

## PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT3593463

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
MICHAEL ZEMEL	07/13/2012
E. DOUGLAS GRINDSTAFF II	07/13/2012
ANTJE BRUCKBAUER	07/13/2012
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	NUMETA SCIENCES, INC.
<b>Street Address:</b>	1600 DIVISION ST.
<b>Internal Address:</b>	SUITE 230
<b>City:</b>	NASHVILLE
<b>State/Country:</b>	TENNESSEE
<b>Postal Code:</b>	37203
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	14927255
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(650)493-6811
<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>	
<b>Phone:</b>	650-461-5211
<b>Email:</b>	cricks@wsgr.com
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<b>Address Line 1:</b>	650 PAGE MILL ROAD
<b>Address Line 4:</b>	PALO ALTO, CALIFORNIA 94304-1050
<b>ATTORNEY DOCKET NUMBER:</b>	42736-702.303
<b>NAME OF SUBMITTER:</b>	CHRISTINE RICKS
<b>SIGNATURE:</b>	/Christine Ricks/
<b>DATE SIGNED:</b>	10/29/2015
<b>Total Attachments: 2</b>	
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source=42736_702_303_signed_assignment_from_parent#page2.tif	

## PATENT ASSIGNMENT

Docket Number 42736-702.201

WHEREAS, the undersigned:

1. ZEMEL, Michael  
Heiskell, TN
2. GRINDSTAFF II, E. Douglas  
Nashville, TN
3. BRUCKBAUER, Anje  
Knoxville, TN

(hereinafter "inventor(s)"), have invented certain new and useful improvements in

## COMPOSITIONS AND METHODS FOR MODULATING METABOLIC PATHWAYS

- ☐ for which a United States patent application is executed on even date herewith;  
☒ for which Application No. 13/542,381 was filed on July 13, 2012 in the United States Patent Office;  
☐ for which Application No.      was filed on      in the U.S. Receiving Office of the Patent Cooperation Treaty;  
☐ for which Application No.      was filed on      in the      Patent Office; and/or  
☐ for which an application was filed upon which a United States Patent issued on      as U.S. Patent No.     .

(hereinafter "Application(s)");

WHEREAS, NuMeta Sciences, Inc., a corporation of the State of Delaware, having a place of business at 1600 Division St. Suite 230 Nashville, TN 37203, (hereinafter "Assignee"), is desirous of acquiring the entire right, title and interest in and to said Application(s) and the inventions disclosed therein, and in and to all embodiments of the inventions, heretofore conceived, made or discovered, whether jointly or severally, by said inventor(s) (hereinafter collectively referred to as "Inventions"), and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter "Patent(s)") thereon granted in the United States, foreign countries, or under any international convention, agreement, protocol, or treaty.

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said inventor(s) to have been received in full from said Assignee:

1. Said inventor(s) do hereby sell, assign, transfer and convey unto said Assignee the entire right, title and interest (a) in and to said Inventions and said Applications, including the right to claim priority to said Inventions and said Applications; (b) in and to all rights to all United States and corresponding non-United States patent applications and Patent(s), including those filed under the Paris Convention for the Protection of Industrial Property, The Patent Cooperation Treaty or otherwise; (c) in and to any and all applications filed and any and all Patent(s) granted on said Inventions in the United States, in any foreign country, or under any international convention, agreement, protocol, or treaty, including each and every application filed and any and all Patent(s) granted on any application which is a divisional, substitution, continuation, or continuation-in-part of any of said Application(s); and (d) in and to each and every issuance, reexamination, or extensions of any of said Patent(s).

2. Said inventor(s) hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest herein conveyed in the United States, foreign countries, or under any international convention, agreement, protocol, or treaty. Such cooperation by said inventor(s) shall include prompt production of pertinent facts and documents, giving of testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any applications covering said Inventions; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said Inventions; (d) for filing and prosecuting applications for reissuance of any said Patent(s); (e) for interference or other priority proceedings involving said Inventions; and (f) for legal proceedings involving said Inventions and any applications therefor and any Patent(s) granted thereon, including without limitation reissues and reexaminations, opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said inventor(s) in providing such cooperation shall be paid for by said Assignee.

3. The terms and covenants of this assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said inventor(s), their respective heirs, legal representatives and assigns.

4. Said inventor(s) hereby warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

5. Said inventor(s) hereby request that any Patent(s) issuing in the United States, foreign countries, or under any international convention, agreement, protocol, or treaty, be issued in the name of the Assignee, or its successors and assigns, for the sole use of said Assignee, its successors, legal representatives and assigns.

6. This instrument will be interpreted and construed in accordance with the laws of the State of California, without regard to conflict of law principles. If any provision of this instrument is found to be illegal or unenforceable, the other provisions shall remain effective and enforceable to the greatest extent permitted by law. This instrument may be executed in counterparts, each of which is deemed an original, but all of which together constitute one and the same agreement.

IN WITNESS WHEREOF, said inventor(s) have executed and delivered this instrument to said Assignee as of the dates written below:

Date: 7/13/12  
Michael ZemelDate:             
E. Douglas Grindstaff IIDate: 7-13-12  
Anje BruckbauerDate:

## PATENT ASSIGNMENT

Docket Number 42736-702,201

WHEREAS, the undersigned:

1. ZEMEL, Michael  
Heiskell, TN2. GRINDSTAFF II, E. Douglas  
Nashville, TN3. BRUCKBAUER, Antje  
Knoxville, TN

(hereinafter "Inventor(s).") have invented certain new and useful improvements in

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- ☐ for which a United States patent application is executed on even date herewith;  
☒ for which Application No. 13/549,381 was filed on July 13, 2012 in the United States Patent Office;  
☐ for which Application No. \_\_\_ was filed on \_\_\_ in the U.S. Receiving Office of the Patent Cooperation Treaty;  
☐ for which Application No. \_\_\_ was filed on \_\_\_ in the \_\_\_ Patent Office; and/or  
☐ for which an application was filed upon which a United States Patent issued on \_\_\_, us U.S. Patent No. \_\_\_\_\_

(hereinafter "Application(s)").

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3. The terms and covenants of this assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Inventor(s), their respective heirs, legal representatives and assigns.
4. Said Inventor(s) hereby warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.
5. Said Inventor(s) hereby request that any Patent(s) issuing in the United States, foreign countries, or under any international convention, agreement, protocol, or treaty, be issued in the name of the Assignee, or its successors and assigns, for the sole use of said Assignee, its successors, legal representatives and assigns.
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Date: \_\_\_\_\_  
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Antje Bruckbauer