507048095 12/28/2021

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7094933

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
RONALD S. REISERER	08/18/2020
DAVID K. SCHAFFER	07/08/2020
PHILIP C. SAMSON	07/29/2020
DMITRY A. MARKOV	07/14/2020
MICHAEL GEUY	07/14/2020
LISA J. MCCAWLEY	07/28/2020
JOHN P. WIKSWO	07/21/2020

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:	17623350

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:	0114506.159US94
NAME OF SUBMITTER:	TIM TINGKANG XIA
SIGNATURE:	/Tim Tingkang Xia/

PATENT 507048095 REEL: 058595 FRAME: 0319

DATE SIGNED:	12/28/2021
	This document serves as an Oath/Declaration (37 CFR 1.63).
Total Attachments: 7	·
source=0114506159US94De	cAssignment#page1.tif
source=0114506159US94DecAssignment#page2.tif	
source=0114506159US94DecAssignment#page3.tif	
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PATENT REEL: 058595 FRAME: 0320

Attorney Docket No.: 0114506,159WO23

VU Reference No.: VU20002PCT4

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:	Microfluidic Systems, Pumps, Valves, Fluidic Chips Thereof, and Applications of Same	
	DECLARATION	
As a below named inventor I	hereby declare that:	
- 100 AND	irected to: I application, or a application or PCT international application number PCT/US2020/040061 filed on June 29, 2020.	
 I believe that I am the second of the second	I application was made or authorized to be made by me, le original inventor or an original joint inventor of a claimed invention in the application, ge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or more than five (5) years, or both.	
	ASSIGNMENT	
WHEREAS, <u>Vands</u> Avenue, Nashville, Tenness	rhilt University having an office and place of business at 385 Kirkland Hall, 2201 West End re. 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 w application claiming priority or continuation thereof and a invention possessed by the II	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 I 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 II 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 ITY'S legal representatives and assigns, as fully and entirely as the same would have been held by me not been made;	
consideration any and all app order to carry into full force generally do everything poss	myself, my heirs, legal representatives, administrators and assigns properly to execute without further dications, petitions, oaths and assignments or other papers and instruments which may be necessary in and effect, the sale, assignment, transfer and conveyance hereby made or intended to be made and ible to aid VANDERBILT UNIVERSITY, its legal representatives and assigns, to obtain and enforce ention in all countries throughout the world;	
AND, I hereby cove which would conflict with the	nant that no assignment, sale, agreement or encumbrance has been or will be made or entered into is assignment.	
identifying applications clair above-listed application, incl	TTOR, hereby authorize counsel for VANDERBILT UNIVERSITY to enter above information ning said invention as well as any subsequent application claiming priority directly or indirectly to the uding any reissues, reexaminations, divisions, continuations-in-part, extensions, or continuations ity under the International Convention.	
LEGAL NAME OF INVE	CTOR	
Inventor: Ronal Signature:	d S. Reiserer Date: 08/18/2020	
Witness:	na-Admas Date: 8/19/20	

PATENT REEL: 058595 FRAME: 0321

Attorney Docket No.: 0114506.159W()23

VU Reference No.: VU20002PCT4

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: Microfluidic Systems, Pumps, Valves, Fluidic Chips Thereof, and Applications of Same		
	DECLARATION	
As a below named inventor I	hereby declare that:	
	lirected to: d application, or as application or PCT international application number PCT/US2020/040061 filed on June 29, 2020.	
 I believe that I am the second of the second	d application was made or authorized to be made by me. ne original inventor or an original joint inventor of a claimed invention in the application. Be that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or t more than five (5) years, or both	
	ASSIGNMENT	
WHEREAS, <u>Vanda</u> Avenue, Nashville, Tenness	erbilt University having an office and place of business at 305 Kirkland Hall, 2201 West End sec. 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 wapplication claiming priority or continuation thereof and a invention possessed by the II	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 I 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 II rights of priority under the Paris Convention arising from said application, and all other rights in said NVENTOR, including the right to bring suit for damages due to past infringements; the same for ITY'S legal representatives and assigns, as fully and entirely as the same would have been held by me not been made;	
consideration any and all app order to carry into full force a generally do everything possi	myself, my heirs, legal representatives, administrators and assigns properly to execute without further dications, petitions, oaths and assignments or other papers and instruments which may be necessary in and effect, the sale, assignment, transfer and conveyance hereby made or intended to be made and able to aid VANDERBILT UNIVERSITY, its legal representatives and assigns, to obtain and enforce ention in all countries throughout the world;	
AND, I hereby cove which would conflict with the	nant that no assignment, sale, agreement or encumbrance has been or will be made or entered into is assignment.	
identifying applications claim above-listed application, incl	TOR, hereby authorize counsel for VANDERBILT UNIVERSITY to enter above information thing said invention as well as any subsequent application claiming priority directly or indirectly to the uding any reissues, reexaminations, divisions, continuations-in-part, extensions, or continuations tity under the International Convention.	
LEGAL NAME OF INVEN	TOR	
Inventor: Dawid Signature: F	K. Schaufer A. Date: 7/8/20	
Witness:	"Hen M. Brot Date; 7-7-2020 FAIS	

Altomey Docket No.: 0114506-1590VO23

VU Reference No.: VU20002PCT4

	COMBINATION ASSIGNMENT-STATEMENT
	DECLARATION (37 CFR 1.83) FOR UTILITY OR DESIGN APPLICATION
USIA	G AN APPLICATION DATA SHEET (37 CFR 1.78) AND ASSIGNMENT FOR SINGLE ASSIGNEE
Title of invention:	Microfluidic Systems, Pumps, Valves, Fluidic Chies Theract, and Applications of Same.
	Deglaration
As a below named inventor	f hereby declare that:
- This declaration is	directed to:
C) The attac	hed application, or
a United St.	ites application or PCT international application number PCT/USZ020/040081 filed on June 29, 2020.
The above-identif	ed 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.
	idgs that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonmen (\$) years, or both,
and languagement, year	ASS:GNMENT
WHEREAS, Van Terrirosen, 37240, USA, h	terbilt University having an office and place of business at 365 Kirkland Had, 2201 West End Avenue, Nashvills, desirous of acquiring the entire interest in the same:
published in the 1993-1994 which are hereby ecknowie the entire right, title end into may issue thereon, and any continuation-in-part, externs rights in said invention pose	RE, for good and valuable consideration, as described in the Policy on Technology and Literary and Artistic Works, Vanderbilk Faculty Manuel, as such policy is amended from time to time, the sufficiency and adequacy and receipt of tiged, I, the INVENTOP, agree to assign and hereby do self, assign and transfer unto said VANOERBILT UNIVERSITY rest in and to said invention and application throughout the world including, without limitation, any Letters Patent whis subsequent application obtaining priority to the above-dentified application, reissue, reexamination, divisional, on or continuation thereof and all rights of priority under the Pans Convention arising from said application, and all oth eased by the INVENTOR, including the right to bring suit for damages due to past infringements, the same for "8 legal representatives and designs, as fully and entirely as the same would have been held by me had this essignm
any and all applications, pe and effect, the sale, assigns	id myself, my heirs, legal representatives, administrators and assigns properly to execute without further consideration illions, caths and assignments or other papers and instruments which may be necessary in order to carry into full force nent, transfer and conveyance hereby made or intended to be made and generally do everything possible to aid f, its legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.
ANC, I hereby co conflict with this sasignmen	venent that no assignment, sats, agreement or encumbrance has been or will be made or entered into which would he
claiming said invention as a	NYOR, hereby authorize course: for VANDERBILT UNIVERSITY to enter above information identifying applications all as any authorized application claiming priority directly or indirectly to the above-listed application, including any visions, Continuations-in-part, extensions, or continuations thereof, and all rights of priority under the international
LEGAL NAME OF INVENT	OR .
	Hilp C Samson Date: 7-29-7-020
Signature:	Mys C. Sursur
	Susan E, Samson - 29-2020 Lusun E, Samaon
Signature:	lunini E. Jameson

Attorney Docket No.: 0114506.159WO23

VU Reference No.: VU20002PCT4

COMBINATION ASSIGNMENT-STATEMENT

USING AN	DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR SINGLE ASSIGNEE
Title of Invention:	Microfluidic Systems, Pumps, Valves, Fluidic Chips Thereof, and Applications of Same
	DECLARATION
As a below named in	ventor I hereby declare that:
☐ The	tion is directed to: attached application, or ed States application or PCT international application number PCT/US2020/040061 filed on June 29, 2020.
 I believe that I hereby ack 	dentified 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. nowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or at of not more than five (5) years, or both.
	ASSIGNMENT
WHEREAS Avenue, Nashville, 1	Vanderbilt University having an office and place of business at 305 Kirkland Hall, 2201 West End ennessee, 37240, USA, is desirous of acquiring the entire interest in the same;
Artistic Works, publi sufficiency and adequassign and transfer ur application throughou application claiming or continuation there invention possessed by VANDERBILT UNITED TO THE CONTINUATION AND TH	REFORE, for good and valuable consideration, as described in the Policy on Technology and Literary and shed in the 1993-1994 Vanderbilt Faculty Manual, as such policy is amended from time to time, the lacy and receipt of which are hereby acknowledged, I, the INVENTOR, agree to assign and hereby do sell, to said VANDERBILT UNIVERSITY the entire right, title and interest in and to said invention and at the world, including, without limitation, any Letters Patent which may issue thereon, and any subsequent priority to the above-identified application, reissue, reexamination, divisional, continuation-in-part, extension of and all rights of priority under the Paris Convention arising from said application, and all other rights in said by the INVENTOR, including the right to bring suit for damages due to past infringements; the same for IVERSITY'S legal representatives and assigns, as fully and entirely as the same would have been held by me and sale not been made;
consideration any and order to carry into ful generally do everythi	by bind myself, my heirs, legal representatives, administrators and assigns properly to execute without further all applications, petitions, oaths and assignments or other papers and instruments which may be necessary in force and effect, the sale, assignment, transfer and conveyance hereby made or intended to be made and ng possible to aid VANDERBILT UNIVERSITY, its legal representatives and assigns, to obtain and enforce said invention in all countries throughout the world;
AND, I here which would conflict	by covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into with this assignment.
identifying applicatio above-listed applicati	INVENTOR, hereby authorize counsel for VANDERBILT UNIVERSITY to enter above information as claiming said invention as well as any subsequent application claiming priority directly or indirectly to the on, including any reissues, reexaminations, divisions, continuations-in-part, extensions, or continuations of priority under the International Convention.
LEGAL NAME OF	INVENTOR
Inventor:	Dmitry A. Markov Date: 7/14/2020
Signature:	
Witness:	<u>Katé Dorash</u> Date: 7/14/2020
Signature:	<u> </u>

PATENT REEL: 058595 FRAME: 0324

Attorney Docket No.: 0114506 159WO23

VU Reference No.: VU20002PCT4

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:	Microfluidic Systems, Pumps, Valves, Fluidic Chips Thereof, and Applications of Same	
	DECLARATION	
As a below named inventor (hereby declare that:	
- This declaration is d ☐ The attached ☑ United State		
 I believe that I am th I hereby acknowledge 	application was made or aumorized to be made by me, e original inventor or an original joint inventor of a claimed invention in the application, that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or more than five (5) years, or both.	
	ASSIGNMENT	
WHEREAS, <u>Yande</u> <u>Avenue, Nashville, Tenness</u>	rbift University having an office and place of business at 305 Kirkland Hall, 2201 West Find per, 37240, USA, is desirous of acquiring the entire interest in the same;	
Artistic Works, published in to 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 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: Michae Signature: Michae	hael Deux Date; 7/14/20	
Witness: H	Date: 7/14/2020	

Attorney Docket No.: 0114506.159WO23

VU Reference No.: VU20002PCT4

COMBINATION ASSIGNMENT-STATEMENT

	DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION PLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR SINGLE ASSIGNEE	
Title of Invention:	Microfluidic Systems, Pumps, Valves, Fluidic Chips Thereof, and Applications of Same	
	DECLARATION	
As a below named inven	or I hereby declare that:	
	is directed to: ched application, or States application or PCT international application number PCT/US2020/040061 filed on June 29, 2020	
 I believe that I a I hereby acknow 	ified application was made or authorized to be made by me. m the original inventor or an original joint inventor of a claimed invention in the application. Redge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine f not more than five (5) years, or both.	
	ASSIGNMENT	
WHEREAS, <u>V</u> s Avenue, Nashville, Ten	inderbilt University having an office and place of business at 305 Kirkland Hall, 2201 West End nessee, 37240, USA, is desirous of acquiring the entire interest in the same;	
Artistic Works, publisher sufficiency and adequacy assign and transfer unto application throughout the application claiming prior continuation thereof as invention possessed by ti	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, and VANDERBILT UNIVERSITY the entire right, title and interest in and to said invention and e 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 all rights of priority under the Paris Convention arising from said application, and all other rights in size 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 reale not been made;	
consideration any and all order to carry into full fo generally do everything p	bind myself, my heirs, legal representatives, administrators and assigns properly to execute without furth applications, petitions, oaths and assignments or other papers and instruments which may be necessary ree and effect, the sale, assignment, transfer and conveyance hereby made or intended to be made and possible to aid VANDERBILT UNIVERSITY, its legal representatives and assigns, to obtain and enfoll invention in all countries throughout the world;	
AND, I hereby a which would conflict wit	covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into h this assignment.	
identifying applications cabove-listed application,	ENTOR, hereby authorize counsel for VANDERBILT UNIVERSITY to enter above information laiming said invention as well as any subsequent application claiming priority directly or indirectly to the including any reissues, reexaminations, divisions, continuations-in-part, extensions, or continuations priority under the International Convention.	
LEGAL NAME OF IN	/ENTOR	
Inventor: Li	5a L. McCawley Date: 7/28/2020	
Signature:	29-74-Cinty	
Witness: <u>St</u>	awn P. Garbett Date: 7/28/2020	
Signature:	Delso	

Attempty Docket No.: 0114596,159WO23

VU Reference No.: VU20002PCT4

COMBINATION ASSIGNMENT-STATEMENT

DECLARATION (3)	CFR 1.63) FOR UTILITY C	OR DESIGN APPLICATION
USING AN APPLICATION DATA	SHEET (37 CFR 1.76) AND	ASSIGNMENT FOR SINGLE ASSIGNEE

Title of Invention:

Microfluidic Systems, Pumps, Valves, Fluidic Chips Thereof, 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/US2020/040061 filed on June 29, 2020.
- 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, <u>Vanderbilt University</u> having an office and place of business at <u>305 Kirkland Hall, 2201 West End Avenue</u>, <u>Nashville</u>, <u>Tennessee</u>, <u>37240</u>, <u>USA</u>, 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
Signature:

Witness: Julia K. Wikswo

Signature: Win / WS/W

Date: 21 July 2020

Date: 21/141/2020

PATENT REEL: 058595 FRAME: 0327

RECORDED: 12/28/2021