

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4296435

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the ERRONEOUS LISTING OF PATENT NUMBER 6803456 previously recorded on Reel 040187 Frame 0714. Assignor(s) hereby confirms the FIRST LIEN SECURITY INTEREST FROM VERTELLUS HOLDINGS LLC TO WILMINGTON TRUST, NATIONAL ASSOCIATION, AS COLLATERAL AGENT.
SEQUENCE:	1

CONVEYING PARTY DATA

Name	Execution Date
VERTELLUS HOLDINGS LLC	10/31/2016

RECEIVING PARTY DATA

Name:	WILMINGTON TRUST, NATIONAL ASSOCIATION, AS COLLATERAL AGENT
Street Address:	50 SOUTH SIXTH STREET
Internal Address:	SUITE 1290
City:	MINNEAPOLIS
State/Country:	MINNESOTA
Postal Code:	55402

PROPERTY NUMBERS Total: 28

Property Type	Number
Patent Number:	5756750
Patent Number:	6118003
Patent Number:	5932736
Patent Number:	6046336
Patent Number:	6051714
Patent Number:	6365738
Patent Number:	6184384
Patent Number:	6218543
Patent Number:	6258955
Patent Number:	6403825
Patent Number:	6369230
Patent Number:	6391995
Patent Number:	6603010
Patent Number:	6596872
Patent Number:	6958400

PATENT

Property Type	Number
Patent Number:	7795169
Patent Number:	7687513
Patent Number:	7151181
Patent Number:	8980956
Patent Number:	9006305
Patent Number:	8980972
Patent Number:	9353262
Patent Number:	9284402
Patent Number:	9193683
Application Number:	14412555
Application Number:	14776293
Application Number:	15114304
Application Number:	62173283

CORRESPONDENCE DATA

Fax Number: (202)835-7586

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: 2028357500

Email: dcip@milbank.com

Correspondent Name: JAVIER J. RAMOS

Address Line 1: 1850 K STREET, NW, SUITE 1100

Address Line 2: MILBANK, TWEED, HADLEY & MCCLOY, LLP

Address Line 4: WASHINGTON, D.C. 20006

ATTORNEY DOCKET NUMBER:	42835.00000
NAME OF SUBMITTER:	JAVIER J. RAMOS
SIGNATURE:	/Javier J. Ramos/
DATE SIGNED:	02/28/2017

Total Attachments: 13

- source=Vertellus - First Lien Patent Security Agreement#page1.tif
- source=Vertellus - First Lien Patent Security Agreement#page2.tif
- source=Vertellus - First Lien Patent Security Agreement#page3.tif
- source=Vertellus - First Lien Patent Security Agreement#page4.tif
- source=Vertellus - First Lien Patent Security Agreement#page5.tif
- source=Vertellus - First Lien Patent Security Agreement#page6.tif
- source=Vertellus - First Lien Patent Security Agreement#page7.tif
- source=Vertellus - First Lien Patent Security Agreement#page8.tif
- source=Vertellus - First Lien Patent Security Agreement#page9.tif
- source=Vertellus - First Lien Patent Security Agreement#page10.tif
- source=Vertellus - First Lien Patent Security Agreement#page11.tif
- source=Vertellus - First Lien Patent Security Agreement#page12.tif

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT4123043

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST
SEQUENCE:	1

CONVEYING PARTY DATA

Name	Execution Date
VERTELLUS HOLDINGS LLC	10/31/2016

RECEIVING PARTY DATA

Name:	WILMINGTON TRUST, NATIONAL ASSOCIATION, AS COLLATERAL AGENT
Street Address:	50 SOUTH SIXTH STREET
Internal Address:	SUITE 1290
City:	MINNEAPOLIS
State/Country:	MINNESOTA
Postal Code:	55402

PROPERTY NUMBERS Total: 29

Property Type	Number
Patent Number:	7795169
Patent Number:	7151181
Patent Number:	6403825
Patent Number:	6803456
Patent Number:	9353262
Patent Number:	7687513
Patent Number:	9284402
Patent Number:	9193683
Patent Number:	8980956
Patent Number:	9006305
Patent Number:	8980972
Application Number:	14412555
Application Number:	15114304
Application Number:	62173283
Patent Number:	5756750
Patent Number:	6118003
Patent Number:	6051714
Patent Number:	5932736

PATENT

Property Type	Number
Patent Number:	6365738
Patent Number:	6603010
Patent Number:	6369230
Patent Number:	6046336
Patent Number:	6958400
Patent Number:	6258955
Patent Number:	6218543
Patent Number:	6184384
Patent Number:	6391995
Patent Number:	6596872
Application Number:	14776293

CORRESPONDENCE DATA

Fax Number: (202)835-7586

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: 2028357500

Email: dcip@milbank.com

Correspondent Name: JAVIER J. RAMOS

Address Line 1: 1850 K ST. NW, SUITE 1100

Address Line 2: MILBANK, TWEED, HADLEY & MCCLOY LLP

Address Line 4: WASHINGTON, D.C. 20006

ATTORNEY DOCKET NUMBER: 42835.00000

NAME OF SUBMITTER: JAVIER J. RAMOS

SIGNATURE: /Javier J. Ramos/

DATE SIGNED: ~~11/01/2016~~ 2/28/2017

Total Attachments: 6

source=Vertellus - First Lien Patent Security Agreement#page1.tif

source=Vertellus - First Lien Patent Security Agreement#page2.tif

source=Vertellus - First Lien Patent Security Agreement#page3.tif

source=Vertellus - First Lien Patent Security Agreement#page4.tif

source=Vertellus - First Lien Patent Security Agreement#page5.tif

source=Vertellus - First Lien Patent Security Agreement#page6.tif

**AMENDED AND RESTATED
PATENT SECURITY AGREEMENT**

THIS AMENDED AND RESTATED PATENT SECURITY AGREEMENT (this “**Amended and Restated Patent Security Agreement**”), dated as of February 28, 2017, is made by and between Vertellus Holdings LLC, a Delaware limited liability company (the “**Grantor**”), and Wilmington Trust, National Association, as collateral agent (in such capacity, together with its successors and permitted assigns in such capacity, the “**Collateral Agent**”) for the Secured Parties.

WITNESSETH:

WHEREAS, pursuant to the Amended and Restated Credit Agreement dated October 31, 2016 (as the same may be amended, restated, supplemented or otherwise modified from time to time, the “**Credit Agreement**”) among the Borrower, each subsidiary guarantor party thereto (the “**Subsidiary Guarantors**”), Wilmington Trust, National Association, as Administrative Agent and Collateral Agent, and the lenders party thereto (the “**Lenders**”), the Lenders have agreed to make certain financial accommodations for the Borrower, and each Subsidiary Guarantor provided a guarantee of the obligations of the Borrower under the Credit Agreement upon the terms and subject to the conditions set forth therein;

WHEREAS, the Grantor is party to a Security Agreement dated October 31, 2016 in favor of the Collateral Agent, as amended by the First Amendment to Security Agreement dated February 28, 2017 (as the same may be amended, restated, supplemented or otherwise modified from time to time, the “**Security Agreement**”), pursuant to which the Grantor executed and delivered the Patent Security Agreement dated October 31, 2016 in favor of the Collateral Agent (the “**Original Agreement**”);

WHEREAS, Grantor has brought to the Lenders’ attention that U.S. Patent No. 6803456 previously listed on Schedule 1 of the Original Agreement (the “**Patent**”) is not property of the Grantor and was inadvertently included on Schedule 1 of the Original Agreement;

WHEREAS, the Grantor owns the patents listed on Schedule 1 hereto (the “**Patents**”), which Patents are pending or registered with the United States Patent and Trademark Office (the “**USPTO**”), and Schedule 1 hereto omits the Patent; and

WHEREAS, the parties wish to amend and restate the Original Agreement, in its entirety by entering into this Amended and Restated Patent Security Agreement.

NOW, THEREFORE, in consideration of the premises and the mutual agreement set forth in the Security Agreement and this Amended and Restated Patent Security Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Grantor hereby agrees with the Collateral Agent as follows:

A. **Defined Terms.** Capitalized terms used herein without definition are used as defined in the Security Agreement or Credit Agreement, as applicable.

B. **Grant of Security Interest in Patent Collateral.** The Grantor, as collateral security for the prompt and complete payment and performance when due (whether at stated maturity, by acceleration or otherwise) of the Secured Obligations of the Grantor, hereby mortgages, pledges and hypothecates to the Collateral Agent for the benefit of the Secured Parties, and grants to the Collateral Agent for the benefit of the Secured Parties a Lien on and security interest in, all of its right, title and interest in, to and under the following Collateral of the Grantor (the “**Patent Collateral**”):

- (1) all of its Patents and all IP Licenses included in the Collateral, including, without limitation, those referred to on Schedule 1 hereto;
- (2) all reissues, reexaminations, continuations, continuations-in-part, divisionals, renewals and extensions of the foregoing; and
- (3) all income, royalties, proceeds and Liabilities at any time due or payable or asserted under and with respect to any of the foregoing, including, without limitation, all rights to sue and recover at law or in equity for any past, present and future infringement, misappropriation, dilution, violation, unfair competition regarding or other impairment thereof.

C. **Security Agreement.** The security interest granted pursuant to this Amended and Restated Patent Security Agreement is granted in conjunction with the security interest granted to the Collateral Agent pursuant to the Security Agreement and the Grantor hereby acknowledges and agrees that the rights and remedies of the Collateral Agent with respect to the security interest in the Patent Collateral made and granted hereby are more fully set forth in the Security Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein.

D. **Grantor Remains Liable.** The Grantor hereby agrees that, anything herein to the contrary notwithstanding, the Grantor shall assume full and complete responsibility for the prosecution, defense, enforcement or any other necessary or desirable actions in connection with its Patents and IP Licenses subject to a security interest hereunder.

E. **Counterparts.** This Amended and Restated Patent Security Agreement may be executed in any number of counterparts and by different parties in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement. Signature pages may be detached from multiple separate counterparts and attached to a single counterpart. Delivery of an executed signature page of this Amended and Restated Patent Security Agreement by facsimile transmission or by electronic transmission shall be as effective as delivery of a manually executed counterpart hereof.

F. **Governing Law.** This Amended and Restated Patent Security Agreement and the rights and obligations of the parties hereto shall be governed by, and construed and interpreted in accordance with, the law of the State of New York.

G. **Intercreditor Agreements.** Notwithstanding anything herein to the contrary, the security interests granted to the Collateral Agent pursuant to this Amended and Restated Patent Security Agreement and the exercise of any right or remedy by the Collateral Agent hereunder,

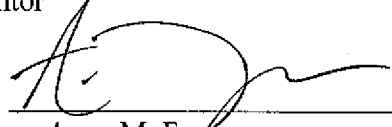
are subject to the provisions of the Intercreditor Agreements. In the event of any conflict between the terms of any Intercreditor Agreement and the terms of this Amended and Restated Patent Security Agreement, the terms of such Intercreditor Agreement shall govern and control.

H. **Recordation**. The parties authorize the directors of the USPTO to record this Amended and Restated Patent Security Agreement.

[SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, the undersigned have caused this Amended and Restated Patent Security Agreement to be duly executed as of the date first set forth above.

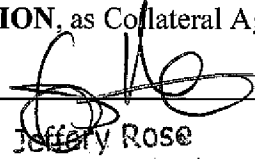
VERTELLUS HOLDINGS LLC, as
Grantor

By: 
Name: Anne M. Frye
Title: Vice President and General Counsel

[Signature Page to Amended and Restated Patent Security Agreement]

ACKNOWLEDGED AND AGREED as of
the date first above written:

**WILMINGTON TRUST, NATIONAL
ASSOCIATION**, as Collateral Agent

By: _____
Name: 
Title: Jeffrey Rose
Vice President

[Signature Page to Amended and Restated Patent Security Agreement]

**PATENT
REEL: 041836 FRAME: 0994**

**SCHEDULE 1
TO
AMENDED AND RESTATED
PATENT SECURITY AGREEMENT**

Patent Registrations

UNITED STATES PATENTS:

Owner	Title	Filed	Application #	Patent #
Vertellus Holdings LLC	VPO CATALYST AND PROCESS FOR PREPARING THE SAME	2/2/2006	10/566868	7795169
Vertellus Holdings LLC	IMPROVED PROCESS FOR THE PREPARATION OF 3,5-DIETHYL-1,2-DIHYDRO-1-PHENYL-2-PROPYLPYRIDINE	2/10/2006	11/351783	7151181
Vertellus Holdings LLC	PROCESSES FOR PREPARING CITRATE ESTERS	11/30/1999	09/437334	6403825
Vertellus Holdings LLC	COMPOSITIONS, METHODS AND ARTICLES PRODUCED BY COMPOUNDING POLYAMIDES WITH OLEFIN-MALEIC ANHYDRIDE POLYMERS	2/18/2013	13/817510	9353262
Vertellus Holdings LLC	AMINOPYRIDINIUM IONIC LIQUIDS	10/21/2005	11/254782	7687513
Vertellus Holdings LLC	HIGH MOLECULAR WEIGHT CASTOR OIL-BASED POLYOLS AND USES THEREOF	7/26/2013	13/982079	9284402
Vertellus Holdings LLC	PROCESS FOR PREPARING DIHALOPYRIDINES	12/1/2014	14/404819	9193683
Vertellus Holdings LLC	METHODS FOR PRODUCING BIOCOMPATIBLE MATERIALS	8/31/2012	13/601067	8980956
Vertellus Holdings LLC	BIOCOMPATIBLE MATERIAL	8/31/2012	13/601123	9006305
Vertellus Holdings LLC	POLYMERISABLE MATERIAL	8/31/2012	13/601211	8980972
Vertellus Holdings LLC	OLEFIN-MALEIC ANHYDRIDE COPOLYMER COMPOSITIONS AND USES THEREOF	1/2/2015	14/412555	
Vertellus Holdings LLC	PROCESS FOR MAKING 2-CHLORO-5-METHYLPYRIDINE	7/26/2016	15/114304	
Vertellus Holdings LLC	IMPACT-MODIFIED POLYAMIDE COMPOSITIONS	9/14/2015	14/776293	
Vertellus Holdings LLC	PROCESS FOR MAKING 4,4'-DIHALODIPHENYL SULFONES	6/9/2015	62/173283	
Vertellus Holdings LLC	CONTINUOUS PROCESS FOR THE HYDROLYSIS OF CYANOPYRIDINES UNDER	2/7/1997	08/798313	5756750

Owner	Title	Filed	Application #	Patent #
	SUBSTANTIALLY ADIABATIC CONDITIONS			
Vertellus Holdings LLC	PROCESSES FOR PRODUCING 3-CYANOPYRIDINE FROM 2-METHYL-1,5-PENTANEDIAMINE	1/29/1998	09/015831	6118003
Vertellus Holdings LLC	PROCESSES FOR DECHLORINATING PYRIDINES	3/12/1999	09/267004	6051714
Vertellus Holdings LLC	PREPARATION OF HETEROCYCLES USING 1,3-DIHALOPROPENES	4/7/1998	09/056681	5932736
Vertellus Holdings LLC	PREPARATION OF HETEROCYCLES USING 1,3-DIHALOPROPENES	6/29/1999	09/342294	6365738
Vertellus Holdings LLC	SUPERNUCLEOPHILIC 4-SUBSTITUTED-PYRIDINE CATALYSTS, AND PROCESSES USEFUL FOR PREPARING SAME	11/6/2001	09/993046	6603010
Vertellus Holdings LLC	SUPERNUCLEOPHILIC 4-SUBSTITUTED-PYRIDINE CATALYSTS, AND PROCESSES USEFUL FOR PREPARING SAME	4/13/2000	09/463902	6369230
Vertellus Holdings LLC	SUPERNUCLEOPHILIC 4-SUBSTITUTED-PYRIDINE CATALYSTS, AND PROCESSES USEFUL FOR PREPARING SAME	7/31/1998	09/127542	6046336
Vertellus Holdings LLC	SUPERNUCLEOPHILIC 4-SUBSTITUTED-PYRIDINE CATALYSTS, AND PROCESSES USEFUL FOR PREPARING SAME	4/29/2003	10/425504	6958400
Vertellus Holdings LLC	PROCESSES FOR PREPARING 2-PIPERIDINEETHANOL COMPOUNDS	8/27/1999	09/385670	6258955
Vertellus Holdings LLC	PROCESSES FOR PRODUCING HIGHLY PURE NICOTINAMIDE	7/21/1999	09/358201	6218543
Vertellus Holdings LLC	DECHLORINATION OF PYRIDINES IN ACIDIC, ZINC-CONTAINING MEDIUMS	7/15/1999	09/354279	6184384
Vertellus Holdings LLC	POLYMER COMPOSITIONS USEFUL AS DYE COMPLEXING AGENTS, AND PROCESSES FOR PREPARING SAME	2/9/2001	09/781095	6391995
Vertellus Holdings LLC	PROCESS FOR PREPARING ALKENYL-SUBSTITUTED HETEROCYCLES	10/22/2001	10/040,726	6596872