504918975 05/17/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4965720

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ZHAOLIN WANG	03/19/2017
PING YE	03/16/2017
ALONSO RICARDO	03/16/2017
KRISTOPHER JOSEPHSON	03/20/2017
PAUL ANDERSON	03/17/2017
MICHELLE DENISE HOARTY	03/16/2017
ZHONG MA	03/16/2017
NATHAN EZEKIEL NIMS	03/17/2017
EBERHARD SCHNEIDER	03/22/2017
GREGOR SCHURMANN	03/26/2017
PETER WAGNER	03/22/2017
DOUGLAS A. TRECO	03/16/2017
HONG ZHENG	03/17/2017
DANIEL ELBAUM	03/20/2017
NICOLAS CEDRIC BOYER	03/21/2017

RECEIVING PARTY DATA

Name:	RA PHARMACEUTICALS, INC.
Street Address:	87 CAMBRIDGE PARK DRIVE
City:	CAMBRIDGE
State/Country:	MASSACHUSETTS
Postal Code:	02140

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15978271

CORRESPONDENCE DATA

Fax Number: (978)448-8721

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: 978-448-8720

> **PATENT** REEL: 045831 FRAME: 0690

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Email: DOCKETING@DTWARDLAW.COM

Correspondent Name: DT WARD, PC

Address Line 1: 142A MAIN STREET

Address Line 4: GROTON, MASSACHUSETTS 01450

ATTORNEY DOCKET NUMBER:	2011.1001USCON3
NAME OF SUBMITTER:	JESSICA L. CHARLAND
SIGNATURE:	/Jessica L. Charland/
DATE SIGNED:	05/17/2018

Total Attachments: 13

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PATENT REEL: 045831 FRAME: 0691

CONFIRMATION AND ACKNOWLEDGMENT OF ASSIGNMENT

The undersigned hereby acknowledges receipt of assignment of the entire worldwide right, title, and interest in all inventions and improvements ("SUBJECT MATTER") that are disclosed in the following provisional application filed under 35 U.S.C. § 111(b), non-provisional application filed under 35 U.S.C. § 111(a), international application filed according to the Patent Cooperation Treaty (PCT), or U.S. national phase application filed under 35 U.S.C. § 371 ("APPLICATION"):

Application No. 15/459,035 entitled "PEPTIDE AND PEPTIDOMIMETIC INHIBITORS", filed on March 15, 2017.

From	Zhaolin Wang	Dated	March 19, 2017
From	Ping Ye	Dated	March 16, 2017
From	Alonso Ricardo	Dated	March 16, 2017
From_	Kristopher Josephson	Dated	March 20, 2017
From	Paul Anderson	Dated	March 17, 2017
From	Michelle Denise Hoarty	Dated	March 16, 2017
From	Zhong Ma	Dated	March 16, 2017
From	Nathan Ezekiel Nims	Dated	March 17, 2017
From	Eberhard Schneider	Dated	March 22, 2017
From	Gregor Schurmann	Dated	March 26, 2017
From	Peter Wagner	Dated	March 22, 2017
From	Douglas A. Treco	Dated	March 16, 2017
From	Hong Zheng	Dated	March 17, 2017
From	Daniel Elbaum	Dated	March 20, 2017
From	Nicolas Cedric Boyer	Dated	March 21, 2017

The undersigned acknowledges and accepts this assignment on behalf of Ra Pharmaceuticals, Inc.

Date 5/14/18 Signature

Authorized Representative of Ra Pharmaceuticals, Inc.

PATENT REEL: 045831 FRAME: 0692

ASSIGNMENT

For good and valuable consideration, the sufficiency and receipt of which is hereby acknowledged, the person(s) named below (referred to as "INVENTOR" whether singular or plural) has sold, assigned, and transferred and does hereby sell, assign, and transfer to Ra Pharmaceuticals, Inc., having a place of business at 87 Cambridge Park Drive, Cambridge, Massachusetts 02140, for itself and its successors, transferees, and assigns (herein "ASSIGNEE") the following:

- 1. The entire worldwide right, title, and interest in all inventions and improvements ("SUBJECT MATTER") that are disclosed in the following provisional application filed under 35 U.S.C. § 111(b), non-provisional application filed under 35 U.S.C. § 111(a), international application filed according to the Patent Cooperation Treaty (PCT), or U.S. national phase application filed under 35 U.S.C. § 371 ("APPLICATION"):
 - Application No. <u>15/459,035</u>, entitled <u>"PEPTIDE AND PEPTIDOMIMETIC INHIBITORS"</u> filed on March 15, 2017.
 - 2. The entire worldwide right, title, and interest in and to:
- (a) the APPLICATION; (b) all applications claiming priority from the APPLICATION; (c) all provisional, utility, divisional, continuation, substitute, renewal, reissue, and other applications related thereto which have been or may be filed in the United States or elsewhere in the world; (d) all patents (including reissues and re-examinations) which may be granted on the applications set forth in (a), (b), and (c) above; and (e) all right of priority in the APPLICATION and in any underlying provisional or foreign application, together with all rights to sue for and recover damages for past acts of infringement, whether based on any patents listed herein, patents issuing from applications listed herein or provisional rights from any patent application listed herein.

INVENTOR agrees that ASSIGNEE may apply for and receive patents for SUBJECT MATTER in ASSIGNEE's own name.

INVENTOR agrees to do the following, when requested, and without further consideration, in order to carry out the intent of this Assignment: (1) execute all oaths, assignments, powers of attorney, applications, and other papers necessary or desirable to fully secure to ASSIGNEE the rights, titles and interests herein conveyed; (2) communicate to ASSIGNEE all known facts relating to the SUBJECT MATTER; and (3) generally do all lawful acts that ASSIGNEE shall consider desirable for securing, maintaining, and enforcing worldwide patent protection relating to the SUBJECT MATTER and for vesting in ASSIGNEE the rights, titles, and interests herein conveyed. INVENTOR further agrees to provide any successor, assign, or legal representative of ASSIGNEE with the benefits and assistance provided to ASSIGNEE hereunder.

INVENTOR represents that INVENTOR has the rights, titles, and interests to convey as set forth herein, and covenants with ASSIGNEE that the INVENTOR has not made and will not

1 of 4

Attorney Docket No. 2011.1001USCON2

Filed: March 15, 2017 Application No.: 15/459,035

hereafter make any assignment, grant, mortgage, license, or other agreement affecting the rights, titles, and interests herein conveyed.

INVENTOR grants the attorney of record the power to insert on this Assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

INVENTOR acknowledges the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

This Assignment may be executed in one or more counterparts, each of which shall be deemed an original and all of which may be taken together as one and the same Assignment.

Date	Signature_ Name	Zhaolin Wang
Date 3/16/17	Signature_ Name	Ping Ye
Date 03/16/17	Signature_ Namo	Alonso Ricardo
Date 3/20/17	Signature_ Name	C// A Kristopher Josephson
Date	Signature_ Name	Paul Anderson

Filed: March 15, 2017 Application No.: 15/459,035

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Date 3/19/2017	Signature Thew in D
Date 3/16/17	Signature Ping Ye
Date 03/16 13-	Signature Alonso Ricardo
Dato	SignatureNameKristopher Josephson
	Clounton
Date	Signature Name Paul Anderson

Filed: March 15, 2017 Application No.: 15/459,035

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Date	Signature	Zhaolin Wang
Date 3/16/17	Signature_ Name	Ping Ye
Date 03/16/17	Signature_ Name	Alonso Ricardo
Date	Signature_ Name	Kristopher Josephson
Date 3/17/2017	Signuture_ Name	Paul C. Audlioo Tr Paul Anderson

Filed: March 15, 2017 Application No.: 15/459,035

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Date	Signature_	
	Name	Zhaolin Wang
Date 3/16/17	Signature_ Name	Ping Ye
Date 03/16 13-	Signature_ Name	Alonso Ricardo
Date	Signature_ Name	Kristopher Josephson
Date	Signature Name	Paul Anderson

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Attorney Docket No: 2011.1001USCON2

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Date	Signature
Date	SignatureNamePeter Wagner
Date 3/16/17	Signature A ()
•	Name Douglas A. Treco
Date 03/17/2017	Signature Vene Theory

Title: PEPTIDE AND PEPTIDOMIMETIC INHIBITORS Piled: March 15, 2017 Application No.: 15/459,035			
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Date 3 16 17	Signature Michelle Denise Hoarty Name Michelle Denise Hoarty	ninina n	
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Date	Signature Name Gregor Schurmann		
Date 3/22/17	Signature CTGG Wagner Poter Wagner		
Date 3/10/17	Signature A Treco		
Date	Signature Name Hong Zheng		

Attorney Dooket No: 2011.1001USCON2

Filed: March 15, 2017 Application No.: 15/459,035	
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Date 3 10 17	Signature Michelle Hoarty Name Michelle Denise Hoarty
Date 3/16/17	Signature 7 M 2 Name Zhong Ma
Date 3/17/17	Signature Nathan Ezekiel Nims
Date	Signature
Date	SignatureNameGregor Schurmann
Date	Signature
Date 3/10/17	Signature Douglas A. Treco

3 of 4

Signature Hong Zheng

Title: PEPTIDE AND PEPTIDON Piled: March 15, 2017 Application No.: 15/459,035	IMETIC INHIBITORS
Date 3/10/17	Signature Mighelle Steatty Name Mighelle Denise Hoarty
Date 3/16/17	Signature Zhong Ma Name Zhong Ma
Date	SignatureNathan Ezokiel Nims
Date	Signature Name Eberhard Schneider
Date 3/26/17	Signature W/Qu.T Name Greger Schurmann
Date	Signature
Date 3/16/17	Signature A Treco
Date	Signature Name Hong Zheng

Title: PEPTIDE AND PEPTIDON Filed: March 15, 2017 Application No.: 15/459,035	MIMETIC INHIBITORS
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Date 3 16 17	Signature Michelle Hoarty Name Michelle Denise Hoarty
Date 3/16/17	Signature Air M2 Name Zhong Ma
Date	SignatureNathan Ezekiel Nims
Date 3/22/2017	Signature Usako d Christo Signature Berhard Schneider
4.	
Date	SignatureNameGregor Schurmann
Date	Signature
Date 3/16/17	Signature A. Treco
D uta	Cimatura
Date	Signature Name Hong Zheng

Title: PEPTIDE AND PEPTIDO Filed: March 15, 2017 Application No.: 15/459,035		IBITORS
Date 3/20//7	Signature_ Name	Daniel Elbaum
Date	Signature_	Nicolan Codela Boyar

Title: PEPTIDE AND PEPTIDO! Filed: March 15, 2017 Application No.: 15/459,035	VIMETIC INHIBITORS
Date	SignatureName Daniel Elbaum
Date <u>03/2/1201</u> 7	Signature Nome Ni John Barry

Attorney Docket No: 2011.1001USCON2

RECORDED: 05/17/2018

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PATENT REEL: 045831 FRAME: 0704