

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT2950293

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	PATENT SECURITY AGREEMENT (SECOND LIEN)	
CONVEYING PARTY DATA		
	Name	Execution Date
	INO THERAPEUTICS LLC	02/12/2014
RECEIVING PARTY DATA		
Name:	CREDIT SUISSE AG, CAYMAN ISLANDS BRANCH, AS ADMINISTRATIVE AGENT	
Street Address:	ELEVEN MADISON AVENUE	
City:	NEW YORK	
State/Country:	NEW YORK	
Postal Code:	10010	
PROPERTY NUMBERS Total: 1		
	Property Type	Number
	Patent Number:	7114510
CORRESPONDENCE DATA		
Fax Number:	(714)755-8290	
<i>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.</i>		
Email:	IPDOCKET@LW.COM, KRISTIN.AZCONA@LW.COM	
Correspondent Name:	LATHAM & WATKINS LLP	
Address Line 1:	650 TOWN CENTER DRIVE, 20TH FLOOR	
Address Line 4:	COSTA MESA, CALIFORNIA 92626	
ATTORNEY DOCKET NUMBER:	030786-0601	
NAME OF SUBMITTER:	KRISTIN J AZCONA	
SIGNATURE:	/KJA/	
DATE SIGNED:	07/23/2014	
Total Attachments: 12		
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PATENT SECURITY AGREEMENT

This **PATENT SECURITY AGREEMENT**, dated as of February 12, 2014 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, this "**Agreement**"), is made by the entities identified as grantors on the signature pages hereto (collectively, the "**Grantors**") in favor of Credit Suisse AG, Cayman Islands Branch, as Administrative Agent for the Secured Parties (in such capacity and together with its successors and permitted assigns in such capacity, the "**Administrative Agent**").

WHEREAS, the Grantors are party to a Second Lien Security Agreement, dated as of February 12, 2014 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the "**Security Agreement**"), between each of the Grantors and the other grantors party thereto and the Administrative Agent, pursuant to which the Grantors granted a security interest to the Administrative Agent in the Patent Collateral (as defined below) and are required to execute and deliver this Agreement.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Grantors hereby agree with the Administrative Agent as follows:

SECTION. 1. DEFINED TERMS

Unless otherwise defined herein, terms defined in the Security Agreement and used herein have the meaning given to them in the Security Agreement.

SECTION 2. GRANT OF SECURITY INTEREST

As collateral security for the payment in full when due (whether at the stated maturity, by acceleration or otherwise) and performance of the Secured Obligations, each Grantor hereby pledges to the Administrative Agent, its successors and permitted assigns, for the benefit of the Secured Parties, and hereby grants to the Administrative Agent, its successors and permitted assigns, for the benefit of the Secured Parties, a security interest in, all right, title or interest in or to any and all of the following assets and properties (other than Excluded Assets) now owned or at any time hereafter owned or acquired by such Grantor or in which such Grantor now has or at any time hereafter owned or acquired by such Grantor or in which such Grantor now has or at any time in the future may own or acquire any right, title, or interest (collectively, the "**Patent Collateral**"):

- (i) (a) all letters patent of the United States in or to which any Grantor now or hereafter owns or acquires any right, title or interest, all registrations and recordings thereof, and all applications for letters patent of the United States, including registrations, recordings and pending applications in the USPTO including any of the foregoing listed in Schedule A; and (b) all reissues, continuations, divisions, continuations-in-part, renewals, improvements or extensions thereof, and the inventions disclosed or claimed therein, including the right to make, use and/or sell the inventions disclosed or claimed therein, including any of the foregoing listed in Schedule A;

(ii) any written agreement, now or hereafter in effect, granting to any third party any right to make, use or sell any invention on which a Patent, now or hereafter owned by any Grantor or that any Grantor otherwise has the right to license, is in existence, or granting to any Grantor any right to make, use or sell any invention on which a Patent, now or hereafter owned by any third party, is in existence, and all rights of any Grantor under any such agreement; and

(iii) to the extent not otherwise included, all additions, improvements, Proceeds, products, accessions, rents, profits, renewals, extensions, rights to sue or otherwise recover for infringements or other violations thereof of any and all of the foregoing and all Supporting Obligations, collateral security and guarantees given by any Person with respect to any of the foregoing throughout the world.

SECTION 3. SECURITY AGREEMENT

The security interest granted pursuant to this Agreement is granted in conjunction with the security interest granted to the Administrative Agent for the Secured Parties pursuant to the Security Agreement, and the Grantors hereby acknowledge and affirm that the rights and remedies of the Administrative 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. In the event that any provision of this Agreement is deemed to conflict with the Security Agreement, the provisions of the Security Agreement shall control.

SECTION 4. GOVERNING LAW

THIS AGREEMENT AND ANY CLAIM OR CONTROVERSY RELATING TO THE SUBJECT MATTER HEREOF, WHETHER SOUNDING IN CONTRACT LAW, TORT LAW OR OTHERWISE, SHALL BE GOVERNED BY, AND SHALL BE CONSTRUED AND ENFORCED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK.

SECTION 5. COUNTERPARTS

This Agreement may be executed in one or more counterparts and by different parties hereto in separate counterparts, each of which when so executed and delivered shall be deemed an original, but all such counterparts together shall constitute but one and the same instrument.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, each Grantor has caused this Agreement to be executed and delivered by its duly authorized officer as of the date first set forth above.

IKARIA, INC.

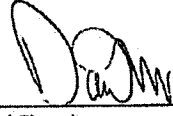
By: 

Name: Daniel Tasse

Title: President


[Signature Page to Second Lien Patent Security Agreement]

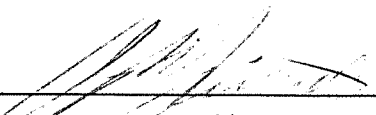
INO THERAPEUTICS LLC

By: 
Name: Daniel Tassé
Title: President

[Signature Page to Second Lien Patent Security Agreement]

CREDIT SUISSE AG, CAYMAN ISLANDS
BRANCH, as Administrative Agent

By: 
Name: MIKHAIL FAYBUSOVICH
Title: AUTHORIZED SIGNATORY

By: 
Name: Tyler R. Smith
Title: Authorized Signatory

[Signature Page to Second Lien Patent Security Agreement]

PATENT
REEL: 033383 FRAME: 0052

SCHEDULE A
to
PATENT SECURITY AGREEMENT

PATENTS AND PATENT APPLICATIONS

TITLE	STATUS	FILING DATE	APPLICATION NUMBER	ISSUE DATE	PATENT NUMBER	REGISTERED OWNER
Method and Apparatus for the Administration of CO	Issued	Aug 5, 2005	10/520,270	Aug 11, 2009	7,574,246	INO Therapeutics GmbH ¹
Method and Apparatus for the Administration of CO	Issued	Jul 14, 2009	12/502,991	May 17, 2011	7,945,301	INO Therapeutics GmbH. ²
Method and Apparatus for the Manufacture of High Purity Carbon Monoxide	Issued	Mar 2, 2011	13/038,539			INO Therapeutics LLC
Dosing Regimens and Methods of Treatment Using Carbon Monoxide	Pending	May 12, 2011	13/106,437			INO Therapeutics LLC
Method and Apparatus for the Production of Nitric Oxide Gas Mixture	Issued	Apr 2, 1996	08/626,413	Dec 2, 1997	5,692,495	INO Therapeutics LLC
Process for the Manufacture of Nitric Oxide	Issued	Sep 26, 1995	08/533,821	Sep 23, 1997	5,670,127	INO Therapeutics LLC
Process for the Purification of Nitric Oxide	Issued	Sep 25, 1995	08/533,121	Sep 23, 1997	5,670,125	INO Therapeutics LLC
Methods of Reducing the Risk of Occurrence of Pulmonary Edema in Children in Need of Treatment with Inhaled Nitric Oxide	Issued	Jun 22, 2010	12/821,020	Oct 9, 2012	8,282,966	INO Therapeutics LLC
Methods of Treating Term and Near-Term Neonates Having Hypoxic Respiratory Failure Associated with Clinical or	Issued	Jun 22, 2010	12/821,041	Oct 23, 2012	8,293,284	INO Therapeutics LLC

¹ Borrower to use commercially reasonable efforts to file evidence of change of title from INO Therapeutics GmbH to a Grantor within 90 days of the date of this Agreement.

² Borrower to use commercially reasonable efforts to file evidence of change of title from INO Therapeutics GmbH to a Grantor within 90 days of the date of this Agreement.

TITLE	STATUS	FILING DATE	APPLICATION NUMBER	ISSUE DATE	PATENT NUMBER	REGISTERED OWNER
Echocardiographic Evidence of Pulmonary Hypertension						
Methods of Reducing the Risk of Occurrence of Pulmonary Edema Associated with Inhalation of Nitric Oxide Gas	Issued	Oct 15, 2012	13/651,660	Apr 30, 2013	8,431,163	INO Therapeutics LLC
Methods for Treating Patients Who Are Candidates for Inhaled Nitric Oxide Treatment	Pending	Nov 21, 2012	13/683,417			INO Therapeutics LLC
Methods of Distributing a Pharmaceutical Product Comprising Nitric Oxide Gas for Inhalation	Pending	Nov 21, 2012	13/683,236			INO Therapeutics LLC
System for Use in Administering Inhaled Nitric Oxide Gas	Pending	Nov 21, 2012	13/683,444			INO Therapeutics LLC
Process for the Purification of Nitric Oxide	Issued	Jul 7, 1994	08/271,688	May 23, 1995	5,417,950	INO Therapeutics LLC
Method and Apparatus for Generating Nitric Oxide for Medical Use	Pending	Feb 16, 2006	11/355,670			INO Therapeutics LLC
Valve with Smart Handle	Issued	May 15, 2003	10/416,870	Oct 3, 2006	7,114,510	Ventek LLC and INO Therapeutics, Inc. (not LLC) ³
Gas Delivery Device And System	Issued	May 15, 2012	13/509,873	Nov 5, 2013	8,573,209	INO Therapeutics LLC
Nitric Oxide Delivery Device	Issued	Nov 15, 2012	13/677,483	Nov 5, 2013	8,573,210	INO Therapeutics LLC
Gas Delivery Device And System	Issued	Jun 11, 2012	13/493,493	Oct 23, 2012	8,291,904	INO Therapeutics LLC
Gas Delivery Device And System	Pending	Oct 29, 2013	14/065,962			INO Therapeutics LLC
Gas Delivery Device And System	Pending	Oct 29, 2013	14/065,975			INO Therapeutics LLC
Nitric Oxide Delivery Device	Pending	Oct 29, 2013	14/065,951			INO Therapeutics LLC
Therapeutic Gas Control Module	Pending	Nov 5, 2013	29/471,765			INO Therapeutics LLC
Methods of Using Inhaled Nitric Oxide	Pending	Oct 28, 2011	13/283,759			INO Therapeutics LLC

³ Borrower to use commercially reasonable efforts to file evidence of change of title from Ventek LLC and INO Therapeutics, Inc. (not LLC) to a Grantor within 90 days of the date of this Agreement.

TITLE	STATUS	FILING DATE	APPLICATION NUMBER	ISSUE DATE	PATENT NUMBER	REGISTERED OWNER
Gas for Treatment of Acute Respiratory Distress Syndrome						
Apparatus and Method for Monitoring Nitric Oxide Delivery	Pending	Nov 7, 2012	13/671,057			INO Therapeutics LLC
Apparatus and Method for Monitoring Nitric Oxide Delivery	Pending	Mar 13, 2013	13/800,287			INO Therapeutics LLC
System for Predicting NO2 Concentrations	Issued	Mar 21, 1996	08/620,063	Dec 23, 1997	5,699,790	INO Therapeutics LLC
Pause Control for Nitric Oxide Therapy	Issued	Dec 13, 1996	08/766,833	Mar 31, 1998	5,732,693	INO Therapeutics LLC
System for Correcting NO2 Monitor	Issued	Dec 13, 1996	08/766,834	Mar 31, 1998	5,732,694	INO Therapeutics LLC
System for Monitoring Therapy During Calibration	Issued	Dec 13, 1996	08/764,569	May 19, 1998	5,752,504	INO Therapeutics LLC
Methods of Administering Nitric Oxide to Arterial or Arterialized Blood	Pending	Mar 15, 2013	61/787,865			Provisional application INO Therapeutics LLC
Process for the Purification of Nitric Oxide	Issued	Jul 7, 1994	08/271,592	May 7, 1996	5,514,204	INO Therapeutics LLC
Special Gas Dose Delivery Apparatus for Respiration Equipment	Issued	Apr 22, 1997	08/841,466	Jul 6, 1999	5,918,596	Instrumentarium Corp. ⁴
Gas Delivery Device and System for Use in Magnetic Resonance Imaging	Pending	Mar 13, 2013	61/779,375			Provisional application INO Therapeutics LLC
Device and Methods for Monitoring Oxygenation During Treatment with Delivery Nitric Oxide	Pending	Mar 13, 2013	61/779,301			Provisional application INO Therapeutics LLC
Therapeutic Gas Delivery Device with Pulsed and Continuous Flow Control	Pending	Mar 15, 2013	61/791,775			Provisional application INO Therapeutics LLC
Therapeutic Gas Delivery Device with Pulsed and Continuous Flow	Pending	Mar 18, 2013	61/802,798			Provisional application INO Therapeutics LLC

⁴ Borrower to use commercially reasonable efforts to file evidence of change of title from Instrumentarium Corp. to a Grantor within 90 days of the date of this Agreement.

TITLE	STATUS	FILING DATE	APPLICATION NUMBER	ISSUE DATE	PATENT NUMBER	REGISTERED OWNER
Control						
Automated Pre-Use Checkout Port for iNO Delivery System	Pending	May 6, 2013	61/819,815			Provisional application INO Therapeutics LLC
Nitric Oxide Delivery System O2, O2/Air Blender Module	Pending	May 6, 2013	61/819,827			Provisional application INO Therapeutics LLC
Intelligent Gas Source Management	Pending	May 6, 2013	61/819,842			Provisional application INO Therapeutics LLC
Method of Identifying and Treating Premature Infants at Risk for BPD	Pending	Jun 25, 2013	61/838,931			Provisional application INO Therapeutics LLC
Method of Identifying and Treating Premature Infants at Risk for BPD	Pending	Jun 26, 2013	61/839,574			Provisional application INO Therapeutics LLC
Methods of Reducing the Risk of Mortality Associated with a Medical Treatment	Pending	Jun 25, 2013	61/839,352			Provisional application INO Therapeutics LLC
Therapeutic Gas Delivery Device	Pending	Sep 13, 2013	29/467,025			Design patent application INO Therapeutics LLC
Therapeutic Gas Delivery Device	Pending	Sep 13, 2013	29/467,028			Design patent application INO Therapeutics LLC
Clinical Decision Support System and Methods	Pending	Sep 13, 2013	14/026,807			INO Therapeutics LLC
Administration and Monitoring of Nitric Oxide in Ex Vivo Fluids	Pending	Dec 3, 2013	14/095,621			INO Therapeutics LLC
Devices and Methods for Engaging Indexed Valve and Pressure Canister Assembly with Collar and for Linear Actuation by Plunger Assembly into Fluid Communication with Device for Regulating Drug Delivery	Pending	Sep 26, 2011	13/260,505			INO Therapeutics LLC
Devices and Methods for Engaging Indexed Valve and Pressure Canister Assembly with Collar and for Linear Actuation by	Pending	Dec 30, 2011	13/341,084			INO Therapeutics LLC

TITLE	STATUS	FILING DATE	APPLICATION NUMBER	ISSUE DATE	PATENT NUMBER	REGISTERED OWNER
Plunger Assembly into Fluid Communication with Device for Regulating Drug Delivery						
System and Method of Administering a Pharmaceutical Gas to a Patient	Issued	Sep 21, 2005	11/231,554	Apr 28, 2009	7,523,752	INO Therapeutics LLC
System and Method of Administering a Pharmaceutical Gas to a Patient	Pending	Dec 20, 2011	13/331,807			INO Therapeutics LLC
System and Method of Administering a Pharmaceutical Gas to a Patient	Issued	Apr 27, 2009	12/430,220	Jan 10, 2012	8,091,549	INO Therapeutics LLC
System and Method of Administering a Pharmaceutical Gas to a Patient	Issued	Nov 2, 2011	13/287,663	Aug 27, 2013	8,517,015	INO Therapeutics LLC
System and Method of Administering a Pharmaceutical Gas to a Patient	Issued	Oct 28, 2011	13/284,433	Mar 19, 2013	8,397,721	INO Therapeutics LLC
System and Method of Administering a Pharmaceutical Gas to a Patient	Issued	Jun 28, 2012	13/536,272	Apr 2, 2013	8,408,206	INO Therapeutics LLC
System and Method of Administering a Pharmaceutical Gas to a Patient	Pending	Feb 27, 2013	13/778,596			INO Therapeutics LLC
System and Method of Administering a Pharmaceutical Gas to a Patient	Allowed	Jul 15, 2013	13/942,049			INO Therapeutics LLC
System and Method of Administering a Pharmaceutical Gas to a Patient	Issued	Jul 15, 2013	13/942,115	Dec 17, 2013	8,607,792	INO Therapeutics LLC
System and Method of Administering a Pharmaceutical Gas to a Patient	Issued	Jul 15, 2013	13/942,136	Dec 31, 2013	8,616,204	INO Therapeutics LLC
Accurate Dose Nitric Oxide Pulse Delivery Device with Monitoring and Alarms	Issued	May 26, 1998	09/084,710	Dec 26, 2000	6,164,276	INO Therapeutics LLC
Purge System for Nitric Oxide Administration Apparatus	Issued	May 16, 1997	08/857,925	Oct 3, 2000	6,125,846	INO Therapeutics LLC
Purge System for Nitric Oxide	Issued	Jun 21, 2000	09/598,584	Jun 24, 2003	6,581,592	INO Therapeutics LLC

TITLE	STATUS	FILING DATE	APPLICATION NUMBER	ISSUE DATE	PATENT NUMBER	REGISTERED OWNER
Administration Apparatus						
Nitric Oxide Administration Device with Timed Pulse	Issued	Feb 18, 1998	09/025,382	Aug 29, 2000	6109260	INO Therapeutics LLC
High Concentration NO Pulse Delivery Device	Issued	May 26, 1998	09/084,724	Jul 18, 2000	6,089,229	INO Therapeutics LLC
Methods of Administering High Concentrations of Nitric Oxide	Pending	Mar 15, 2012	13/420,852			INO Therapeutics LLC
Methods of Administering High Concentrations of Nitric Oxide	Pending	Mar 14, 2013	13/827,240			INO Therapeutics LLC
Breathing Apparatus Detection and Purging	Pending	Apr 5, 2012	13/440,046			INO Therapeutics LLC
Method and Apparatus to Zero a Patient Trigger Sensor	Pending	Jun 29, 2012	13/537,146			INO Therapeutics LLC
Cannula for Minimizing Dilution of Dosing During Nitric Oxide Delivery	Pending	Dec 4, 2013	14/096,548			INO Therapeutics LLC
Cannula for Minimizing Dilution of Dosing During Nitric Oxide Delivery	Pending	Dec 4, 2013	14/096,629			INO Therapeutics LLC
Cannula for Minimizing Dilution of Dosing During Nitric Oxide Delivery	Pending	Dec 4, 2013	14/096,910			INO Therapeutics LLC
Cannula for Minimizing Dilution of Dosing During Nitric Oxide Delivery	Pending	Mar 14, 2013	61/784,238			Provisional patent INO Therapeutics LLC
Cannula for Minimizing Dilution of Dosing During Nitric Oxide Delivery	Pending	Jul 19, 2013	61/856,367			Provisional patent INO Therapeutics LLC
Therapeutic Gas Delivery Device	Allowed	May 24, 2013	29/455,842			Design patent application INO Therapeutics LLC
Therapeutic Gas Delivery Device	Pending	Aug 16, 2013	29/464,499			Design patent application INO Therapeutics LLC
Systems And Methods For Providing of a	Pending	Oct 17, 2013	61/892,010			Provisional patent application INO Therapeutics LLC

TITLE	STATUS	FILING DATE	APPLICATION NUMBER	ISSUE DATE	PATENT NUMBER	REGISTERED OWNER
Therapeutics Gas With a Desired Flow Profile to Maximize Therapeutic Effectiveness						
Carbon Monoxide Improves Outcomes in Tissue and Organ Transplants and Suppresses Apoptosis	Issued	Jun 21, 2002	10/177,930	Jul 3, 2007	7,238,469	INO Therapeutics LLC (per inventor Dr. Jeanne Gose); Beth Israel Deaconess Medical Center, Inc. (per inventors Fritz H. Bach, Miguel P. Soares, Edda M. Tobiasch); and Yale University (per inventor Leo E. Otterbein)