505258450 01/02/2019

PATENT ASSIGNMENT COVER SHEET

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

CONVEYING PARTY DATA

| Name | Execution Date |
|--------------------------|----------------|
| ROMAN LVOVITCH BOGORAD | 03/23/2018 |
| CHAD ALBERT COWAN | 03/26/2018 |
| JEFFREY LI | 07/16/2018 |
| ANTE SVEN LUNDBERG | 02/13/2018 |
| MATTHIAS JOHANNES JOHN | 03/22/2018 |
| JEFFREY WILLIAM STEBBINS | 03/27/2018 |
| THAO THI NGUYEN | 07/12/2018 |

RECEIVING PARTY DATA

| Name: | CRISPR THERAPEUTICS AG |
|-----------------|------------------------|
| Street Address: | BAARERSTRASSE 14 |
| City: | ZUG |
| State/Country: | SWITZERLAND |
| Postal Code: | 6300 |

PROPERTY NUMBERS Total: 1

| Property Type | Number | |
|---------------------|----------|--|
| Application Number: | 15779836 | |

CORRESPONDENCE DATA

Fax Number:

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: 617-646-8000

Email: janet.oconnor@wolfgreenfield.com

Correspondent Name: WOLF GREENFIELD
Address Line 1: 600 ATLANTIC AVENUE

Address Line 4: BOSTON, MASSACHUSETTS 02210

| ATTORNEY DOCKET NUMBER: | C1542.70036US02 |
|-------------------------|--------------------|
| NAME OF SUBMITTER: | CURTIS R. POWELL |
| SIGNATURE: | /Curtis R. Powell/ |
| DATE SIGNED: | 01/02/2019 |

PATENT REEL: 047999 FRAME: 0875

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Total Attachments: 22 source=C154270036US02-CASI-CRP#page1.tif source=C154270036US02-CASI-CRP#page2.tif source=C154270036US02-CASI-CRP#page3.tif source=C154270036US02-CASI-CRP#page4.tif source=C154270036US02-CASI-CRP#page5.tif source=C154270036US02-CASI-CRP#page6.tif source=C154270036US02-CASI-CRP#page7.tif source=C154270036US02-CASI-CRP#page8.tif source=C154270036US02-CASI-CRP#page9.tif source=C154270036US02-CASI-CRP#page10.tif source=C154270036US02-CASI-CRP#page11.tif source=C154270036US02-CASI-CRP#page12.tif source=C154270036US02-CASI-CRP#page13.tif source=C154270036US02-CASI-CRP#page14.tif source=C154270036US02-CASI-CRP#page15.tif source=C154270036US02-CASI-CRP#page16.tif source=C154270036US02-CASI-CRP#page17.tif source=C154270036US02-CASI-CRP#page18.tif source=C154270036US02-CASI-CRP#page19.tif source=C154270036US02-CASI-CRP#page20.tif source=C154270036US02-CASI-CRP#page21.tif source=C154270036US02-CASI-CRP#page22.tif

ASSIGNMENT



Roman Lvovitch BOGORAD, Chad Albert COWAN, Jeffrey LI, Ante Sven LUNDBERG, Matthias Johannes JOHN, M Jeffrey Williams STEBBINS and Thao Thi NGUYEN (each referred to as "Assignor") have made an invention(s) (the "Invention(s)") set forth in an application for patent entitled MATERIALS AND METHODS FOR TREATMENT OF ALPHA-1 ANTITRYPSIN DEFICIENCY, and which is a:

| (1) | provisional applicati | on | | | | | |
|-----|-----------------------|------------------|----------------|-----------------------|------------|-------|--------|
| | (a) to be fil | ed herewith; or | | | | | |
| | (b) bearing | Application No., | and filed on; | | | | |
| (2) | non-provisional app | lication | | | | | |
| | (a) to be fil | | | | | | |
| | (b) bearing and/or | Application No. | , and filed on | • | | | |
| (3) | x PCT application | | | | | | |
| 713 | | Application No. | PCT/IB2016 | / 001845 , and | d filed on | Decen | ıber 1 |
| | <u></u> | | | | | | |
| | and/or | | | | | | |
| (4) | attached hereto. | | | | | | |

WHEREAS, CRISPR Therapeutics AG, a having its principal place of business at Baarerstrasse 14, 6300 ZUG, Switzerland its successors, legal representatives and assigns, (the "Assignee"), is desirous of acquiring the entire right, title, and interest in: the Invention(s); the application(s) for patent identified above; the right to file applications for patent of the United States or other countries on the Invention(s); any application(s) for patent of the United States or other countries claiming priority to, and/or the benefit of, these applications; any provisional or other right to recover any and all past, present, and future damages, including royalties, for any and all past, present, and future infringements of these application(s); and any and all patent(s) of the United States or other countries that may be granted therefor or thereon.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, and to the extent that the Assignor has not done so already via a prior agreement with the Assignee or a predecessor in interest of the Assignee, or if the Assignor has already done so via a prior agreement with the Assignee or a predecessor in interest of the Assignee then in confirmation of any obligation to do so in said prior agreement, the Assignor has sold, assigned, transferred, and set over, and by these presents

does sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns, the Assignor's entire right, title, and interest in:

- (a) the Invention(s);
- (b) the application(s) for patent identified above;
- (c) the right to file applications for patent of the United States or other countries on the Invention(s), including all rights under the Hague Convention, the Paris Convention for the Protection of Industrial Property, and under the Patent Cooperation Treaty, and all rights of claiming priority in any country of the world;
- (d) any application(s) for patent of the United States or other countries claiming the Invention(s);
- (e) any application(s) for patent of the United States or other countries claiming priority to, and/or the benefit of, at least one of the application(s) for patent identified above or any application(s) for patent claiming the Invention(s), including any priority application(s), substitute application(s), division(s), continuation(s), and continuation(s)-in-part;
- (f) any provisional or other right to recover any and all past, present, and future damages, including royalties, for any and all past, present, and future infringements of any application for patent identified in the preceding paragraphs (b)-(e) and of any and all patent(s) granted based thereon in the United States and in all other countries; and
- (g) any patent(s) of the United States or other countries that may be granted for or on any application for patent identified in the preceding paragraphs (b)-(e), including any reissue(s), reexamination(s), revival(s), renewal(s) and extension(s) of said patent(s).

The above-granted rights, titles, and interests are to be held and enjoyed by the Assignee, for its own use and behalf and the use and behalf of its successors, legal representatives, and assigns, as fully and entirely as the same would have been held and enjoyed by the Assignor had this sale and assignment not been made.

The Assignor hereby represents to the Assignee, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, or if applicable, at such time said prior agreement was executed, the Assignor is a lawful owner of an undivided interest in the entire right, title, and interest in and to the Invention(s), that the Invention(s) are unencumbered, except, if applicable, by obligation to assign in accordance with said prior agreement, and that the Assignor has good and full right and lawful authority to sell and convey the same in the manner set forth herein, and that Assignor will not make or enter into any assignment, sale, agreement or encumbrance which would conflict with these presents.

The Assignor hereby covenants and agrees to and with the Assignee, its successors, legal representatives, and assigns, that the Assignor will sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done in connection with any and all proceedings for the procurement, maintenance, enforcement and defense of the Invention(s), said application(s), and said patent(s), including interference and derivation proceedings, and any post-grant proceedings (e.g., opposition proceedings, post-grant reviews, *Inter partes* reviews, supplemental examinations, etc.) without charge to the Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns.

The Assignor hereby authorizes and requests the attorneys of COOLEY LLP to insert in the spaces provided above the filing date, the application number, and the attorney docket number of the application(s) identified above when known.

The Assignor hereby requests the Commissioner of Patents to issue said patents of the United States to the Assignee for the sole use and behalf of the Assignee, its successors, legal representatives, and assigns.

Page 4 of 11

Attorney Docket No. CRIS-010/001WO (321073-2014)

Date: 3/23/2018 A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

Massachusetts County of Middle Sex Roman Lyovitch BOGORAD Public, personally appeared proved to me on the basis of satisfactory evidence, to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument. REQUIRED SENTENCE IF NOTARIZED IN CALIFORNIA: I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary Public

Place Notary Seal Above

KAREN A. WOOD Notary Public XIMMONWEALTH OF MASSACHUSETTS

My Commission Expires November 29, 2024

My Commission Expires: No. 29 2024

Page 5 of 11 Attorney Docket No. CRIS-010/001WO (321073-2014)

| Date: | By: | |
|--|------------------------------------|---------------------------|
| | Chad Albert COW | W |
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| individual who signed the document to | which this certificate is attache | |
| truthfulness, accuracy, or validity of tha | t document. | 3 |
| | | |
| State of | | |
| State of |) SS. | |
| County of | <u> </u> | |
| | | N.T. |
| On , before me, | Chad Albert COWAN | , Notary , who |
| Public, personally appeared | | |
| proved to me on the basis of satisfactory | evidence, to be the person(s) | whose name(s) is/are |
| subscribed to the within instrument and | acknowledged to me that he/sh | ne/they executed the same |
| in his/her/their authorized capacity(ies), | and that by his/her/their signat | ure(s) on the instrument |
| the person(s), or the entity upon behalf | | |
| REQUIRED SENTENCE IF NOTARIZ | | |
| | | -55000 (2000)2000 |
| PERJURY under the laws of the State o | f California that the foregoing | paragraph is true and |
| correct. | | |
| | | |
| WITNESS my hand and official seal. | | |
| *************************************** | | |
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| | | |
| Signature of Notary Public | Place I | Notary Seal Above |
| | | |
| My Commission Expires: | | |

Page 6 of 11 Attorney Docket No. CRIS-010/001WO (321073-2014)

| Date: 7/16/18 By: Jeffey I.I. |
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| |
| A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document. |
| State of Massedsess 15) ss. County of Million) |
| On July 16, 2018, before me, 4nnc M. Jawko , Notary Public, personally appeared Jeffrey LI, who proved to me on the basis of satisfactory evidence, to be the person(s) whose name(s) is/are |
| subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument |
| the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument. |
| REQUIRED SENTENCE IF NOTARIZED IN CALIFORNIA: I certify under PENALTY OF |
| PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. |
| WITNESS my hand and official seal. LYNNE M. HAWKES Notary Public COMMONWEALTH OF MASSACHUSETTS My Commission Excites May 16, 2019 Signature of Notary Public Place Notary Seal Above |
| |
| My Commission Expires: 1/44 16, 2019 |

Page 7 of 11

Attorney Docket No. CRIS-010/001WO (321073-2014) Feb () 2018 By: A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document. State of Massachuse Hs

County of Middle sex On Ich 13, 2018, before me, KAREA Public, personally appeared proved to me on the basis of satisfactory evidence, to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument. REQUIRED SENTENCE IF NOTARIZED IN CALIFORNIA: I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. KAREN A. WOOD Notary Public WITNESS my hand and official seal. COMMONWEALTH OF MASSACHUSETTS My Commission Expires November 29, 2024

Signature of Notary Public

Place Notary Seal Above

My Commission Expires: $\sqrt{\sqrt{29}, 202}$

Date: 03/22/2018

By:

Matthias Johannes JOHN

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of Maddesch) ss.

County of Middlesch)

On 3 22 18 , before me, Matthias Johannes JOHN , who proved to me on the basis of satisfactory evidence, to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

REQUIRED SENTENCE IF NOTARIZED IN CALIFORNIA: I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

KAREN A. WOOD
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
November 29, 2024

Signature of Notary Public

Place Notary Seal Above

My Commission Expires: NN 29 2024

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document. State of Massachusetts

County of Middlesex On 3/27/18 , before me, KAREN A Public, personally appeared proved to me on the basis of satisfactory evidence, to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument. REQUIRED SENTENCE IF NOTARIZED IN CALIFORNIA: I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. KAREN A. WOOD Notery Public WITNESS my hand and official seal. MONWEALTH OF MASSACHUSETTS My Commission Expires November 29, 2024 Signature of Notary Public Place Notary Seal Above

My Commission Expires: Nov 26 2024

Page 10 of 11

Attorney Docket No. CRIS-010/001WO (321073-2014) Date: July 12, 2018 By: Thao Thi NGUYEN A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document. State of <u>Massachuse H3</u>
County of <u>Middlasse</u> MAREN A Thao Thi NGUYEN Public, personally appeared proved to me on the basis of satisfactory evidence, to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument. REQUIRED SENTENCE IF NOTARIZED IN CALIFORNIA: I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and

WITNESS my hand and official seal.

Signature of Notary Public

correct.

Place Notary Seal Above

KAREN A. WOOD
Notery Public

MONNEALTH OF MASSACHUSETTS
My Commission Expires
November 29, 2024

My Commission Expires: Nov 29, 2021

| For and on behalf of ASSIGNEE: | 5 |
|---|--|
| Date: July 16, 2018 | By: |
| | Name: \ \ / \ |
| | Title: *** Company: CRISPR Therapeutics AG |
| | Company, Critic Removables 110 |
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| truthfulness, accuracy, or validity of th | |
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| County of |) |
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| | ry evidence, to be the person(s) whose name(s) is/are |
| subscribed to the within instrument and | d acknowledged to me that he/she/they executed the same |
| in his/her/their authorized capacity(ies |), and that by his/her/their signature(s) on the instrument |
| the person(s), or the entity upon behalf | f of which the person(s) acted, executed the instrument. |
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| PERJURY under the laws of the State | of California that the foregoing paragraph is true and |
| correct. | |
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| WITNESS my hand and official seal. | |
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| Signature of Notary Public | Place Notary Seal Above |
| | - |
| My Commission Expires: | |

ASSIGNMENT

Roman Lvovitch BOGORAD, Chad Albert COWAN, Jeffrey LI, Ante Sven LUNDBERG, Matthias Johannes JOHN, M Jeffrey Williams STEBBINS and Thao Thi NGUYEN (each referred to as "Assignor") have made an invention(s) (the "Invention(s)") set forth in an application for patent entitled MATERIALS AND METHODS FOR TREATMENT OF ALPHA-1 ANTITRYPSIN DEFICIENCY, and which is a:

| (1) | provisional application |
|-----|--|
| | (a) to be filed herewith; or |
| | (b) bearing Application No., and filed on; |
| (2) | non-provisional application |
| | (a)to be filed herewith; or |
| | (b) bearing Application No., and filed on; and/or |
| (3) | x PCT application |
| | (a) x bearing Application No. PCT/IB2016/001845, and filed on December 1 2016. |
| | and/or |
| (4) | attached hereto. |

WHEREAS, CRISPR Therapeutics AG, a having its principal place of business at Baarerstrasse 14, ZUG V8 CH-6300, Switzerland its successors, legal representatives and assigns, (the "Assignee"), is desirous of acquiring the entire right, title, and interest in: the Invention(s); the application(s) for patent identified above; the right to file applications for patent of the United States or other countries on the Invention(s); any application(s) for patent of the United States or other countries claiming priority to, and/or the benefit of, these applications; any provisional or other right to recover any and all past, present, and future damages, including royalties, for any and all past, present, and future infringements of these application(s); and any and all patent(s) of the United States or other countries that may be granted therefor or thereon.

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does sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns, the Assignor's entire right, title, and interest in:

- (a) the Invention(s);
- (b) the application(s) for patent identified above;
- (c) the right to file applications for patent of the United States or other countries on the Invention(s), including all rights under the Hague Convention, the Paris Convention for the Protection of Industrial Property, and under the Patent Cooperation Treaty, and all rights of claiming priority in any country of the world;
- (d) any application(s) for patent of the United States or other countries claiming the Invention(s);
- (e) any application(s) for patent of the United States or other countries claiming priority to, and/or the benefit of, at least one of the application(s) for patent identified above or any application(s) for patent claiming the Invention(s), including any priority application(s), substitute application(s), division(s), continuation(s), and continuation(s)-in-part;
- (f) any provisional or other right to recover any and all past, present, and future damages, including royalties, for any and all past, present, and future infringements of any application for patent identified in the preceding paragraphs (b)-(e) and of any and all patent(s) granted based thereon in the United States and in all other countries; and
- (g) any patent(s) of the United States or other countries that may be granted for or on any application for patent identified in the preceding paragraphs (b)-(e), including any reissue(s), reexamination(s), revival(s), renewal(s) and extension(s) of said patent(s).

The above-granted rights, titles, and interests are to be held and enjoyed by the Assignee, for its own use and behalf and the use and behalf of its successors, legal representatives, and assigns, as fully and entirely as the same would have been held and enjoyed by the Assignor had this sale and assignment not been made.

The Assignor hereby represents to the Assignee, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, or if applicable, at such time said prior agreement was executed, the Assignor is a lawful owner of an undivided interest in the entire right, title, and interest in and to the Invention(s), that the Invention(s) are unencumbered, except, if applicable, by obligation to assign in accordance with said prior agreement, and that the Assignor has good and full right and lawful authority to sell and convey the same in the manner set forth herein, and that Assignor will not make or enter into any assignment, sale, agreement or encumbrance which would conflict with these presents.

The Assignor hereby covenants and agrees to and with the Assignee, its successors, legal representatives, and assigns, that the Assignor will sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done in connection with any and all proceedings for the procurement, maintenance, enforcement and defense of the Invention(s), said application(s), and said patent(s), including interference and derivation proceedings, and any post-grant proceedings (e.g., opposition proceedings, post-grant reviews, Inter partes reviews, supplemental examinations, etc.) without charge to the Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns.

The Assignor hereby authorizes and requests the attorneys of COOLEY LLP to insert in the spaces provided above the filing date, the application number, and the attorney docket number of the application(s) identified above when known.

The Assignor hereby requests the Commissioner of Patents to issue said patents of the United States to the Assignee for the sole use and behalf of the Assignee, its successors, legal representatives, and assigns.

Page 4 of 11 **Attorney Docket No. CRIS-010/001WO (321073-2014)**

| Date: | By: | |
|--|--|-------------------|
| | Roman Lyovitch BOGORA | D |
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| A notary public or other officer completing individual who signed the document to we truthfulness, accuracy, or validity of that | which this certificate is attached, and no | |
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| State of |) | |
| State of |) ss. | |
| State of | | |
| On , before me, | | , Notary |
| Public, personally appeared | Roman Lvovitch BOGORAD | , who |
| proved to me on the basis of satisfactory | evidence, to be the person(s) whose n | ame(s) is/are |
| subscribed to the within instrument and a | acknowledged to me that he/she/they e | executed the same |
| in his/her/their authorized capacity(ies), a | and that by his/her/their signature(s) or | n the instrument |
| the person(s), or the entity upon behalf of | f which the person(s) acted, executed to | the instrument. |
| REQUIRED SENTENCE IF NOTARIZI | ED IN CALIFORNIA: I certify under | PENALTY OF |
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| WITNESS my hand and official seal. | | |
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| Signature of Notary Public | Place Notary S | eal Above |
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My Commission Expires:

| Date: 26 March 2018 | Page 5 of 1 Attorney Docket No. CRIS-010/001WO (321073-2014 By: Chad Albert COWAN |
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| | leting this certificate verifies only the identity of the o which this certificate is attached, and not the hat document. |
| State of Massachusetts County of Suffolk |) ss. |
| Public, personally appeared proved to me on the basis of satisfactors subscribed to the within instrument and | Nancy Poole , Notary Chad Albert COWAN , who ory evidence, to be the person(s) whose name(s) is/are and acknowledged to me that he/she/they executed the same |
| the person(s), or the entity upon beha REQUIRED SENTENCE IF NOTAR PERJURY under the laws of the State | s), and that by his/her/their signature(s) on the instrument lf of which the person(s) acted, executed the instrument. RIZED IN CALIFORNIA: I certify under PENALTY OF e of California that the foregoing paragraph is true and |
| WITNESS my hand and official seal. Signature of Notary Public | Place WEALS STATE TO THE PLACE OF THE PARTY |

My Commission Expires: 11 Jan 2024

Page 6 of 11 **Attorney Docket No. CRIS-010/001WO (321073-2014)**

| Date: | Ву: | |
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| | Jeffrey LI | |
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| On , before me, | | , Notary |
| Public, personally appeared | Jeffrey LI | , who |
| proved to me on the basis of satisfactory e | evidence, to be the person(s) wh | iose name(s) is/are |
| subscribed to the within instrument and ac | cknowledged to me that he/she/t | they executed the same |
| in his/her/their authorized capacity(ies), an | nd that by his/her/their signature | e(s) on the instrument |
| the person(s), or the entity upon behalf of | which the person(s) acted, exec | cuted the instrument. |
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My Commission Expires: _____

Page 7 of 11 **Attorney Docket No. CRIS-010/001WO (321073-2014)**

| Date: | By: | |
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| State of |) | |
| State of |) ss. | |
| County of |) | |
| On , before me, | | , Notary |
| Public, personally appeared | Ante Sven LUNDBERG | , who |
| proved to me on the basis of satisfact | tory evidence, to be the person(s) whos | e name(s) is/are |
| subscribed to the within instrument a | and acknowledged to me that he/she/the | ey executed the same |
| in his/her/their authorized capacity(ie | es), and that by his/her/their signature(s | s) on the instrument |
| the person(s), or the entity upon beha | alf of which the person(s) acted, execut | ed the instrument. |
| REQUIRED SENTENCE IF NOTAL | RIZED IN CALIFORNIA: I certify un- | der PENALTY OF |
| PERJURY under the laws of the Stat | e of California that the foregoing parag | graph is true and |
| correct. | | |
| | | |
| WITNESS my hand and official seal. | | |
| | | |
| | | |
| Signature of Notary Public | Place Notar | y Seal Above |
| | | |

My Commission Expires:

Page 8 of 11 **Attorney Docket No. CRIS-010/001WO (321073-2014)**

| Date: | By: |
|---|---|
| | Matthias Johannes JOHN |
| | |
| | pleting this certificate verifies only the identity of the |
| individual who signed the document truthfulness, accuracy, or validity of | t to which this certificate is attached, and not the |
| trutifulness, accuracy, or variety of | that document. |
| | |
| State of |) |
| County of |) ss. |
| County of | |
| On , before me, | Matthias Johannes JOHN , who |
| Public, personally appeared | Matthias Johannes JOHN , who |
| proved to me on the basis of satisfac | etory evidence, to be the person(s) whose name(s) is/are |
| subscribed to the within instrument a | and acknowledged to me that he/she/they executed the same |
| in his/her/their authorized capacity(i | es), and that by his/her/their signature(s) on the instrument |
| the person(s), or the entity upon beha | alf of which the person(s) acted, executed the instrument. |
| REQUIRED SENTENCE IF NOTA | RIZED IN CALIFORNIA: I certify under PENALTY OF |
| PERJURY under the laws of the State | te of California that the foregoing paragraph is true and |
| correct. | |
| 66.166.1 | |
| WITNESS my hand and official seal | 1 |
| WITNESS my hand and official sear | 1. |
| | |
| | |
| Signature of Notary Public | Place Notary Seal Above |
| | |

My Commission Expires:

Page 9 of 11 **Attorney Docket No. CRIS-010/001WO (321073-2014)**

| Date: | By: | |
|---|---|-------------|
| · | Jeffrey William STEBBINS | |
| | | |
| A notary public or other officer con | mpleting this certificate verifies only the identity of | of the |
| | nt to which this certificate is attached, and not the | |
| truthfulness, accuracy, or validity o | | |
| | | |
| State of | , | |
| State of | | |
| State of |) | |
| | | |
| On , before me | | Notary |
| | Jeffrey William STEBBINS , w | |
| proved to me on the basis of satisfa | actory evidence, to be the person(s) whose name(s |) is/are |
| subscribed to the within instrument | at and acknowledged to me that he/she/they execute | ed the same |
| in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument | | |
| the person(s), or the entity upon bel | ehalf of which the person(s) acted, executed the ins | strument. |
| REQUIRED SENTENCE IF NOTA | ARIZED IN CALIFORNIA: I certify under PENA | ALTY OF |
| PERJURY under the laws of the St | tate of California that the foregoing paragraph is to | rue and |
| correct. | | |
| | | |
| WITNESS my hand and official sea | aal | |
| WITHLESS my hand and official sea | лат. | |
| | | |
| | | |
| Signature of Notary Public | Place Notary Seal Al | bove |
| | | |
| My Commission Expires: | | |

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| Date: | By: | |
|---|---|-------------------------|
| | Thao Thi NGUYEN | |
| | | |
| A notary public or other officer comp | | he identity of the |
| individual who signed the document | | |
| truthfulness, accuracy, or validity of | | |
| | | |
| State of | ` | |
| State of |) ss. | |
| State of |) 33. | |
| | | |
| On , before me, | Thao Thi NGUYEN | , Notary |
| | Thao Thi NGUYEN | , who |
| proved to me on the basis of satisfact | cory evidence, to be the person(s) when | hose name(s) is/are |
| subscribed to the within instrument a | nd acknowledged to me that he/she/ | they executed the same |
| in his/her/their authorized capacity(ie | es), and that by his/her/their signatur | re(s) on the instrument |
| the person(s), or the entity upon beha | alf of which the person(s) acted, exe- | cuted the instrument. |
| REQUIRED SENTENCE IF NOTAI | RIZED IN CALIFORNIA: I certify | under PENALTY OF |
| PERJURY under the laws of the Stat | e of California that the foregoing pa | aragraph is true and |
| correct. | 5 51 | |
| 00110011 | | |
| WITTNESS 1 1 1 CC 1 1 1 | | |
| WITNESS my hand and official seal. | | |
| | | |
| | | |
| Signature of Notary Public | Place No | otary Seal Above |
| | | |
| | | |

My Commission Expires:

| For and on behalf of ASSIGNEE: | | 1 X Command Sankforte |
|---|-----------|---|
| Date: 29 March | By: | |
| | | Name: Tyler Title: Dylan-Hyde Chi |
| | | 11ttc. |
| | | Company: CRISPR Therapeutics AG |
| | | |
| A notary public or other officer completing | g this ce | ertificate verifies only the identity of the |
| individual who signed the document to wh | | |
| truthfulness, accuracy, or validity of that d | locumer | ıt. |
| | | |
| State of |) | |
| | | SS. |
| County of |) | |
| On , before me, | | Notary |
| · — | | , Notary |
| Public, personally appeared proved to me on the basis of satisfactory e | | · |
| • | | |
| | | dged to me that he/she/they executed the same |
| in his/her/their authorized capacity(ies), ar | nd that b | by his/her/their signature(s) on the instrument |
| the person(s), or the entity upon behalf of | which tl | he person(s) acted, executed the instrument. |
| REQUIRED SENTENCE IF NOTARIZE | D IN C | ALIFORNIA: I certify under PENALTY OF |
| PERJURY under the laws of the State of C | Californ | ia that the foregoing paragraph is true and |
| correct. | | |
| | | |
| WHENECO I I I CC. I I | | |
| WITNESS my hand and official seal. | | |
| | | |
| | | _ |
| Signature of Notary Public | | Place Notary Seal Above |
| | | |
| My Commission Evniras | | |

PATENT REEL: 047999 FRAME: 0898

RECORDED: 01/02/2019