## 504008344 09/16/2016

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4055001

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
CRAIG W. LINDSLEY	04/11/2016
P. JEFFREY CONN	04/11/2016
MICHAEL R. WOOD	09/16/2016
MICHAEL S. POSLUSNEY	09/15/2016
JAMES C. TARR	09/14/2016
BRUCE J. MELANCON	02/29/2016

## **RECEIVING PARTY DATA**

Name:	VANDERBILT UNIVERSITY
Street Address:	305 KIRKLAND HALL, 2201 WEST END AVENUE
City:	NASHVILLE
State/Country:	TENNESSEE
Postal Code:	37240

### **PROPERTY NUMBERS Total: 1**

Property Type	Number		
Application Number:	14913266		

## **CORRESPONDENCE DATA**

**Fax Number:** (414)277-0656

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:** (414)271-6560

**Email:** dahauser@michaelbest.com

Correspondent Name: MICHAEL BEST & FRIEDRICH LLP

Address Line 1: 100 E WISCONSIN AVENUE

Address Line 2: SUITE 3300

Address Line 4: MILWAUKEE, WISCONSIN 53202

ATTORNEY DOCKET NUMBER:	093386-9088-US01
NAME OF SUBMITTER:	JOSEPH M. PLETCHER
SIGNATURE:	/joseph m. pletcher/
DATE SIGNED:	09/16/2016

PATENT 504008344 REEL: 040059 FRAME: 0363

## **Total Attachments: 6**

source=19662858\_093386-9088-US01\_As\_Filed\_Declaration\_and\_Assignment#page1.tif source=19662858\_093386-9088-US01\_As\_Filed\_Declaration\_and\_Assignment#page2.tif source=19662858\_093386-9088-US01\_As\_Filed\_Declaration\_and\_Assignment#page3.tif source=19662858\_093386-9088-US01\_As\_Filed\_Declaration\_and\_Assignment#page4.tif source=19662858\_093386-9088-US01\_As\_Filed\_Declaration\_and\_Assignment#page5.tif source=19662858\_093386-9088-US01\_As\_Filed\_Declaration\_and\_Assignment#page6.tif

VU Reference No.: VUI4058USI

	COMBINATION AS	isignment-stateme:	A.L.
	ECLARATION (37 CFR 1.63) FC LICATION DATA SHEET (37 C		
Title of Invention:	SUBSTITUTED THIENO(2,3- POSITIVE ALLOSTERIC MO RECEPTOR M4		DXAMIDE ANALOGS AS SCARINIC ACETYLCHOLINE
	DEC	LARATION	
As a below named is	wentor I hereby declare that:		
OTM	ation is directed to; sattached application, or ited States application or PCT intern 16.	ational application number	14/913,266 filed on <u>February 19</u>
<ul> <li>I believe the</li> <li>I hereby act</li> </ul>	identified application was made or a tt I am the original inventor or an or mowledge that any willful false state e or imprisonment of not more than	iginal joint inventor of a cla ement made in this declarati	imed invention in the application.
		IGNMENT	
WHEREAS End Avenue, Nashy	i, <u>Vanderbilt University</u> having an ill <b>e. Tennessec, 37240, USA</b> , is des	office and place of business irous of acquiring the entire	at 305 Kirkland Hall, 2201 West interest in the same;
Literary and Artistic time to time, the suff assign and hereby do interest in and to said which may issue their reexamination, divisi Paris Convention ari including the right to	EREFORE, for good and valuable of Works, published in the 1993-1994 iciency and adequacy and receipt of sell, assign and transfer unto said \(\frac{1}{2}\) invention and application throught con, and any subsequent application onal, continuation-in-part, extension sing from said application, and all or bring suit for damages due to past it and assigns, as fully and entirely as	Vanderbilt Faculty Manual, which are hereby acknowle ANDERBILT UNIVERS of the world, including, with claiming priority to the about or continuation thereof another rights in the INVENTIAL of the more for the same for	as such policy is amended from deed, I, the INVENTOR, agree to ITY the entire right, title and hout limitation, any Letters Patent we-identified application, reissue, I all rights of priority under the ON possessed by the INVENTOR, VANDERBILT UNIVERSITY'S
which may be necess made or intended to I	by bind myself, my heirs, legal repr deration any and all applications, pe ary in order to carry into full force o se made and generally do everything ssigns, to obtain and enforce proper	titions, oaths and assignmen nd effect, the sale, assignme possible to aid VANDERI	its or other papers and instruments int, transfer and conveyance hereby BLT UNIVERSITY, its legal
AND, I here entered into which w	by covenant that no assignment, sal ould conflict with this assignment.	e, agreement or encumbranc	d has been or will be made or
LEGAL NAME OF	INVENTOR		
Inventor: Crai	g W. Lindsley	Date:	4-11-2016
Signature:	<u> </u>		
Witness: Dog	na Johnson	Date:	411116

Attorney Diseket No.: 693386-9688-0501

VU Reference No.: VUI4058US)

	COMBINATION ASSIGNMENT-STATEMENT
USING A?	DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR SINGLE ASSIGNEE
Title of Invent	SUBSTITUTED THIENO[2,3-C]PYRIDAZINE-6-CARBOXAMIDE ANALOGS AS on: POSITIVE ALLOSTERIC MODULATORS OF THE MUSCARINIC ACETYLCHOLINE RECEPTOR M4
	DECLARATION
As a below na	ned inventor I hereby declare that:
- This	eclaration is directed to:
Ĩ	The attached application, or
\$	United States application or PCT international application number 14/913,266 filed on February 19, 2016.
- I beli - I here	pove-identified application was made or authorized to be made by me.  The that I am the original inventor or an original joint inventor of a claimed invention in the application, by acknowledge that any willful false statement made in this declaration is punishable under 18 USC by fine or imprisonment of not more than five (5) years, or both.
	ASSIGNMENT
WHE End Avenue,	REAS. <u>Vanderbilt University</u> having an office and place of business at <u>305 Kirkland Hall, 2201 West</u> <u>Nashville, Tennessee, 37240, USA</u> , is desirous of acquiring the entire interest in the same;
Literary and A time to time, the assign and her interest in and which may issue examination. Paris Conventincluding the r	THEREFORE, for good and valuable consideration, as described in the Policy on Technology and tistic Works, published in the 1993-1994 Vanderbilt Faculty Manual, as such policy is amended from e sufficiency and adequacy and receipt of which are hereby acknowledged, I, the INVENTOR, agree to by do sell, assign and transfer unto said VANDERBILT UNIVERSITY the entire right, title and to said invention and application throughout the world, including, without limitation, any Letters Patent to thereon, and any subsequent application claiming priority to the above-identified application, reissue, divisional, continuation-in-part, extension or continuation thereof and all rights of priority under the in arising from said application, and all other rights in the INVENTION possessed by the INVENTOR, ght to bring suit for damages due to past infringements; the same for VANDERBILT UNIVERSITY'S atives and assigns, as fully and entirely as the same would have been held by us had this assignment and ade;
without further which may be made or intend	I hereby bind myself, my heirs, legal representatives, administrators and assign properly to execute consideration any and all applications, petitions, ouths and assignments or other papers and instruments eccessary in order to carry into full force and effect, the sale, assignment, transfer and conveyance hereby 2d to be made and generally do everything possible to aid VANDERBILT UNIVERSITY, its legal and assigns, to obtain and enforce proper protection for said invention in all countries throughout the
AND, entered into wi	I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or ich woold conflict with this assignment.
LEGAL NAM	E OF INVENTOR
Inventor:	P. Jeffrey Conn Date: Apr. 1 11, 2011
Signature:	PTEAM GOV
<b>VA</b> 250	
Witness:	Donna Johnson  C  Date: 4[1]]
Commission	A Constitution (NOV) Victorians

VIJ Reference No.: VIJ14058USJ

## COMBINATION ASSIGNMENT-STATEMENT

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR SINGLE ASSIGNEE				
Title of Inventi-	SUBSTITUTED THIENO[2,3-C]PYRIDAZINE-6-CARBOXAMIDE ANALOGS AS  POSITIVE ALLOSTERIC MODULATORS OF THE MUSCARINIC ACETYLCHOLINE RECEPTOR M4			
	DECLARATION			
As a below nan	ed inventor I bereby declare that:			
	claration is directed to: The attached application, or United States application or PCT international application number 14/913,266 filed on February 19, 2016.			
- I belie - I herel	ove-identified application was made or authorized to be made by me.  that I am the original inventor or an original joint inventor of a claimed invention in the application.  y acknowledge that any willful false statement made in this declaration is punishable under 18 USC  y fine or imprisonment of not more than five (5) years, or both.			
	ASSIGNMENT			
	EAS, Vanderhilt University having an office and place of business at 305 Kirkland Hall, 2201 West ashville, Tennessee, 37240, USA, is desirous of acquiring the entire interest in the same;			
NOW, THEREFORE, for good and valuable consideration, as described in the Policy on Technology and Literary and Artistic Works, published in the 1993-1994 Vanderbilt Faculty Manual, as such policy is amended from time to time, the sufficiency and adequacy and receipt of which are hereby acknowledged, I, the INVENTOR, agree to assign and hereby do sell, assign and transfer unto said VANDERBILT UNIVERSITY the entire right, title and interest in and to said invention and application throughout the world, including, without limitation, any Letters Patent which may issue thereon, and any subsequent application claiming priority to the above-identified application, reissue, reexamination, divisional, continuation-in-part, extension or continuation thereof and all rights of priority under the Paris Convention arising from said application, and all other rights in the INVENTION possessed by the INVENTOR, including the right to bring suit for damages due to past infringements; the same for VANDERBILT UNIVERSITY'S legal representatives and assigns, as fully and entirely as the same would have been held by us had this assignment and sale not been made;				
AND, I hereby bind myself, my heirs, legal representatives, administrators and assign properly to execute without further consideration any and all applications, petitions, oaths and assignments or other papers and instruments which may be necessary in order to carry into full force and effect, the sale, assignment, transfer and conveyance hereby made or intended to be made and generally do everything possible to aid VANDERBILT UNIVERSITY, its legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries throughout the world;				
AND, I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.				
LEGAL NAM	E OF INVENTOR			
Inventor:	Michael R. Wood Date: 9/16/2016			
Signature:	Much Mad			
Witness:				
Signature:	A. C.			

VU Reference No.: VUI4058US1

	COMBINATION ASSIGNMENT-STATEMENT		
DEC USING AN APPLI	CLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION CATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR SINGLE ASSIGNEE		
Title of Invention:	SUBSTITUTED THIENO[2,3-C]PYRIDAZINE-6-CARBOXAMIDE ANALOGS AS POSITIVE ALLOSTERIC MODULATORS OF THE MUSCARINIC ACETYLCHOLINE RECEPTOR M4		
	<u>DECLARATION</u>		
As a below named inve	entor I hereby declare that:		
	ttached application, or distribution of PCT international application number 14/913,266 filed on February 19.		
<ul> <li>I believe that I</li> <li>I hereby acknowledge</li> </ul>	ntified application was made or authorized to be made by me.  I am the original inventor or an original joint inventor of a claimed invention in the application.   I am the original inventor or an original joint inventor of a claimed invention in the application.   I will be a pulliful false statement made in this declaration is punishable under 18 USC   I imprisonment of not more than five (5) years, or both.		
	<u>ASSIGNMENT</u>		
WHEREAS, L End Avenue, Nashvill	Vanderbilt University having an office and place of business at 305 Kirkland Hall, 2201 West e. Tennessee, 37240, USA, is desirous of acquiring the entire interest in the same;		
NOW, THEREFORE, for good and valuable consideration, as described in the Policy on Technology and Literary and Artistic Works, published in the 1993-1994 Vanderbilt Faculty Manual, as such policy is amended from time to time, the sufficiency and adequacy and receipt of which are hereby acknowledged, I, the INVENTOR, agree to assign and hereby do sell, assign and transfer unto said VANDERBILT UNIVERSITY the entire right, title and interest in and to said invention and application throughout the world, including, without limitation, any Letters Patent which may issue thereon, and any subsequent application claiming priority to the above-identified application, reissue, reexamination, divisional, continuation-in-part, extension or continuation thereof and all rights of priority under the Paris Convention arising from said application, and all other rights in the INVENTION possessed by the INVENTOR, including the right to bring suit for damages due to past infringements; the same for VANDERBILT UNIVERSITY'S legal representatives and assigns, as fully and entirely as the same would have been held by us had this assignment and sale not been made;			
without further conside which may be necessar made or intended to be	y bind myself, my heirs, legal representatives, administrators and assign properly to execute eration any and all applications, petitions, oaths and assignments or other papers and instruments by in order to carry into full force and effect, the sale, assignment, transfer and conveyance hereby made and generally do everything possible to aid VANDERBILT UNIVERSITY, its legal igns, to obtain and enforce proper protection for said invention in all countries throughout the		
AND, I hereb entered into which wo	y covenant that no assignment, sale, agreement or encumbrance has been or will be made or uld conflict with this assignment.		
LEGAL NAME OF I	NVENTOR		
Inventor: Mich	Date: 9-15-16		
Witness:	en E Ernst Date: 9/15/16		

VU Reference No.: VU14058USI

#### COMBINATION ASSIGNMENT-STATEMENT

DECLARATION (37 CF	R 1.63) FOR UTILITY OF	R DESIGN APPLICATION	
USING AN APPLICATION DATA SHI	EET (37 CFR 1.76) AND A	issignment for single	ASSIGNEE

Title of Invention:

SUBSTITUTED THIENO[2,3-C]PYRIDAZINE-6-CARBOXAMIDE ANALOGS AS POSITIVE ALLOSTERIC MODULATORS OF THE MUSCARINIC ACETYLCHOLINE RECEPTOR M4

## DECLARATION

As a below named inventor I hereby declare that:

- This declaration is directed to:
  - The attached application, or
  - United States application or PCT international application number 14/913,266 filed on February 19, 2016.
- The above-identified application was made or authorized to be made by me.
- I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
- I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

### ASSIGNMENT

WHEREAS, Vanderbilt University having an office and place of business at 305 Kirkland Hall, 2201 West End Avenue, Nashville, Tennessee, 37240, USA, is desirous of acquiring the entire interest in the same;

NOW, THEREFORE, for good and valuable consideration, as described in the Policy on Technology and Literary and Artistic Works, published in the 1993-1994 Vanderbilt Faculty Manual, as such policy is amended from time to time, the sufficiency and adequacy and receipt of which are hereby acknowledged. I, the INVENTOR, agree to assign and hereby do sell, assign and transfer unto said VANDERBILT UNIVERSITY the entire right, title and interest in and to said invention and application throughout the world, including, without limitation, any Letters Patent which may issue thereon, and any subsequent application claiming priority to the above-identified application, reissue, reexamination, divisional, continuation-in-part, extension or continuation thereof and all rights of priority under the Paris Convention arising from said application, and all other rights in the INVENTION possessed by the INVENTOR, including the right to bring suit for damages due to past infringements; the same for VANDERBILT UNIVERSITY'S legal representatives and assigns, as fully and entirely as the same would have been held by us had this assignment and sale not been made:

AND, I hereby bind myself, my heirs, legal representatives, administrators and assign properly to execute without further consideration any and all applications, petitions, oaths and assignments or other papers and instruments which may be necessary in order to carry into full force and effect, the sale, assignment, transfer and conveyance hereby made or intended to be made and generally do everything possible to aid VANDERBILT UNIVERSITY, its legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries throughout the world;

AND, I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

#### LEGAL NAME OF INVENTOR

Inventor:	James C, Tatr	Date:	<u> 47/4/2016                                     </u>
Signature:	Oma Coll		,
The extra	and the second s		9/14/2016
Witness:	NAGARATHANAM VEERASAMY	Date:	11.12.12.20
Signature:	V. Nadama		

VU Reference No.: VU14058U81

	COMBINATION ASSIG	'NMENT-STATEMEN'	T	000000000000000000000000000000000000000	
DEC USING AN APPLI	CLARATION (37 CFR 1.63) FOR U CATION DATA SHEET (37 CFR :	TILITY OR DESIGN . 1.76) AND ASSIGNME	APPLIC NT FOR	ATIO SING	n ;le assignee
SUBSTITUTED THIENO[2,3-C]PYRIDAZINE-6-CARBOXAMIDE ANALOGS AS POSITIVE ALLOSTERIC MODULATORS OF THE MUSCARINIC ACETYLCHOLIN RECEPTOR M4					
	DECLA	RATION			
As a below named inve	entor I hereby declare that:				
	ttached application, or d States application or PCT internation	nal application number _l	4/913,266	filed	on <u>February 19,</u>
<ul> <li>I believe that I</li> <li>I hereby acknowledge</li> </ul>	ntified application was made or author am the original inventor or an origin owledge that any willful false stateme or imprisonment of not more than five	al joint inventor of a clair nt made in this declaratio	med inver on is punis	ntion li shable	n the application. under 18 USC
	<u>ASSIG!</u>	NMENT			
WHEREAS, 1 End Avenue, Nashvill	<b>Vanderbilt University</b> having an offi le, Tennessee, 37240, USA, is desirou	ce and place of business as of acquiring the entire	at 305 Ki interest ir	rklane 1 the s	d Hall, 2201 West ame;
Literary and Artistic W time to time, the suffic assign and hereby do so interest in and to said it which may issue therec reexamination, division Paris Convention arisin including the right to b	REFORE, for good and valuable constorks, published in the 1993-1994 Variency and adequacy and receipt of wheell, assign and transfer unto said VAN evention and application throughout ton, and any subsequent application of all, continuation-in-part, extension or from said application, and all other ring suit for damages due to past infrind assigns, as fully and entirely as the	nderbilt Faculty Manual, sich are hereby acknowler IDERBILT UNIVERSI the world, including, with aiming priority to the abo continuation thereof and rights in the INVENTK ingements; the same for N	as such p dged, I, th TY the er rout limits rve-identi I all rights ON posses VANDER	olicy in INV ntire rigation, a fied apprints of prints seed by UBILT	is amended from /ENTOR, agree to ght, title and any Leiters Patent apilication, reissue, iority under the y the INVENTOR, UNIVERSITY'S
without further conside which may be necessar made or intended to be	y bind myself, my heirs, legal represe eration any and all applications, petitic y in order to carry into full force and made and generally do everything po- igns, to obtain and enforce proper pro	ons, oaths and assignmen effect, the sale, assignments assible to aid VANDERE	its or othe ent, transf HLT UN	r pape er and IVER	ers and instruments conveyance hereby SITY, its legal
	y covenant that no assignment, sale, a ald conflict with this assignment.	igreement or encumbranc	e has bee	n or w	ill be made or
LEGAL NAME OF I	NVENTOR				
Inventor: Bruce	J. Melancon	Date	4eb	29	2016
Signature: 4	<u> </u>		***************************************		
Witness:	Kak Ronnett	Date:	W)^	12	01/4

**PATENT REEL: 040059 FRAME: 0370** 

**RECORDED: 09/16/2016**