

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I, the undersigned Assignor, hereby:

1. Sell, assign and transfer to **Vertex Pharmaceuticals Incorporated**, a Massachusetts having a place of business at **50 Northern Avenue, Boston, Massachusetts 02210**, its successors, assigns and legal representatives, all hereinafter referred to as the Assignee, my entire right, title and interest for the United States and all foreign countries, in and to any and all inventions and designs which are disclosed in the provisional patent application filed in the United States Patent and Trademark Office on **December 5, 2018** under No. **62/775,637**, bearing Attorney Docket No. **V0138.70070US00**, and entitled **GENE-EDITING SYSTEMS FOR EDITING A CYSTIC FIBROSIS TRANSMEMBRANE REGULATOR (CFTR) GENE**, and in and to the application and all corresponding non-provisional, divisional, continuing, substitute, renewal, reissue and all other applications for Letters Patent, utility models, industrial designs or similar intellectual property rights which have been or shall be filed in the United States, internationally, and in any foreign country, including but not limited to China, Japan and Korea, on any of the inventions and designs; and in and to all original and reissued patents which have been or shall be issued in the United States or any other jurisdiction on the inventions and designs, including the right to apply for patent rights in each foreign country and all rights to priority, including the right to claim priority for China, Japan and Korea; as well as the right to sue in its own name and recover damages for past infringement of any United States Letters Patent and foreign patent, including a reasonable royalty relating to provisional rights under 35 U.S.C. § 154(d) that have attached to any published United States patent application, on the inventions and designs;
2. Agree that the Assignee may apply for and receive Letters Patent and utility model and industrial design registrations for the inventions and designs in its own name; and when requested, without charge to but at the expense of the Assignee, agree to carry out in good faith the intent and purpose of this Assignment, by executing all non-provisional, divisional, continuing, substitute, renewal, reissue, and all other patent, utility model and industrial design applications on any and all the inventions and designs, by executing all rightful oaths, assignments, powers of attorney and other papers, by communicating to the Assignee all facts known to me relating to the inventions and designs and the history thereof, and generally by doing everything reasonably possible which the Assignee shall consider desirable for aiding in securing and maintaining proper protection for the inventions and designs and for vesting title to the inventions and designs and all applications for patents and all patents on the inventions and designs, in the Assignee;
3. Request the Director of the United States Patent and Trademark Office and foreign patent authorities to issue the Letters Patent or other intellectual property rights, including foreign patents, to the Assignee;
4. Authorize and request Wolf, Greenfield & Sacks, P.C. to supply any missing application identification information or correct any errors in the application identification information provided above, whether discovered prior to or after recordation;
5. Covenant with the Assignee that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me and that full right to convey the same as herein expressed is possessed by me; and
6. Appoint Assignee, through its designee, my attorney-in-fact to execute, in my name and on my behalf, any and all documents required to effectuate this Assignment, specifically including, but not limited to, those documents specified above and any necessary corrective assignments.

This instrument is executed under seal and signed under the pains and penalties of perjury under the laws of the United States of America.

Attorney Docket No. **V0138.70070US00**

12/4/2019
Date

M. Weinberg
Inventor: Marco Weinberg
Address: 10 Kendall Drive
Chapel Hill, North Carolina 27517
Citizenship: ZA

Witness:
12/4/2019
Date

Latrice Bass
Signature

Name: Latrice Bass
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Witness:
12/4/19
Date

J Herndon
Signature

Name: JENNY HERNDON
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CHAPEL HILL NC 27517

DEC-4-2019

Date

Diego D'Astolfo
Inventor: Diego D'Astolfo

Address: 3215 Merryfield Row
San Diego, California 92121

Citizenship: AR

Witness:

12/4/2019
Date

Masanao Tsuda

Signature

Name: Masanao Tsuda

Address: 3215 Merry Row
San Diego, California 92121

Witness:

12/4/19
Date

Eleana Slavin

Signature

Name: Eleana Slavin

Address: 3215 Merryfield Row
San Diego, CA 92121

Attorney Docket No. **V0138.70070US00**

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For good and valuable consideration, the receipt of which is hereby acknowledged, I, the undersigned Assignor, hereby:

1. Sell, assign and transfer to **Vertex Pharmaceuticals Incorporated**, having a place of business at **50 Northern Avenue, Boston, Massachusetts 02210**, its successors, assigns and legal representatives, all hereinafter referred to as the Assignee, my entire right, title and interest for the United States and all foreign countries, in and to any and all inventions and designs which are disclosed in the International Application filed on **December 5, 2019** under International Application No. **PCT/US2019/064718**, bearing Attorney Docket No. **V0138.70070WO00**, and entitled **GENE-EDITING SYSTEMS FOR EDITING A CYSTIC FIBROSIS TRANSMEMBRANE REGULATOR (CFTR) GENE**, and in and to the application and all corresponding provisional, non-provisional, divisional, continuing, substitute, renewal, reissue and all other applications for Letters Patent, utility models, industrial designs or similar intellectual property rights which have been or shall be filed in the United States, internationally, and in any foreign country, including but not limited to China, Japan and Korea, on any of the inventions and designs; and in and to all original and reissued patents which have been or shall be issued in the United States or any other jurisdiction on the inventions and designs, including the right to apply for patent rights in each foreign country and all rights to priority, including the right to claim priority for China, Japan and Korea; as well as the right to sue in its own name and recover damages for past infringement of any United States Letters Patent and foreign patent, including a reasonable royalty relating to provisional rights under 35 U.S.C. § 154(d) that have attached to any published United States patent application, on the inventions and designs;
2. Agree that the Assignee may apply for and receive Letters Patent and utility model and industrial design registrations for the inventions and designs in its own name; and when requested, without charge to but at the expense of the Assignee, agree to carry out in good faith the intent and purpose of this Assignment, by executing all non-provisional, divisional, continuing, substitute, renewal, reissue, and all other patent, utility model and industrial design applications on any and all the inventions and designs, by executing all rightful oaths, assignments, powers of attorney and other papers, by communicating to the Assignee all facts known to me relating to the inventions and designs and the history thereof, and generally by doing everything reasonably possible which the Assignee shall consider desirable for aiding in securing and maintaining proper protection for the inventions and designs and for vesting title to the inventions and designs and all applications for patents and all patents on the inventions and designs, in the Assignee;
3. Request the Director of the United States Patent and Trademark Office and foreign patent authorities to issue the Letters Patent or other intellectual property rights, including foreign patents, to the Assignee;
4. Authorize and request Wolf, Greenfield & Sacks, P.C. to supply any missing application identification information or correct any errors in the application identification information provided above, whether discovered prior to or after recordation;

Attorney Docket No. **V0138.70070WO00**

5. Covenant with the Assignee that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me and that full right to convey the same as herein expressed is possessed by me; and

6. Appoint Assignee, through its designee, my attorney-in-fact to execute, in my name and on my behalf, any and all documents required to effectuate this Assignment, specifically including, but not limited to, those documents specified above and any necessary corrective assignments.

This instrument is executed under seal and signed under the pains and penalties of perjury under the laws of the United States of America.

1/31/2021
Date

M.S.
Inventor: Marco Weinberg
Address: 10 Kendall Drive
Chapel Hill, North Carolina 27517
Citizenship: South Africa

Witness:
1/31/2021
Date

J Herndon
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Name: JENNY HERNDON
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Witness:
1/31/2021
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Attorney Docket No. V0138.70070WO00

06-JAN-2021
Date

Diego D'Astolfo
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Witness:
Jan 6 2021
Date

Kathryn Grandinetti
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San Diego CA 92121

Witness:
Jan 6 2021
Date

Sophia Espanola
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Attorney Docket No. V0138.70070WO00