# 506931791 10/20/2021

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6978628

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
JOHN P. WIKSWO	10/04/2019
RONALD S. REISERER	10/04/2019
DAVID K. SCHAFFER	10/08/2019
DMITRY A. MARKOV	10/04/2019
CLAYTON M. BRITT	10/14/2019

#### **RECEIVING PARTY DATA**

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

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

Property Type	Number
Application Number:	17505940

#### **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:** 6172390100

Email: patent@lockelord.com
Correspondent Name: LOCKE LORD LLP
Address Line 1: P.O. BOX 55874

Address Line 4: BOSTON, MASSACHUSETTS 02205

ATTORNEY DOCKET NUMBER:	0114506.159US5
NAME OF SUBMITTER:	TIM TINGKANG XIA
SIGNATURE:	/Tim Tingkang Xia/
DATE SIGNED:	10/20/2021
	This document serves as an Oath/Declaration (37 CFR 1.63).

PATENT REEL: 057847 FRAME: 0380

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# **Total Attachments: 5**source=0114506159US5DecAssign

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PATENT REEL: 057847 FRAME: 0381

Attorney Decket No.: 0114506.159WO2

VU Reference No.: VU20002PCT1

#### COMBINATION ASSIGNMENT-STATEMENT

DECLARATION (37	CFR 1.63) FOR	UTILITY OR DESIGN AF	PLICATION
USING AN APPLICATION DATA	SHEET (37 CFR	. 1.76) AND ASSIGNMENT	FOR SINGLE ASSIGNEE

Title of Invention:

Multichannel Pumps and Applications of Same

#### 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 PCT/US2019/047190 filed on August 20, 2019.
- 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 said 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 me had this assignment and sale not been made;

AND, I hereby bind myself, my heirs, legal representatives, administrators and assigns 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.

AND, I, the INVENTOR, hereby authorize counsel for VANDERBILT UNIVERSITY to enter above information identifying applications claiming said invention as well as any subsequent application claiming priority directly or indirectly to the above-listed application, including any reissues, reexaminations, divisions, continuations-in-part, extensions, or continuations thereof, and all rights of priority under the International Convention.

#### LEGAL NAME OF INVENTOR

Inventor:	John P. Wikswo		Dat		od s	2019	<u>(</u>
Signature:	MILL						
Witness:	Allison	Price	Dati	: 4	Octor	ver	2019
Signature:	allian	Price					

Attorney Docket No.: 0114506 159WO2

VI) Reference No.: VU20002PCT1

# 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 Invention:	Multichannel Pumps and Applications of Same			
9	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 PCT/US2019/047190 filed on August 20, 2019.				
I believe that I am the I hereby acknowledge	<ul> <li>The above-identified application was made or authorized to be made by me.</li> <li>I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.</li> <li>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.</li> </ul>			
	ASSIGNMENT			
	rbilt University having an office and place of business at 305 Kirkland Hall, 2201 West End ee, 37240, USA, is desirous of acquiring the entire interest in the same;			
Artistic Works, published in a sufficiency and adequacy and assign and transfer unto said application throughout the we application claiming priority or continuation thereof and all invention possessed by the IN	RE, for good and valuable consideration, as described in the Policy on Technology and Literary and the 1993-1994 Vanderbilt Faculty Manual, as such policy is amended from time to time, the receipt of which are hereby acknowledged, I, the INVENTOR, agree to assign and hereby do sell, VANDERBILT UNIVERSITY the entire right, title and interest in and to said invention and orld, including, without limitation, any Letters Patent which may issue thereon, and any subsequent to the above-identified application, reissue, reexamination, divisional, continuation-in-part, extension I rights of priority under the Paris Convention arising from said application, and all other rights in said IVENTOR, including the right to bring suit for damages due to past infringements; the same for TY'S legal representatives and assigns, as fully and entirely as the same would have been held by me not been made;			
AND, I hereby bind myself, my heirs, legal representatives, administrators and assigns 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 cover which would conflict with this	nant that no assignment, sale, agreement or encumbrance has been or will be made or entered into s assignment.			
AND, I, the INVENTOR, hereby authorize counsel for VANDERBILT UNIVERSITY to enter above information identifying applications claiming said invention as well as any subsequent application claiming priority directly or indirectly to the above-listed application, including any reissues, reexaminations, divisions, continuations-in-part, extensions, or continuations thereof, and all rights of priority under the International Convention.				
LEGAL NAME OF INVEN	TOR			
Inventor: Ronald Signature:	18. Réiscrer Date: 10/4/2019			
Witness:	eryl Cosby Date: 10-4-19			
R. Santaka	<i>↑</i>			

Attorney Docket No.: 0114506,159WO2

VU Reference No.: VU20002PCT1

#### 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 Invention;	Multichannel Pumps and Applications of Same		
	DECLARATION		
As a below named inventor	I hereby declare that:		
<b>S</b>	directed to: ed application, or ites application or PCT international application number PCT/US2019/047190 filed on August 20, 2019.		
<ul> <li>I believe that I am</li> <li>I hereby acknowled</li> </ul>	<ul> <li>The above-identified application was made or authorized to be made by me.</li> <li>I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.</li> <li>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.</li> </ul>		
	ASSIGNMENT		
	Ierbilt University having an office and place of business at 305 Kirkland Hall, 2201 West End sace, 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 said 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 me had this assignment and sale not been made;			
AND, I hereby bind myself, my heirs, legal representatives, administrators and assigns 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.		
AND, I, the INVENTOR, hereby authorize counsel for VANDERBILT UNIVERSITY to enter above information identifying applications claiming said invention as well as any subsequent application claiming priority directly or indirectly to the above-listed application, including any reissues, reexaminations, divisions, continuations-in-part, extensions, or continuations thereof, and all rights of priority under the International Convention.			
LEGAL NAME OF INVE			
Inventor: Dav	id K. Sschaffer Date: 10/8/19		
Signature;			
Witness: Mic	had vary  Date: 10-9-19  Low vary		
Signature:	los verzage		

Attorney Docket No.: 0114506.(59WQ2

VU Reference No.: VU20002PCT1

# 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 Invention:	Multichannel Pumps and Applications of Same		
	DECLARATION		
As a below named invent	or I hereby declare that:		
	is directed to: ched application, or tates application or PCT international application number PCT/US2019/047190 filed on August 20, 2019.		
<ul> <li>I believe that I at</li> <li>I hereby acknow</li> </ul>	fied application was made or authorized to be made by me.  In the original inventor or an original joint inventor of a claimed invention in the application.  In the original inventor or an original joint inventor of a claimed invention in the application.  In the original inventor of the original joint inventor of a claimed in this declaration is punishable under 18 USC 1001 by fine or not more than five (5) years, or both.		
,	ASSIGNMENT		
	nderbilt University having an office and place of business at 305 Kirkland Hall, 2201 West End lessee, 37240, USA, is desirous of acquiring the entire interest in the same;		
Artistic Works, published sufficiency and adequacy assign and transfer unto a application throughout the application claiming prious continuation thereof ar invention possessed by the	FORE, for good and valuable consideration, as described in the Policy on Technology and Literary and in the 1993-1994 Vanderbilt Faculty Manual, as such policy is amended from time to time, the and receipt of which are hereby acknowledged, I, the INVENTOR, agree to assign and hereby do sell, aid VANDERBILT UNIVERSITY the entire right, title and interest in and to said invention and world, including, without limitation, any Letters Patent which may issue thereon, and any subsequent rity to the above-identified application, reissue, reexamination, divisional, continuation-in-part, extension dall rights of priority under the Paris Convention arising from said application, and all other rights in said in INVENTOR, including the right to bring suit for damages due to past infringements; the same for RSITY'S legal representatives and assigns, as fully and entirely as the same would have been held by me alle not been made;		
consideration any and all order to carry into full for generally do everything p	AND, I hereby bind myself, my heirs, legal representatives, administrators and assigns 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 c which would conflict with	ovenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into this assignment.		
AND, I, the INVENTOR, hereby authorize counsel for VANDERBILT UNIVERSITY to enter above information identifying applications claiming said invention as well as any subsequent application claiming priority directly or indirectly to the above-listed application, including any reissues, reexaminations, divisions, continuations-in-part, extensions, or continuations thereof, and all rights of priority under the International Convention.			
LEGAL NAME OF IN	ENTOR		
Inventor: Dr	pitry A. Markov Date: Oct 4 JUL		
Signature:			
Witness:	Misor Price Date: 10/4/2019		
Signature: (	ellison Wice		

Attorney Docket No.: 0114506.159WO2

VU Reference No.: VU20002PCT1

# 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 Invention:	Multichannel Pumps and Applications of Same			
	<u>DECLARATION</u>			
As a below named inventor I	hereby declare that:			
- This declaration is d ☐ The attached ☑ United State				
<ul> <li>I believe that I am the</li> <li>I hereby acknowledge</li> </ul>	<ul> <li>The above-identified application was made or authorized to be made by me.</li> <li>I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.</li> <li>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 (S) years, or both.</li> </ul>			
	ASSIGNMENT			
	rbill University having an office and place of business at 305 Kirkland Hall, 2201 West End see, 37240, USA, is desirous of acquiring the entire interest in the same;			
Artistic Works, published in sufficiency and adequacy and assign and transfer unto said application throughout the wo application claiming priority or continuation thereof and all invention possessed by the IN	RE, for good and valuable consideration, as described in the Policy on Technology and Literary and the 1993-1994 Vanderbilt Faculty Manual, as such policy is amended from time to time, the receipt of which are hereby acknowledged, I, the INVENTOR, agree to assign and hereby do sell, VANDERBILT UNIVERSITY the entire right, title and interest in and to said invention and orld, including, without limitation, any Letters Patent which may issue thereon, and any subsequent to the above-identified application, reissue, reexamination, divisional, continuation-in-part, extension I rights of priority under the Paris Convention arising from said application, and all other rights in said IVENTOR, including the right to bring suit for damages due to past infringements; the same for TY'S legal representatives and assigns, as fully and entirely as the same would have been held by me not been made;			
AND, I hereby bind myself, my heirs, legal representatives, administrators and assigns 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 cove which would conflict with thi	nant that no assignment, sale, agreement or encumbrance has been or will be made or entered into s assignment.			
AND, I, the INVENTOR, hereby authorize counsel for VANDERBILT UNIVERSITY to enter above information identifying applications claiming said invention as well as any subsequent application claiming priority directly or indirectly to the above-listed application, including any reissues, reexaminations, divisions, continuations-in-part, extensions, or continuations thereof, and all rights of priority under the International Convention.				
LEGAL NAME OF INVEN	TOR			
	n M. Britt Date: 19/14/2019			
Signature:				
Witness: Signature:	ery Cosky Date: 10-14-19			

**RECORDED: 10/20/2021** 

PATENT REEL: 057847 FRAME: 0386