#### 505615787 08/09/2019

## PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
CRISPR THERAPEUTICS AG	07/24/2019

### **RECEIVING PARTY DATA**

Name:	VERTEX PHARMACEUTICALS INC.	
Street Address:	50 NORTHERN AVENUE	
City:	BOSTON	
State/Country:	MASSACHUSETTS	
Postal Code:	02210	

### **PROPERTY NUMBERS Total: 6**

Property Type	Number	
Application Number:	15763328	
Application Number:	62247484	
Application Number:	62324064	
Application Number:	16312651	
Application Number:	62355949	
Application Number:	62461875	

### **CORRESPONDENCE DATA**

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using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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ATTORNEY DOCKET NUMBER:	100867-608146	
NAME OF SUBMITTER:	DEBRA KOZLOWSKI	
SIGNATURE:	/Debra Kozlowski/	
DATE SIGNED:	08/09/2019	

**PATENT** REEL: 050017 FRAME: 0421 505615787

### **Total Attachments: 3**

source=Executed Assignment -- CRISPR Therapeutics AG to Vertex Pharmaceuticals Inc#page1.tif source=Executed Assignment -- CRISPR Therapeutics AG to Vertex Pharmaceuticals Inc#page2.tif source=Executed Assignment -- CRISPR Therapeutics AG to Vertex Pharmaceuticals Inc#page3.tif

PATENT REEL: 050017 FRAME: 0422

#### **ASSIGNMENT**

WHEREAS, CRISPR THERAPEUTICS AG, a corporation organized and existing under the laws of Switzerland, having a place of business at Baarerstrasse 14, 6300 Zug, Switzerland (referred to hereinafter as an "Assignor") owns the entire right, title, and interest in the patent Inventions disclosed, described, and/or claimed in the patent applications listed in Schedule A attached hereto (hereinafter, the "Applications"); and

WHEREAS, VERTEX PHARMACEUTICALS INC., organized and existing under the laws of Massachusetts, having a place of business at 50 Northern Avenue, Massachusetts 02210 together with any successors, assigns, and legal representatives thereof (hereinafter, called the "Assignee") is desirous of acquiring the entire right, title and interest, for all countries, in and to said patent Inventions and Applications.

NOW, THEREFORE, for one U.S. dollar and other good and valuable consideration, the receipt of which is hereby acknowledged, each Assignor agrees to and does hereby sell, assign, transfer and convey unto Assignee the entire right, title and interest of such Assignor in and to said Inventions and Applications, and all divisions, renewals and continuations thereof, and any and all Letters Patent of the United States which may be granted thereon, and all reissues, reexaminations, and extensions thereof, and all priority rights under all available international agreements, treaties and conventions for the protection of intellectual property in its various forms in every participating country, and all applications for Letters Patent or other grants of protection of proprietary rights including, but not limited to, inventor's certificate, utility model, utility certificate, patent of importation, registration of patent and industrial design registration which may be filed, and which may be granted, upon said inventions in any countries or regions foreign to the United States, and all reissues, renewals and extensions thereof; and each Assignor hereby authorizes and requests the Commissioner for Patents and Trademarks of the United States, and all officials of countries or regions foreign to the United States having authority so to do, to issue all such Letters Patent or other grants of protection upon said inventions to the Assignee or to such nominees as it may designate;

AND the Assignor hereby authorizes and empowers the Assignee or nominees to invoke and claim for any applications for such Letters Patent or other grants of protection for said inventions filed by it or them, the benefit of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by a convention which may henceforth be substituted for it, and to invoke and claim such right of priority without further written or oral authorization from such Assignor;

AND the Assignor hereby consents that a copy of this Assignment shall be deemed a full and formal equivalent of any assignment, consent to file or like document which may be required in any country or region for any purpose and more particularly in proof of the right of the Assignee or nominees to claim the aforesaid benefit of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it;

**AND** the Assignor hereby covenants that such Assignor has the full right to convey the right, title and interest herein assigned and that such Assignor has not executed and will not execute any agreement in conflict herewith;

AND the Assignor hereby covenants and agrees that such Assignor will communicate to Assignee or nominees all facts known to such Assignor pertaining to the Invention, and testify in all legal proceedings, sign all lawful papers, execute all divisional, continuation, substitute and reissue applications, make all rightful oaths and declarations and in general perform all lawful acts necessary or proper to aid Assignee or nominee in obtaining, maintaining and enforcing all lawful patent or other grants of protection of the Invention in any and all countries and regions.

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PATENT REEL: 050017 FRAME: 0423 The Assignor has caused this Assignment to be signed and executed by its undersigned officer thereunto duly authorized on the respective date written below.

ASSIGNOR CRISPR THERAPEUTICS AG

Name: ANDERS KASSOW

Title: EXECUTIVE DIRECTOR IP

Date: 24.7. 2019

ASSIGNEE

VERTEX PHARMACEUTICALS INC.

Name: Nathaniel Edwards

Title: Senior Director, 17

Date: August 1, 2019

[SIGNATURE PAGE TO ASSIGNMENT]

# **SCHEDULE A**

# (PATENT)

Application No.	Filing Date	Status	Docket No.
AU 2016344609	28-Oct-2016	Pending	CT6-AU
CA 3000931	28-Oct-2016	Published	CT6-CA
CN 201680063852.2	28-Oct-2016	Published	CT6-CN
EP 16820319.8	28-Oct-2016	Published	СТ6-ЕР
JP 2018-521542	28-Oct-2016	Pending	CT6-JP
US 15/763328	26-Mar-2018	Pending	CT6-US
US 62/247484	28-Oct-2015	Expired	CT6-P1
US 62/324064	18-Apr-2016	Expired	CT6-P2
PCT/IB2016/001679	28-Oct-2016	Nat Phase	СТ6-РСТ
EP 17742548.5	27-Jun-2017	Published	СТ48-ЕР
US 16/312651	21-Dec-2018	Pending	CT48-US
US 62/355949	29-Jun-2016	Expired	CT48-P1
US 62/461875	22-Feb-2017	Expired	CT48-P2
PCT/IB2017/053816	27-Jun-2017	Nat Phase	СТ48-РСТ

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RECORDED: 08/09/2019 REEL: 050017 FRAME: 0425