

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5858052

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	NOTICE OF GRANT OF SECURITY INTEREST IN INTELLECTUAL PROPERTY
CONVEYING PARTY DATA	
Name	Execution Date
MALLINCKRODT LLC	12/09/2019
OCERA THERAPEUTICS, INC.	12/09/2019
MALLINCKRODT ARD IP LIMITED	12/09/2019
MALLINCKRODT HOSPITAL PRODUCTS IP LIMITED	12/09/2019
SPECGX LLC	12/09/2019
STRATATECH CORPORATION	12/09/2019
VTESSE INC.	12/09/2019
MALLINCKRODT PHARMA IP TRADING D.A.C.	12/09/2019
RECEIVING PARTY DATA	
Name:	DEUTSCHE BANK AG NEW YORK BRANCH, AS COLLATERAL AGENT
Street Address:	60 WALL STREET
City:	NEW YORK
State/Country:	NEW YORK
Postal Code:	10005
PROPERTY NUMBERS Total: 46	
Property Type	Number
Patent Number:	10363251
Patent Number:	10213385
Patent Number:	9949949
Patent Number:	10173964
Patent Number:	10258602
Application Number:	16369690
Application Number:	62852097
Application Number:	62857677
Application Number:	62873080
Application Number:	62873084
Application Number:	62794369
Application Number:	62789016
Application Number:	62823297

PATENT

Property Type	Number
Application Number:	16365263
Application Number:	16378361
Application Number:	16411944
Application Number:	62849064
Application Number:	16502828
Application Number:	16504881
Application Number:	16505295
Application Number:	16537103
Application Number:	16537955
Application Number:	16598786
Application Number:	16665353
Application Number:	62928152
Application Number:	16669151
Application Number:	16677435
Application Number:	62774687
Application Number:	14750429
Application Number:	16300362
Application Number:	16408678
Application Number:	15817847
Application Number:	15751442
Application Number:	62845569
Application Number:	62916159
Application Number:	16611193
Application Number:	16529323
Application Number:	16549151
Application Number:	16574699
Application Number:	16600874
Application Number:	16481405
Application Number:	62907308
Application Number:	62910887
Application Number:	16150048
Application Number:	16372899
Application Number:	16430664

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: 2136207848

Email: iprecordations@whitecase.com
Correspondent Name: JUSTINE LU/WHITE & CASE LLP
Address Line 1: 555 SOUTH FLOWER STREET, 2700
Address Line 4: LOS ANGELES, CALIFORNIA 90071

ATTORNEY DOCKET NUMBER: 1111779-2659-S216

NAME OF SUBMITTER: JUSTINE LU

SIGNATURE: /Justine Lu/

DATE SIGNED: 12/09/2019

Total Attachments: 10

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Notice of Grant of Security Interest in Intellectual Property

NOTICE OF GRANT OF SECURITY INTEREST IN PATENTS, dated as of December 9, 2019 (this “**Agreement**”), made by Mallinckrodt ARD IP Limited, a private limited company incorporated in Ireland with registered number 568350, Mallinckrodt Hospital Products IP Limited, a private limited company incorporated in Ireland with registered number 568351, Mallinckrodt LLC, a Delaware limited liability company, Mallinckrodt Pharma IP Trading Designated Activity Company, a designated activity company incorporated in Ireland with registered number 568588, Ocera Therapeutics, Inc., a Delaware corporation, SpecGX LLC, a Delaware limited liability company, Stratatech Corporation, a Delaware corporation, and Vtesse Inc., a Delaware corporation (each, a “**Pledgor**” and collectively, the “**Pledgors**”), in favor of DEUTSCHE BANK AG NEW YORK BRANCH, as Collateral Agent (as defined below).

Reference is made to the U.S. Collateral Agreement dated as of March 19, 2014 (as amended, restated, supplemented or otherwise modified from time to time, the “**U.S. Collateral Agreement**”), among Mallinckrodt International Finance S.A., a public limited liability company (*société anonyme*) incorporated under the laws of the Grand Duchy of Luxembourg, having its registered office at 124, boulevard de la Pétrusse, L-2330 Luxembourg, and registered with the Luxembourg Trade and Companies Register (*R.C.S. Luxembourg*) under number B 172.865 (the “**Lux Borrower**”), MALLINCKRODT CB LLC (the “**Co-Borrower**”, and together with the Lux Borrower, the “**Borrowers**”), Mallinckrodt Holdings GmbH (as successor by merger to Mallinckrodt Finance GmbH) (the “**Swiss Finco**”), each other Subsidiary Loan Party listed on the signature pages hereof and each other Subsidiary Loan Party that becomes a party hereto after the date hereof and DEUTSCHE BANK AG NEW YORK BRANCH, as collateral agent (together with its successors and assigns in such capacity, the “**Collateral Agent**”) for the Secured Parties (as defined therein). The parties hereto agree as follows:

SECTION 1. **Terms.** Capitalized terms used in this Agreement and not otherwise defined herein have the meanings specified in the U.S. Collateral Agreement. The rules of construction specified in Section 1.01(b) of the U.S. Collateral Agreement also apply to this Agreement.

SECTION 2. **Grant of Security Interest.** As security for the payment and performance, as applicable, in full of its Secured Obligations, each Pledgor pursuant to the U.S. Collateral Agreement did, and hereby does, assign and pledge to the Collateral Agent, its successors and permitted assigns, for the benefit of the Secured Parties, a continuing security interest in all of each such Pledgor’s right, title and interest in, to and under any and all of the following assets now owned or at any time hereafter acquired by each such Pledgor or in which each such Pledgor now has or at any time in the future may acquire any right, title or interest (collectively, but excluding any Excluded Property, the “**IP Collateral**”):

all Patents of the United States of America of each Pledgor, including those listed on Schedule I;

SECTION 3. **U.S. Collateral Agreement.** The security interests granted to the Collateral Agent herein are granted in furtherance, and not in limitation of, the security interests

granted to the Collateral Agent pursuant to the U.S. Collateral Agreement. Each Pledgor hereby acknowledges and affirms that the rights and remedies of the Collateral Agent with respect to the IP Collateral are more fully set forth in the U.S. Collateral Agreement, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein. In the event of any conflict between the terms of this Agreement and the U.S. Collateral Agreement, the terms of the U.S. Collateral Agreement shall govern.

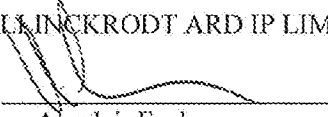
SECTION 4. *Counterparts*. This Agreement may be executed in two or more counterparts, each of which shall constitute an original but all of which when taken together shall constitute but one contract. Delivery of an executed counterpart to this Agreement by facsimile or other electronic transmission shall be as effective as delivery of a manually signed original.

SECTION 5. *Governing Law*. **THIS AGREEMENT AND ANY CLAIMS, CONTROVERSY, DISPUTE OR CAUSES OF ACTION (WHETHER IN CONTRACT OR TORT OR OTHERWISE) BASED UPON, ARISING OUT OF OR RELATING TO THIS AGREEMENT SHALL BE CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAWS OF THE STATE OF NEW YORK.**

[Signature Pages Follow]

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the day and year first above written.

MALLINCKRODT ARD IP LIMITED

By: 
Name: Alasdair Fenlon
Title: Director

MALLINCKRODT HOSPITAL PRODUCTS IP
LIMITED


By: 
Name: Alasdair Fenlon
Title: Director

MALLINCKRODT PHARMA IP TRADING
DESIGNATED ACTIVITY COMPANY


By: 
Name: Alasdair Fenlon
Title: Director

[Signature Page to Notice of Grant of Security Interest in Patents]


MALLINCKRODT LLC

By: 
Name: John Einwalter
Title: Vice President & Treasurer


OCERA THERAPEUTICS, INC.

By: 
Name: John Einwalter
Title: Vice President & Treasurer

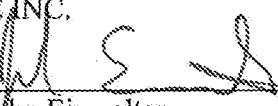
SPECGX LLC

By: 
Name: John Einwalter
Title: Vice President & Treasurer

STRATATECH CORPORATION

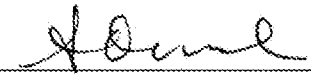
By: 
Name: John Einwalter
Title: Vice President & Treasurer

VTESSE INC.

By: 
Name: John Einwalter
Title: Vice President & Treasurer

DEUTSCHE BANK AG NEW YORK BRANCH,
as Collateral Agent,

By: 
Name: Philip Tancorra
Title: Associate

By: 
Name: Suzan Onal
Title: Associate

Schedule I
to Notice of Grant of Security Interest in Patents

U.S. Patent Registrations

Patent	Registration No.	Registration Date	Owner
(+)-MORPHINAN COMPOUNDS AS SMALL MOLECULE ANTAGONISTS OF TOLL-LIKE RECEPTOR 9	10363251	7/30/2019	Mallinckrodt LLC
COMBINATIONAL LIPOSOME COMPOSITIONS FOR CANCER THERAPY	10213385	2/26/2019	Mallinckrodt LLC
MACROCYCLIC GHRELIN RECEPTOR MODULATORS AND METHODS OF USING THE SAME	9,949,949	4/24/2018	Ocera Therapeutics, Inc.
L-ORNITHINE PHENYL ACETATE AND METHODS OF MAKING THEREOF	10,173,964	1/8/2019	Ocera Therapeutics, Inc.
Macrocytic ghrelin receptor modulators and methods of using the same	10,258,602	4/16/2019	Ocera Therapeutics, Inc.

U.S. Patent Applications

Patent	Application No.	Application Date	Owner
Acth prophylactic treatment of renal disorders	16/369690	3/29/2019	MALLINCKRODT ARD IP LIMITED
REPOSITORY CORTICOTROPIN INJECTION ENHANCED REMYELINATION AFTER CUPRIZONE-INDUCED DEMYELINATION	62/852097	5/23/2019	MALLINCKRODT ARD IP LIMITED
STUDY TO ASSESS THE EFFICACY AND SAFETY OF REPOSITORY CORTICOTROPIN INJECTION IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS DESPITE MODERATE-DOSE	62/857677	6/5/2019	MALLINCKRODT ARD IP LIMITED

CORTICOSTEROID USE			
PREDICTIVE DIAGNOSIS OF INFANTILE SPASMS	62/873080	7/11/2019	MALLINCKRODT ARD IP LIMITED
PREDICTIVE DIAGNOSIS OF INFANTILE SPASMS	62/873084	7/11/2019	MALLINCKRODT ARD IP LIMITED
REPOSITORY CORTICOTROPIN INJECTION (RCI) INDUCES A T CELL CYTOKINE PROFILE LEADING TO AN INCREASE IN REGULATORY T CELLS	62/794369	1/18/2019	MALLINCKRODT ARD IP LIMITED
REPOSITORY CORTICOTROPIN INJECTION ENHANCED REMYELINATION AFTER CUPRIZONE-INDUCED DEMYELINATION	62/789016	1/7/2019	MALLINCKRODT ARD IP LIMITED
GAS DELIVERY SYSTEM	62/823297	3/25/2019	MALLINCKRODT HOSPITAL PRODUCTS IP LIMITED
Device and Methods for Moni- toring Oxygenation During Treatment with Delivery of Ni- tric Oxide	16/365263	3/26/2019	MALLINCKRODT HOSPITAL PRODUCTS IP LIMITED
Methods of Administering In- haled Nitric Oxide Gas	16/378361	4/8/2019	MALLINCKRODT HOSPITAL PRODUCTS IP LIMITED
Method of Treating Patients With Hepatorenal Syndrome Type 1	16/411944	5/14/2019	MALLINCKRODT HOSPITAL PRODUCTS IP LIMITED

METHODS TO INCREASE FUNCTIONAL CAPACITY AND QUALITY OF LIFE IN BRONCHIECTASIS PATIENTS WITH NONTUBERCULOUS MYCOBACTERIA	62/849064	5/16/2019	MALLINCKRODT HOSPITAL PRODUCTS IP LIMITED
Systems and Methods for Manufacturing and Safety of an NO ₂ -to-NO Reactor Cartridge Used to Deliver NO for Inhalation Therapy to a Patient	16/502828	7/3/2019	MALLINCKRODT HOSPITAL PRODUCTS IP LIMITED
THERAPEUTIC GAS DELIVERY DEVICE WITH PULSED AND CONTINUOUS FLOW CONTROL	16/504881	7/8/2019	MALLINCKRODT HOSPITAL PRODUCTS IP LIMITED
METHODS FOR TREATING HYPERBILIRUBINEMIA WITH STANNSOPORFIN	16/505295	7/8/2019	MALLINCKRODT HOSPITAL PRODUCTS IP LIMITED
CENTRIFUGE SYSTEM AND METHOD FOR COMPONENT TRACKING	16/537103	8/9/2019	MALLINCKRODT HOSPITAL PRODUCTS IP LIMITED
Apparatus and Method for Monitoring Nitric Oxide Delivery	16/537955	8/12/2019	MALLINCKRODT HOSPITAL PRODUCTS IP LIMITED
COMPENSATING FOR DISRUPTIONS IN BREATHING GAS FLOW MEASUREMENT	16/598786	10/10/2019	MALLINCKRODT HOSPITAL PRODUCTS IP LIMITED
APPARATUS AND METHOD FOR HUMIDITY CONDITIONING SAMPLE GAS OF A PATIENT BREATHING CIRCUIT AFFILIATED WITH A VENTILATOR AND/OR NITRIC OXIDE DELIVERY SYSTEM	16/665353	10/28/2019	MALLINCKRODT HOSPITAL PRODUCTS IP LIMITED
TERLIPRESSIN TREATMENT IN PATIENTS WITH LOW MEAN ARTERIAL PRESSURE	62/928152	10/30/2019	MALLINCKRODT HOSPITAL PRODUCTS IP LIMITED

Method of Treating Patients With Hepatorenal Syndrome Type 1	16/669151	10/30/2019	MALLINCKRODT HOSPITAL PRODUCTS IP LIMITED
Clinical Decision Support System and Methods	16/677435	11/7/2019	MALLINCKRODT HOSPITAL PRODUCTS IP LIMITED
A SELF-CONTAINED GAS SENSOR MODULE FOR USE WITH A THERAPEUTIC GAS DELIVERY SYSTEM	62/774687	12/3/2018	MALLINCKRODT HOSPITAL PRODUCTS IP LIMITED
NO2 to NO Reactor Cartridge with Improved Cartridge Structure and/or that May Be Used with Constant and/or Variable Flow Ventilators	14/750429	6/25/2015	MALLINCKRODT HOSPITAL PRODUCTS IP LIMITED
METHODS FOR TREATING HYPERBILIRUBINEMIA WITH STANNSOPORFIN AND PHOTOTHERAPY	16/300362	11/9/2018	MALLINCKRODT HOSPITAL PRODUCTS IP LIMITED
POWDER FORMULATION COMPRISING THROMBIN AND FIBRINOGEN	16/408678	5/10/2019	MALLINCKRODT PHARMA IP TRADING D.A.C.
TREATMENT OF PORTAL HYPERTENSION AND RESTORATION OF LIVER FUNCTION USING L-ORNITHINE PHENYLACETATE	15/817847	11/20/2017	Ocera Therapeutics, Inc.
TREATMENT AND PREVENTION OF NEURONAL CELL LOSS USING LORNITHINE IN COMBINATION WITH AT LEAST ONE OF PHENYLACETATE AND PHENYLBUTYRATE	15/751442	2/8/2018	Ocera Therapeutics, Inc.
METHODS OF ASSESSING HEPATIC ENCEPHALOPATHY (HEST)	62/845569	5/9/2019	OCERA THERAPEUTICS, INC.
DOSAGES OF L-ORNITHINE PHENYLACETATE FOR TREATING HYPERAMMONEMIA	62/916159	10/16/2019	OCERA THERAPEUTICS, INC.

PROCESSES OF MAKING L-ORNITHINE PHENYLACETATE	16/611193	11/5/2019	OCERA THERAPEUTICS, INC.
METHYLPHENIDATE HCL TABLET FORMULATIONS PROVIDING ZERO-ORDER DRUG RELEASE	16/529323	8/1/2019	SPECGX LLC
TR PAN COATER APPARATUS AND METHOD	16/549151	8/23/2019	SPECGX LLC
TAMPER-RESISTANT IMMEDIATE RELEASE CAPSULE DOSAGE FORM CONTAINING ORGANIC ACID	16/574699	9/18/2019	SPECGX LLC
COMPOSITIONS AND METHODS FOR PREPARING TAMPER RESISTANT PLATFORMS FOR EXTENDED SOLID DOSAGE FORMS	16/600874	10/14/2019	SPECGX LLC
TISSUE CONTAINER SYSTEMS	16/481405	7/26/2019	STRATATECH CORPORATION
METHODS FOR TREATING ACUTE WOUNDS AND IMPROVING OUTCOMES IN SUBJECTS LESS THAN 18 YEARS OF AGE OR GREATER THAN 65 YEARS OF AGE	62/907308	9/27/2019	STRATATECH CORPORATION
METHODS FOR TREATING ACUTE WOUNDS AND IMPROVING OUTCOMES	62/910887	10/4/2019	STRATATECH CORPORATION
HUMAN SKIN SUBSTITUTES EXPRESSING IL-12	16/150048	10/2/2018	STRATATECH CORPORATION
Hydroxypropyl beta-cyclodextrin compositions and methods	16/372899	4/2/2019	VTESSE INC.
HYDROXYPROPYL BETA-CYCLODEXTRIN COMPOSITIONS AND METHODS	16/430664	6/4/2019	VTESSE INC.