ANTONIO VARONE                   | 01/10/2018             |
| ANDRIES VAN DER MEER             | 01/30/2018             |
| MONICAH OTIENO                   | 01/31/2018             |
| DAVID CONEGLIANO                 | 01/10/2018             |
| <b>RECEIVING PARTY DATA</b>      |                        |
| <b>Name:</b>                     | EMULATE, INC.          |
| <b>Street Address:</b>           | 27 DRYDOCK             |
| <b>City:</b>                     | BOSTON                 |
| <b>State/Country:</b>            | MASSACHUSETTS          |
| <b>Postal Code:</b>              | 02210                  |
| <b>Name:</b>                     | JANSSEN BIOTECH, INC.  |
| <b>Street Address:</b>           | 800/850 RIDGEVIEW ROAD |
| <b>City:</b>                     | HORSHAM                |
| <b>State/Country:</b>            | PENNSYLVANIA           |
| <b>Postal Code:</b>              | 19044                  |
| <b>PROPERTY NUMBERS Total: 1</b> |                        |
| <b>Property Type</b>             | <b>Number</b>          |
| <b>Application Number:</b>       | 15648000               |
| <b>CORRESPONDENCE DATA</b>       |                        |

**Fax Number:** (510)788-8786

***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:** 5107888781

**Email:** aaeverson@medlencarroll.com,rldalton@medlencarroll.com,docketing@medlencarroll.com

**Correspondent Name:** MEDLEN AND CARROLL, LLP

**Address Line 1:** 1440 BROADWAY, SUITE 1010

**Address Line 4:** OAKLAND, CALIFORNIA 94612

|                                |               |
|--------------------------------|---------------|
| <b>ATTORNEY DOCKET NUMBER:</b> | EMULATE-18570 |
|--------------------------------|---------------|

|                           |              |
|---------------------------|--------------|
| <b>NAME OF SUBMITTER:</b> | ABBY EVERSON |
|---------------------------|--------------|

|                   |                |
|-------------------|----------------|
| <b>SIGNATURE:</b> | /abby everson/ |
|-------------------|----------------|

|                     |            |
|---------------------|------------|
| <b>DATE SIGNED:</b> | 04/12/2018 |
|---------------------|------------|

**Total Attachments: 4**

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ASSIGNMENT

WHEREAS, We, Daniel Levner, Christopher David Hinojosa, Norman Wen, Jacob Fraser, Justin Nguyen, Riccardo Barrile, Geraldine Hamilton, Catherine Karalis, Hyoung Shin Park, Antonio Varone, Andries Van der Meer, Monica Otiens, and David Conegliana, hereinafter referred to as "ASSIGNOR", have invented certain new and useful improvements as described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: Additive Channels  
Filing Date: 7/12/2017

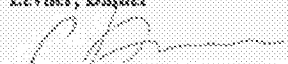
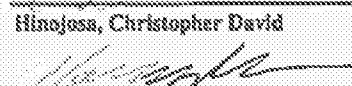
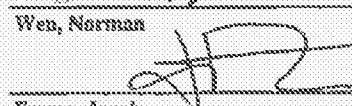
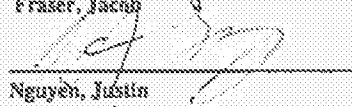
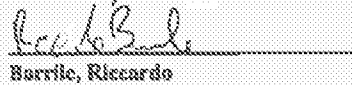
Serial No.: 15/648,000

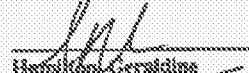
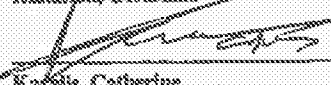
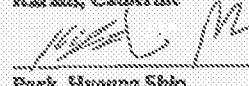
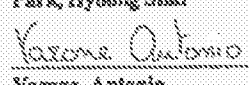
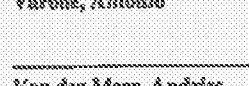
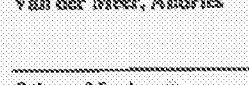
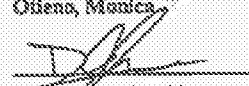
WHEREAS, Emulate, Inc., 27 Drydock, Boston, MA 02210 and Janssen Biotech, Inc., 800/850 Ridgeview Road, Horsham, PA 19044, herein after referred to as "ASSIGNEE", is desirous of acquiring the entire right, title and interest in said invention and application and in any Letters Patent which may be granted on the same;

NOW THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for and in consideration of the sum of One Dollar (\$1.00) lawful money paid to ASSIGNOR by ASSIGNEE and other good and valuable consideration, receipt of which is hereby acknowledged, ASSIGNOR has sold, assigned and transferred, and by these presents does sell, assign and transfer unto said ASSIGNEE, and ASSIGNEE's successors and assigns, all right, title and interest in and to said invention, said application for United States Letters Patent, and any Letters Patent which may hereafter be granted on the same in the United States and all countries throughout the world including any divisions, renewals, continuations in whole or in part, substitutions, conversions, reissues, prolongations or extensions thereof, said interest to be held and enjoyed by said ASSIGNEE as fully and exclusively as it would have been held and enjoyed by said ASSIGNOR had this assignment and transfer not been made, to the full end and term of any Letters Patent.

ASSIGNOR further agrees that ASSIGNOR will, without charge to said ASSIGNEE, but at ASSIGNEE's expense, cooperate with ASSIGNEE in the prosecution of said application and/or applications; execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof; and will perform such other acts as ASSIGNEE lawfully may request, to obtain or maintain Letters Patent for said invention and improvement in any and all countries, and to vest title thereto in said ASSIGNEE, or ASSIGNEE's successors and assigns.

IN TESTIMONY WHEREOF, ASSIGNOR has hereunto signed ASSIGNOR's names to this assignment on the date indicated below.

|                                                                                     |            |
|-------------------------------------------------------------------------------------|------------|
|  | 1/10/18    |
| Levner, Daniel                                                                      | Date       |
|  | 1/10/18    |
| Hinojosa, Christopher David                                                         | Date       |
|  | 01/10/2018 |
| Wen, Norman                                                                         | Date       |
|  | 1/10/18    |
| Fraser, Jacob                                                                       | Date       |
|  | 1/10/18    |
| Nguyen, Justin                                                                      | Date       |
|  | 1/10/2018  |
| Barrile, Riccardo                                                                   | Date       |

|                                                                                      |           |
|--------------------------------------------------------------------------------------|-----------|
|   | 1/10/18   |
| Hamilton, Geraldine                                                                  | Date      |
|  | 1/23/18   |
| Karalis, Catherine                                                                   | Date      |
|   | 1/11/2018 |
| Park, Hyoung Shin                                                                    | Date      |
|   | 1/10/2018 |
| Varone, Antonio                                                                      | Date      |
|   |           |
| Van der Meer, Andries                                                                | Date      |
|   |           |
| Otiens, Monica                                                                       | Date      |
|   | 1/10/18   |
| Conegliana, David                                                                    | Date      |

STATE OF )  
 ) ss.  
COUNTY OF )

On this \_\_\_\_\_ day of \_\_\_\_\_, in the year of \_\_\_\_\_, before me, the undersigned notary public, personally appeared the above-named ASSIGNOR, known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged that he/she executed the same.

NOTARY PUBLIC  
SEAL

## ASSIGNMENT

WHEREAS, We, Daniel Levner, Christopher David Hinojosa, Norman Wen, Jacob Fraser, Justin Nguyen, Riccardo Barriis, Geraldine Hamilton, Catherine Karalis, Hyoung Shin Park, Antonio Varone, Andries Van der Meer, Monicah Otiemo, and David Conegliano, hereinafter referred to as "ASSIGNOR", have invented certain new and useful improvements as described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: Additive Channels  
Filing Date: 7/12/2017

Serial No.: 15/648,000

WHEREAS, Emulate, Inc., 27 Drydock, Boston, MA 02210 and Janzen Biotech, Inc., 800/850 Ridgeway Road, Hursham, PA 19044, herein after referred to as "ASSIGNEE", is desirous of acquiring the entire right, title and interest in said invention and application and in any Letters Patent which may be granted on the same;

NOW THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for and in consideration of the sum of One Dollar (\$1.00) lawful money paid to ASSIGNOR by ASSIGNEE and other good and valuable consideration, receipt of which is hereby acknowledged, ASSIGNOR has sold, assigned and transferred, and by these presents does sell, assign and transfer unto said ASSIGNEE, and ASSIGNEE's successors and assigns, all right, title and interest in and to said invention, said application for United States Letters Patent, and any Letters Patent which may hereafter be granted on the same in the United States and all countries throughout the world including any divisions, renewals, continuations in whole or in part, substitutions, conversions, reissues, prolongations or extensions thereof, said interest to be held and enjoyed by said ASSIGNEE as fully and exclusively as it would have been held and enjoyed by said ASSIGNOR had this assignment and transfer not been made, to the full end and term of any Letters Patent.

ASSIGNOR further agrees that ASSIGNOR will, without charge to said ASSIGNEE, but at ASSIGNEE's expense, cooperate with ASSIGNEE in the prosecution of said application and/or applications; execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof; and will perform such other acts as ASSIGNEE lawfully may request, to obtain or maintain Letters Patent for said invention and improvement in any and all countries, and to vest title thereto in said ASSIGNEE, or ASSIGNEE's successors and assigns.

IN TESTIMONY WHEREOF, ASSIGNOR has hereunto signed ASSIGNOR's names to this assignment on the date indicated below.

|                             |      |                       |      |
|-----------------------------|------|-----------------------|------|
| Levner, Daniel              | Date | Hamilton, Geraldine   | Date |
| Hinojosa, Christopher David | Date | Karalis, Catherine    | Date |
| Wen, Norman                 | Date | Park, Hyoung Shin     | Date |
| Fraser, Jacob               | Date | Varone, Antonio       | Date |
| Nguyen, Justin              | Date | Van der Meer, Andries | Date |
| Barriis, Riccardo           | Date | Otiemo, Monicah       | Date |
|                             |      | Conegliano, David     | Date |

STATE OF )  
COUNTY OF ) ss.

On this \_\_\_\_\_ day of \_\_\_\_\_, in the year of \_\_\_\_\_, before me, the undersigned notary public, personally appeared the above-named ASSIGNOR, known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged that he/she executed the same.

NOTARY PUBLIC  
SEAL

## ASSIGNMENT

WHEREAS, We, Daniel Levner, Christopher David Hinojosa, Norman Wen, Jacob Fraser, Justin Nguyen, Riccardo Barrile, Geraldine Hamilton, Catherine Karalis, Hyoung Shin Park, Antonio Varone, Andries Van der Meer, Monicah Olleno, and David Conegliano, hereinafter referred to as "ASSIGNOR", have invented certain new and useful improvements as described and set forth in the below-identified application for United States Letters Patent:

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IN TESTIMONY WHEREOF, ASSIGNOR has hereunto signed ASSIGNOR's names to this assignment on the date indicated below.

Levner, Daniel \_\_\_\_\_ Date

Hamilton, Geraldine \_\_\_\_\_ Date

Hinojosa, Christopher David \_\_\_\_\_ Date

Karalis, Catherine \_\_\_\_\_ Date

Wen, Norman \_\_\_\_\_ Date

Park, Hyoung Shin \_\_\_\_\_ Date

Fraser, Jacob \_\_\_\_\_ Date

Varone, Antonio \_\_\_\_\_ Date

Nguyen, Justin \_\_\_\_\_ Date

Van der Meer, Andries \_\_\_\_\_ Date

Barrile, Riccardo \_\_\_\_\_ Date

Olleno, Monicah \_\_\_\_\_ Date

Conegliano, David \_\_\_\_\_ Date

STATE OF )

COUNTY OF )

ss.

On this \_\_\_\_\_ day of \_\_\_\_\_, in the year of \_\_\_\_\_, before me, the undersigned notary public, personally appeared the above-named ASSIGNOR, known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged that he/she executed the same.

NOTARY PUBLIC  
SEAL

PATENT

RECORDED: 04/12/2018

REEL: 045929 FRAME: 0368