# 505317879 02/07/2019

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5364660

SUBMISSION TYPE:		NEW ASSIGNMENT	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:		ASSIGNMENT		
CONVEYING PARTY	ΔΑΤΑ			
		Name	Execution Date	
EDWARD JOHN HENN	IESSY		10/09/2017	
RECEIVING PARTY D				
Name:				
Street Address:		1800 CONCORD PIKE		
Internal Address:	P.O. BC	P.O. BOX 15437		
City:	WILMIN	WILMINGTON		
State/Country:	DELAW	DELAWARE		
Postal Code:	19850-5	19850-5437		
PROPERTY NUMBERS Total: 1 Property Type		Number		
		15899892	_	
CORRESPONDENCE	DATA			
		(301)576-6932		
		the e-mail address first; if that is u ; if that is unsuccessful, it will be s		
			I-398-3199	
Email: pate		001-000-0100		
Email:	I	patents@astrazeneca.com		
Correspondent Name	: /	patents@astrazeneca.com ASTRAZENECA PHARMACEUTICAI	LS	
Correspondent Name Address Line 1:	: ,	patents@astrazeneca.com ASTRAZENECA PHARMACEUTICAI ONE MEDIMMUNE WAY		
Correspondent Name	: ,	patents@astrazeneca.com ASTRAZENECA PHARMACEUTICAI		
Correspondent Name Address Line 1: Address Line 4:		patents@astrazeneca.com ASTRAZENECA PHARMACEUTICAI ONE MEDIMMUNE WAY		
Correspondent Name Address Line 1: Address Line 4: ATTORNEY DOCKET N		patents@astrazeneca.com ASTRAZENECA PHARMACEUTICAI ONE MEDIMMUNE WAY GAITHERSBURG, MARYLAND 2087		
Correspondent Name Address Line 1: Address Line 4: ATTORNEY DOCKET N NAME OF SUBMITTER		patents@astrazeneca.com ASTRAZENECA PHARMACEUTICAI ONE MEDIMMUNE WAY GAITHERSBURG, MARYLAND 2087 200588-US-NP		
Correspondent Name Address Line 1:		patents@astrazeneca.com ASTRAZENECA PHARMACEUTICAI ONE MEDIMMUNE WAY GAITHERSBURG, MARYLAND 2087 200588-US-NP DENISE COOPER		
Correspondent Name Address Line 1: Address Line 4: ATTORNEY DOCKET N NAME OF SUBMITTER SIGNATURE:		patents@astrazeneca.com ASTRAZENECA PHARMACEUTICAI ONE MEDIMMUNE WAY GAITHERSBURG, MARYLAND 2087 200588-US-NP DENISE COOPER /Denise Cooper/		
Correspondent Name Address Line 1: Address Line 4: ATTORNEY DOCKET N NAME OF SUBMITTER SIGNATURE: DATE SIGNED: Total Attachments: 4	IUMBER:	patents@astrazeneca.com ASTRAZENECA PHARMACEUTICAI ONE MEDIMMUNE WAY GAITHERSBURG, MARYLAND 2087 200588-US-NP DENISE COOPER /Denise Cooper/		
Correspondent Name Address Line 1: Address Line 4: ATTORNEY DOCKET N NAME OF SUBMITTER SIGNATURE: DATE SIGNED: Total Attachments: 4 source=P2-INV-AZPLP#	IUMBER: page1.tif page2.tif	patents@astrazeneca.com ASTRAZENECA PHARMACEUTICAI ONE MEDIMMUNE WAY GAITHERSBURG, MARYLAND 2087 200588-US-NP DENISE COOPER /Denise Cooper/		
Correspondent Name Address Line 1: Address Line 4: ATTORNEY DOCKET N NAME OF SUBMITTER SIGNATURE: DATE SIGNED: Total Attachments: 4 source=P2-INV-AZPLP#	page1.tif page2.tif page3.tif	patents@astrazeneca.com ASTRAZENECA PHARMACEUTICAI ONE MEDIMMUNE WAY GAITHERSBURG, MARYLAND 2087 200588-US-NP DENISE COOPER /Denise Cooper/		

## ASSIGNMENT OF PATENT RIGHTS

THIS ASSIGNMENT is made as of the 21 day of April 2017 (the "Effective Date") by and between

Edward John Hennessy, a United States citizen of AstraZeneca R&D Boston, 35 Gatehouse Drive, Waltham, Massachusettes 02451 ("Assignors"); and

ASTRAZENECA PHARMACEUTICALS LP, a Delaware limited partnership with registered office address at 1800 Concord Pike, P.O. Box 15437, Wilmington, Delaware 19850-5437, United States of America ("Assignee")

## WHEREAS

- A. Assignors have made certain inventions (the "Inventions") in respect of which US Provisional Application No. 62/488,151 was filed on April 21, 2017 (the "Application").
- B. Assignee wishes to secure the entire right, title and interest in and to the Inventions and to the Application.

## NOW THEREFORE IT IS HEREBY AGREED AS FOLLOWS:

1. In consideration of payments made by Assignee to Assignors, receipt of which is hereby acknowledged, the Assignors hereby confirm that they have assigned, and in so far as there may be any outstanding rights that have not been assigned to the Assignee do hereby assign, with full title guarantee, free from all and any charges or other third party rights, to Assignee absolutely all their right, title and interest in and to the Inventions, the Application and any patents or applications derived therefrom; any divisions, continuations and continuations-in-part thereof; any re-issues, re-examinations, or extensions thereof; all rights to claim priority on the basis of the Application and any patents or applications derived therefrom; and the right to file patent applications derived from the Application directly in the name of Assignee or an affiliated company of Assignee (in countries or regions where such filings are permissible) (collectively, the "**Rights**"), whether now existing or hereafter arising, to the full end of the term for which the Rights have been granted, reissued, re-examined or extended. Assignors warrant that the Rights are unencumbered. Assignors acknowledge that Assignee shall have the rights to further assign or otherwise transfer any or all of the Rights to any third party and Assignors waive any right of first refusal that they may have for acquiring such Rights.

2. Assignors each hereby agree with Assignee that their assignment to Assignee includes, but is not limited to, any and all causes of action, claims, demands or other rights, occasioned from or because of any and all past and future infringement of any of the Rights, including all rights to recover damages, profits and injunctive relief for infringement of any of the Rights.

3. Assignors each hereby agree with Assignee that they shall, at the expense of Assignee, execute and sign all such lawful instruments, applications and documents and do all such lawful acts and things as may reasonably be required by Assignee to enable Assignee or its successors, nominees or assigns to:

- a) secure the vesting of the Rights in Assignce or in its successors, nominees or assigns;
- b) defeat any challenge to the validity of and resolve any questions concerning the Rights; and
- c) apply for, prosecute and obtain patent or similar protection in the United States and all other countries of the world for an invention embodied by the Rights, including the right to claim convention priority from such Patents and including, without limitation, cooperating in any proceedings involving examinations, re-examinations, reissues, opposition and cancellation proceedings, interferences, infringement proceedings, court actions and the like.

4. Assignor hereby authorizes the United States Commissioner of Patents and Trademarks and, as appropriate, the corresponding officials of other countries, to record this Assignment.

## PATENT REEL: 048265 FRAME: 0337

5. This assignment shall be governed by and construed in accordance with the laws of the State of Delaware and the parties hereby submit to the exclusive jurisdiction of the Delaware courts.

Any attorney of record is authorized and requested by the execution of this assignment to insert into this assignment any further information necessary for recordation of this document.

Edward for Kenning

Edward John Hennessy

Dated: October 9, 2017

## ASSIGNMENT OF PATENT RIGHTS

THIS ASSIGNMENT is made as of the 21 day of April 2017 (the "Effective Date") by and between

John Paul Secrist, a United States citizen of AstraZeneca R&D Boston, 35 Gatehouse Drive, Waltham, Massachusettes 02451 ("Assignors"); and

ASTRAZENECA PHARMACEUTICALS LP, a Delaware limited partnership with registered office address at 1800 Concord Pike, P.O. Box 15437, Wilmington, Delaware 19850-5437, United States of America ("Assignee")

#### WHEREAS

- A. Assignors have made certain inventions (the "Inventions") in respect of which US Provisional Application No. 62/488,151 was filed on April 21, 2017 (the "Application").
- B. Assignee wishes to secure the entire right, title and interest in and to the Inventions and to the Application.

#### NOW THEREFORE IT IS HEREBY AGREED AS FOLLOWS:

1. In consideration of payments made by Assignee to Assignors, receipt of which is hereby acknowledged, the Assignors hereby confirm that they have assigned, and in so far as there may be any outstanding rights that have not been assigned to the Assignee do hereby assign, with full title guarantee, free from all and any charges or other third party rights, to Assignee absolutely all their right, title and interest in and to the Inventions, the Application and any patents or applications derived therefrom; any divisions, continuations and continuations-in-part thereof; any re-issues, re-examinations, or extensions thereof; all rights to claim priority on the basis of the Application and any patents or applications derived therefrom; and the right to file patent applications derived from the Application directly in the name of Assignee or an affiliated company of Assignee (in countries or regions where such filings are permissible) (collectively, the "**Rights**"), whether now existing or hereafter arising, to the full end of the term for which the Rights have been granted, reissued, re-examined or extended. Assignors warrant that the Rights are unencumbered. Assignors acknowledge that Assignee shall have the rights to further assign or otherwise transfer any or all of the Rights to any third party and Assignors waive any right of first refusal that they may have for acquiring such Rights.

2. Assignors each hereby agree with Assignee that their assignment to Assignee includes, but is not limited to, any and all causes of action, claims, demands or other rights, occasioned from or because of any and all past and future infringement of any of the Rights, including all rights to recover damages, profits and injunctive relief for infringement of any of the Rights.

3. Assignors each hereby agree with Assignee that they shall, at the expense of Assignee, execute and sign all such lawful instruments, applications and documents and do all such lawful acts and things as may reasonably be required by Assignee to enable Assignee or its successors, nominees or assigns to:

- a) secure the vesting of the Rights in Assignce or in its successors, nominees or assigns;
- b) defeat any challenge to the validity of and resolve any questions concerning the Rights; and
- c) apply for, prosecute and obtain patent or similar protection in the United States and all other countries of the world for an invention embodied by the Rights, including the right to claim convention priority from such Patents and including, without limitation, cooperating in any proceedings involving examinations, re-examinations, reissues, opposition and cancellation proceedings, interferences, infringement proceedings, court actions and the like.

4. Assignor hereby authorizes the United States Commissioner of Patents and Trademarks and, as appropriate, the corresponding officials of other countries, to record this Assignment.

## PATENT REEL: 048265 FRAME: 0339

5. This assignment shall be governed by and construed in accordance with the laws of the State of Delaware and the parties hereby submit to the exclusive jurisdiction of the Delaware courts.

Any attorney of record is authorized and requested by the execution of this assignment to insert into this assignment any further information necessary for recordation of this document.

Hm Paul Sterist

Dated: December 7, 2017

John Paul Secrist