

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT6050126

SUBMISSION TYPE:	RESUBMISSION
NATURE OF CONVEYANCE:	ASSIGNMENT
RESUBMIT DOCUMENT ID:	505982075
CONVEYING PARTY DATA	
Name	Execution Date
RANDOLF VON OEPEN	12/03/2019
SEAN A. MCNIVEN	11/03/2019
KEN C. SALVADOR	12/03/2019
RECEIVING PARTY DATA	
Name:	CEPHEA VALVE TECHNOLOGIES, INC.
Street Address:	3625 PETERSON WAY
City:	SANTA CLARA
State/Country:	CALIFORNIA
Postal Code:	95054
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	16828112
CORRESPONDENCE DATA	
Fax Number:	(801)328-1707
<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>	
Phone:	8015339800
Email:	smaynes@wnlaw.com
Correspondent Name:	WORKMAN NYDEGGER/ABBOTT 2
Address Line 1:	60 EAST SOUTH TEMPLE
Address Line 2:	SUITE 1000
Address Line 4:	SALT LAKE CITY, UTAH 84111
ATTORNEY DOCKET NUMBER:	20818.2.1.1
NAME OF SUBMITTER:	FRASER D. ROY
SIGNATURE:	/Fraser D. Roy, Reg.# 45666/
DATE SIGNED:	04/07/2020
Total Attachments: 24	
source=20818-2-1-1_2020-04-07_NoticeofNon-Recordation#page1.tif	
source=20818-2-1-1_2020-04-07_NoticeofNon-Recordation#page2.tif	

source=20818-2-1-1_2020-04-07_NoticeofNon-Recordation#page3.tif
source=20818-2-1-1_2020-04-07_Assignment#page1.tif
source=20818-2-1-1_2020-04-07_Assignment#page2.tif
source=20818-2-1-1_2020-04-07_Assignment#page3.tif
source=20818-2-1-1_2020-04-07_Assignment#page4.tif
source=20818-2-1-1_2020-04-07_Assignment#page5.tif
source=20818-2-1-1_2020-04-07_Assignment#page6.tif
source=20818-2-1-1_2020-04-07_Assignment#page7.tif
source=20818-2-1-1_2020-04-07_Assignment#page8.tif
source=20818-2-1-1_2020-04-07_Assignment#page9.tif
source=20818-2-1-1_2020-04-07_Assignment#page10.tif
source=20818-2-1-1_2020-04-07_Assignment#page11.tif
source=20818-2-1-1_2020-04-07_Assignment#page12.tif
source=20818-2-1-1_2020-04-07_Assignment#page13.tif
source=20818-2-1-1_2020-04-07_Assignment#page14.tif
source=20818-2-1-1_2020-04-07_Assignment#page15.tif
source=20818-2-1-1_2020-04-07_Assignment#page16.tif
source=20818-2-1-1_2020-04-07_Assignment#page17.tif
source=20818-2-1-1_2020-04-07_Assignment#page18.tif
source=20818-2-1-1_2020-04-07_Assignment#page19.tif
source=20818-2-1-1_2020-04-07_Assignment#page20.tif
source=20818-2-1-1_2020-04-07_Assignment#page21.tif

From: PTAS
Sent: Monday, April 6, 2020 4:55 AM
To: Shawna H. Maynes
CC: Docketing WN
Subject: Assignment Notice of Non-Recordation (WUID: 505982075)
Attachments: Notice.pdf; CoverSheet.tif

Please find attached the Notice of Non-Recordation and the corresponding TIFF image of the first page of the coversheet submitted to the Assignment Recordation Branch.

WUID: 505982075
DOCKET NUMBER: 20818.2.1.1
FIRST ASSIGNEE: CEPHEA VALVE TECHNOLOGIES, INC.
SOURCE: PTAS

PLEASE NOTE: This is an unmonitored email address. In the event you need to contact the Assignment Recordation Branch, please email assign@uspto.gov or call (571) 272-3350.

The United States Patent and Trademark Office
Mail Stop: Assignment Recordation Branch
PO Box 1450
Alexandria, VA 22313

This message contains information that may be confidential and privileged. Unless you are the addressee (or authorized to receive mail for the addressee), you should not use, copy or disclose to anyone this message or any information contained in this message. If you have received this message in error, please advise the Assignment Recordation Branch by e-mail and delete this message. Thank you for your cooperation.

DOCKETED

Atty FDR File# 20818.2.1.1
By DAnderson On 06 Apr 2020
Action Resubmit Assignment
Response Due 6/8/20

Verified

By kplatt On 06 Apr 2020

PATENT

REEL: 052337 FRAME: 0435



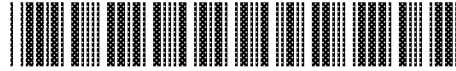
UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

April 06, 2020

PTAS

WORKMAN NYDEGGER/ABBOTT 2
60 EAST SOUTH TEMPLE
SUITE 1000
SALT LAKE CITY, UT 84111



505982075

United States Patent and Trademark Office
Notice of Non-Recordation of an Assignment Document

The enclosed document has been examined and found non-recordable by the Assignment Recordation Branch of the U.S. Patent and Trademark Office. The reason(s) for non-recordation are stated below:

1. All inventors names are not listed on the Cover Sheet.

Documents being resubmitted for recordation must reflect the corrected information to be recorded, the Document ID number referenced above and all pages from this submitted document. The original date of filing of this assignment document will be maintained if resubmitted with the appropriate correction(s) by **Monday, June 8, 2020**, as outlined under 37 CFR 3.51. The resubmitted document must include a stamp with the official date of receipt under 37 CFR 3. Applicants may use the certified procedures under 37 CFR 1.8 or 1.10 for resubmission of the returned papers if they desire to have the benefit of the date of deposit in the United States Postal Service.

To file the resubmission electronically, navigate to the EPAS website at <http://epas.uspto.gov>, click the Start Resubmission button and enter the following information:

Document ID: 505982075
Access Code: E07ESXZXIF31SYY

To file the resubmission in paper, send documents to: U.S. Patent and Trademark Office, Mail Stop: Assignment Recordation Branch, P.O. BOX 1450, Alexandria, VA 22313. If you have any questions regarding this notice, you may contact the Assignment Recordation Branch at 571-272-3350.

ANDREA FREEMAN
ASSIGNMENT RECORDATION BRANCH
PUBLIC RECORDS DIVISION

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT6028783

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
RANDOLF VON OEPEN	12/03/2019
SEAN A. MCNIVEN	11/03/2019
KEN C. SALVADOR	12/03/2019
RECEIVING PARTY DATA	
Name:	CEPHEA VALVE TECHNOLOGIES, INC.
Street Address:	3625 PETERSON WAY
City:	SANTA CLARA
State/Country:	CALIFORNIA
Postal Code:	95054
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	16828112
CORRESPONDENCE DATA	
Fax Number:	(801)328-1707
<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>	
Phone:	8015339800
Email:	smaynes@wnlaw.com
Correspondent Name:	WORKMAN NYDEGGER/ABBOTT 2
Address Line 1:	60 EAST SOUTH TEMPLE
Address Line 2:	SUITE 1000
Address Line 4:	SALT LAKE CITY, UTAH 84111
ATTORNEY DOCKET NUMBER:	20818.2.1.1
NAME OF SUBMITTER:	FRASER D. ROY
SIGNATURE:	/Fraser D. Roy, Reg.# 45666/
DATE SIGNED:	03/24/2020
Total Attachments: 21	
source=20818-2-1-1_2020-03-24_Assignment#page1.tif	
source=20818-2-1-1_2020-03-24_Assignment#page2.tif	
source=20818-2-1-1_2020-03-24_Assignment#page3.tif	

THIS ASSIGNMENT is made and is effective as of the 1st day of December, 2019,

BY AND AMONG

CURTIS CATON, a U.S. citizen of 921 Alta Mar Ter, San Jose, California 95126, USA and 3050 Three Springs Court, San Jose, California 95140, USA (referred to herein as "Mr. Caton");

HUGO A. COBAR, a Guatemalan citizen of 1256 Prescott Avenue, Sunnyvale, California 94089, USA and 3200 Lakeside Drive, Santa Clara, California 95054, USA (referred to herein as "Mr. Cobar");

JUAN F. GRANADA, a U.S. citizen of 19 Rockledge Road, Saddle River, New Jersey 07458, USA and 3050 Three Springs Court, San Jose, California 95140, USA (referred to herein as "Mr. Granada");

ROMMEL LUMAUIG, a U.S. citizen of 1187 Aschauer Court, San Jose, California 95131, USA and 3200 Lakeside Drive, Santa Clara, California 95054, USA (referred to herein as "Mr. Lumaui");

SEAN A. MCNIVEN, a Canadian citizen of 459 University Drive, Menlo Park, California 94025, USA and 3200 Lakeside Drive, Santa Clara, California 95054, USA (referred to herein as "Mr. McNiven");

SHENGMIN MEI, a Canadian citizen of 39720 Placer Way, Fremont, California 94538, USA and 3200 Lakeside Drive, Santa Clara, California 95054, USA (referred to herein as "Mr. Mei");

TIMOTHY C. REYNOLDS, a U.S. citizen of 608 San Conrado Terrace #3, Sunnyvale, California 94085, USA and 3200 Lakeside Drive, Santa Clara, California 95054, USA (referred to herein as "Mr. Reynolds");

KEN C. SALVADOR, a U.S. citizen of 1332 Yosemite Way, Hayward, California 94545, USA and 3200 Lakeside Drive, Santa Clara, California 95054, USA (referred to herein as "Mr. Salvador");

FRANCISCO VALENCIA, a U.S. citizen of 2202 Clarke Avenue, East Palo Alto, California 94303, USA and 3200 Lakeside Drive, Santa Clara, California 95054, USA (referred to herein as "Mr. Valencia");

RANDOLF VON OEPEN, a German citizen of 221 Florence Drive, Aptos, California 95003, USA and 3200 Lakeside Drive, Santa Clara, California 95054, USA (referred to herein as "Mr. von Oepen");

DANIEL TUCKER WALLACE, a U.S. citizen of 3050 Three Springs Court, San Jose, California 95140, USA (referred to herein as "Mr. Wallace");

YONGJIN XIE, a U.S. citizen of 7941 October Way, Cupertino, California 95014, USA and 3200 Lakeside Drive, Santa Clara, California 95054, USA (referred to herein as "Ms. Xie");

(Mr. Caton, Mr. Cobar, Mr. Granada, Mr. Lumauig, Mr. McNiven, Mr. Mei, Mr. Reynolds, Mr. Salvador, Mr. Valencia, Mr. von Oepen, Mr. Wallace and Ms. Xie are collectively referred to hereinafter as "the Assignors");

AND

CEPHEA VALVE TECHNOLOGIES, INC. a Delaware corporation of 3625 Peterson Way, Santa Clara, California 95054, USA (referred to hereinafter as "the Assignee").

WHEREAS

- (a) Each of the Assignors has individually or jointly invented one or more inventions ("the Inventions"), and certain patent applications (the "Patent Applications") have been filed in the names of those of the Assignors who were the inventors in each case;
- (b) Short details identifying each of the Inventions, the Patent Applications filed in respect of each Invention, and the identity of the Assignors who were named as the inventors of each Invention and in whose name(s) the Patent Applications were filed in respect of each of the Inventions, are set out in Schedule I hereto;

(c) Each of the Assignors is, directly or indirectly, contractually obligated to assign all of her or his rights, title and interests in and to the Inventions and Patent Applications to Assignee; and

(d) The parties hereto wish to formally transfer, and do hereby formally assign, transfer and convey to Assignee, all rights, title and interests in and to the Inventions including the Patent Applications set out in Schedule I hereto and any divisional, continuation, continuation-in-part or continued prosecution application which has been or may be filed based on such Patent Applications together with any Patents granted thereon and any further patent applications which may be filed in any country of the World in respect of the Invention (with all such rights being collectively referred to herein as the Patent Rights) with the intent that all the Patent Rights in respect of the Inventions should vest in the Assignee.

NOW THIS DEED WITNESSETH:

In consideration of the hereinbefore recited premises and the sum of One U.S. Dollar (US\$1.00) paid by the Assignee to each of the Assignors at the signing of this Assignment and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Assignors, each individually as well as collectively, do hereby assign, transfer and convey to the Assignee the Inventions, the Patent Rights, all rights, title and interests therein, including all the rights, powers, privileges and immunities conferred on the proprietor thereof by the grant of the Patent Rights and the right to sue for damages and other remedies in respect of any past, present and/or future infringement of any of the Patents, free from any and all incumbrances, **TO HOLD** unto the Assignee absolutely.


The Assignors agree that they will at the expense of the Assignee, but without additional compensation, take such further action and execute or sign any such application forms, deeds or other documents or instruments as may be necessary or desirable to carry out the purposes and intent of this Assignment and vest in the Assignee the full benefit of the Inventions and the Patent Rights.

This Assignment may be executed in multiple counterparts, each of which shall be deemed an original and all of which will constitute but one and the same instrument.

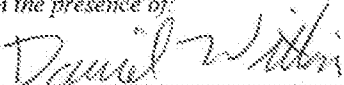
IN WITNESS WHEREOF the parties hereto have executed this Assignment effective as of the date first above written.

SIGNED, SEALED and DELIVERED
by the said CURTIS CATON:

Execution Date: 12/03, 2019


(Signature of Mr. Caton)

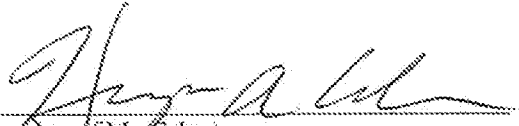
In the presence of:


(1st Witness Signature)


(2nd Witness Signature)

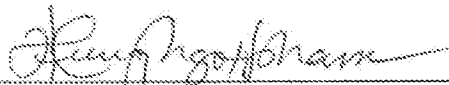
SIGNED, SEALED and DELIVERED
by the said HUGO A. COBAR:

Execution Date: 12/3, 2019


(Signature of Mr. Cobar)

In the presence of:


(1st Witness Signature)

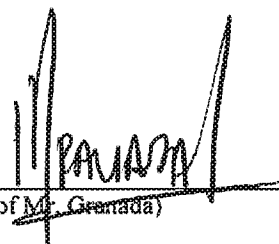

(2nd Witness Signature)


SIGNED, SEALED and DELIVERED
by the said **JUAN F. GRANADA:**

Execution Date: 12/05, 2019

In the presence of:

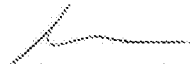
Kim White
(1st Witness Signature)


(Signature of Mr. Granada)


(2nd Witness Signature)

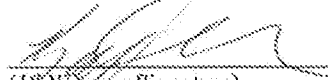
SIGNED, SEALED and DELIVERED
by the said ROMMEL LUMAIG:

Execution Date: 03 Dec, 2019

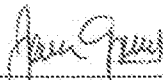


(Signature of Mr. Lumaig)

In the presence of



(1st Witness Signature)



(2nd Witness Signature)

SIGNED, SEALED and DELIVERED
by the said SEAN A. MCNIVEN:

Execution Date: November 3, 2019

Sean McNiven
(Signature of Mr. McNiven)

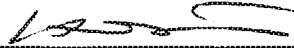
In the presence of:

David W. Allen
(1st Witness Signature)


Phuong Nguyen Pham
(2nd Witness Signature)

SIGNED, SEALED and DELIVERED
by the said SHENGMIN MEI:


Execution Date: 12-4, 2019


(Signature of Mr. Mei)

In the presence of:


(1st Witness Signature)

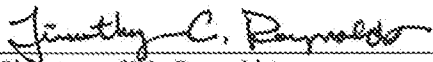
Carolyn Nguyen


(2nd Witness Signature)

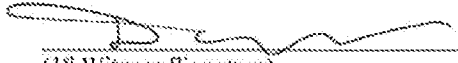
Khanh (Katie) Duong

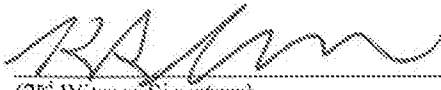
SIGNED, SEALED and DELIVERED
by the said TIMOTHY C. REYNOLDS:

Execution Date: 12/16, 2019


(Signature of Mr. Reynolds)

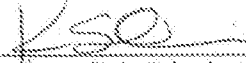
In the presence of:


(1st Witness Signature)

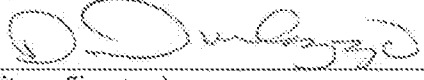

(2nd Witness Signature)

SIGNED, SEALED and DELIVERED
by the said KEN C. SALVADOR:

Execution Date: 12/3, 2019


(Signature of Mr. Salvador)

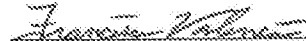
In the presence of


(1st Witness Signature)

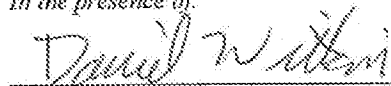

(2nd Witness Signature)


SIGNED, SEALED and DELIVERED
by the said FRANCISCO VALENCIA:

Execution Date: Dec 7, 2019


(Signature of Mr. Valencia)

In the presence of:


(1st Witness Signature)

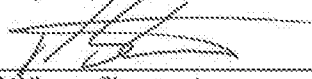

(2nd Witness Signature)

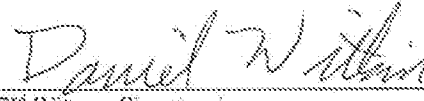
SIGNED, SEALED and DELIVERED
by the said RANDOLF VON OEPEN:

Execution Date: Dec 03, 2019


(Signature of Mr. von Oepen)

In the presence of:


(1st Witness Signature)

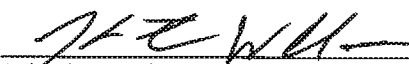

(2nd Witness Signature)

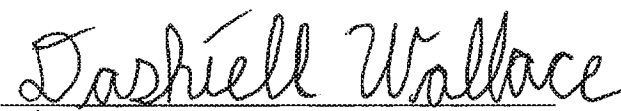
SIGNED, SEALED and DELIVERED
by the said DANIEL TUCKER
WALLACE:

Execution Date: 12/31, 2019


(Signature of Mr. Wallace)

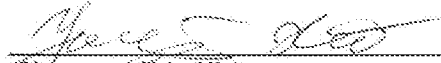
In the presence of:


(1st Witness Signature)

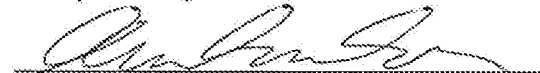

(2nd Witness Signature)


SIGNED, SEALED and DELIVERED
by the said YONGJIN XIE:

Execution Date: Dec. 9th, 2019


(Signature of Ms. Xie)

In the presence of:


(1st Witness Signature)


(2nd Witness Signature)

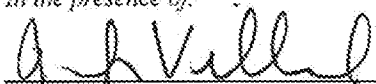
SIGNED, SEALED and ACCEPTED by
CEPHEA VALVE TECHNOLOGIES,
INC.

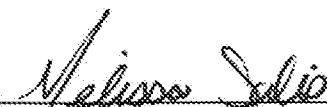
CEPHEA VALVE TECHNOLOGIES, INC.

Execution Date: 12/19, 2019

By: 
Printed Name: Paul Yasger
Title: Assistant Secretary

In the presence of:


(1st Witness Signature)


(2nd Witness Signature)

SCHEDULE I REFERRED TO HEREIN

Invention 1

Brief Description/Identification: "Intravascular Device Delivery Sheath" (20818.1 family)

Inventors: Sean A. MCNIVEN, Ken C. SALVADOR, Francisco VALENCIA,
Randolf VON OEPEN and Yongjin XIE

Country/Region	Application No.	Filing Date	Patent No. (if granted)
United States of America	62/368683	2016-07-29	
United States of America	62/430143	2016-12-05	
United States of America	15/662008	2017-07-27	
Patent Cooperation Treaty	PCT/US2017/044446	2017-07-28	WO2018/023038
Australia	2017302049	2019-02-04	
China	201780054087.2	2019-03-04	
Costa Rica	2019-0108	2019-02-28	
European Patent	17749327.7	2017-07-28	
Singapore	11201900766X	2019-01-28	

Invention 2

Brief Description/Identification: "Delivery Catheter Distal Cap" (20818.2 family)

Inventors: Randolf VON OEPEN, Sean A. MCNIVEN, and Ken C. SALVADOR

Country/Region	Application No.	Filing Date	Patent No. (if granted)
United States of America	62/422426	2016-11-15	
United States of America	15/662014	2017-07-27	
Patent Cooperation Treaty	PCT/US2017/044453	2017-07-28	WO2018/093426
European Patent	17749328.5	2017-07-28	

Invention 3

Brief Description/Identification: "Threaded Coil" (20818.3 family)

Inventors: Randolf VON OEPEN, and Sean A. MCNIVEN

Country/Region	Application No.	Filing Date	Patent No. (if granted)
United States of America	62/368695	2016-07-29	
United States of America	15/662001	2017-07-27	
Patent Cooperation Treaty	PCT/US2017/044457	2017-07-28	WO2018/023043
Australia	2017301739	2019-01-30	
European Patent	17749088.5	2017-07-28	

Invention 4

Brief Description/Identification: "Combination Steerable Catheter and Systems" (20818.4 family)

Inventors: Sean A. MCNIVEN, Francisco VALENCIA, and Randolph VON OEPEN

Country/Region	Application No.	Filing Date	Patent No. (if granted)
United States of America	62/368702	2016-07-29	
United States of America	15/662013	2017-07-27	
Patent Cooperation Treaty	PCT/US2017/044460	2017-07-28	WO2018/023044
Australia	2017301740	2019-01-29	
China	201780053342.1	2019-02-28	
Costa Rica	2019-0109	2019-02-28	
European Patent	17751532.7	2017-07-28	
Singapore	11201900809T	2019-01-29	

Invention 5

Brief Description/Identification: "Hypotube Reinforced Intravascular Device Delivery Systems and Methods" (20818.6 family)

Inventors: Randolph VON OEPEN, Sean A. MCNIVEN, and Francisco VALENCIA

Country/Region	Application No.	Filing Date	Patent No. (if granted)
United States of America	62/368711	2016-07-29	
United States of America	62/380246	2016-08-26	
United States of America	62/436887	2016-12-20	
United States of America	15/662076	2017-07-27	
Patent Cooperation Treaty	PCT/US2017/044461	2017-07-28	WO2018/023045
Australia	2017301741	2019-01-29	
European Patent	17749573.6	2017-07-28	

Invention 6

Brief Description/Identification: "Methods of Steering and Delivery of Intravascular Devices" (20818.7 family)

Inventors: Randolph VON OEPEN, Sean A. MCNIVEN, and Francisco VALENCIA

Country/Region	Application No.	Filing Date	Patent No. (if granted)
United States of America	62/380862	2016-08-29	
United States of America	62/436913	2016-12-20	
United States of America	15/662098	2017-07-27	
Patent Cooperation Treaty	PCT/US2017/044463	2017-07-28	WO2018/044446
China	201780060679.5	2019-03-29	
European Patent	17751533.5	2017-07-28	

Invention 7

Brief Description/Identification: "Systems and Methods for Loading and Deploying an Intravascular" (20818.8 and 20818.1)

Inventors: Randolph VON OEPEN, Sean A. MCNIVEN, and Francisco VALENCIA

Country/Region	Application No.	Filing Date	Patent No. (if granted)
United States of America	62/380795	2016-08-29	
United States of America	62/430149	2016-12-05	

Invention 8

Brief Description/Identification: "Systems and Methods for Loading and Deploying an Intravascular Device – Swivel - Alignment of Tip - Flexible Cover" (20818.1.1 and 20818.1.1.1 family)

Inventors: Randolph VON OEPEN, Sean A. MCNIVEN, Francisco VALENCIA, Ken C. SALVADOR, and Yongjin XIE

Country/Region	Application No.	Filing Date	Patent No. (if granted)
United States of America	62/436985	2016-12-20	
United States of America	15/662089	2017-07-27	
Patent Cooperation Treaty	PCT/US2017/044466	2017-07-28	WO2018/044447
China	201780063345.3	2019-04-12	
European Patent	17749089.3	2017-07-28	

Invention 9

Brief Description/Identification: "Multilumen Catheter" (20818.9 family)

Inventors: Randolph VON OEPEN, Sean A. MCNIVEN, and Francisco VALENCIA

Country/Region	Application No.	Filing Date	Patent No. (if granted)
United States of America	62/380873	2016-08-29	
United States of America	15/662093	2017-07-27	
Patent Cooperation Treaty	PCT/US2017/044470	2017-07-28	WO2018/044448
China	201780060523.7	2019-03-29	
European Patent	17749574.4	2017-07-28	

Invention 10

Brief Description/Identification: "Movable Guidewire Lumen" (20818.10 family)

Inventors: Randolph VON OEPEN, Sean A. MCNIVEN, and Francisco VALENCIA

Country/Region	Application No.	Filing Date	Patent No. (if granted)
United States of America	62/380799	2016-08-29	
United States of America	62/436918	2016-12-20	
United States of America	15/662066	2017-07-27	
Patent Cooperation Treaty	PCT/US2017/044475	2017-07-28	WO2018/044449
China	201780062726.X	2019-04-10	
European Patent	17751534.3	2017-07-28	

Invention 11

Brief Description/Identification: "Systems and Methods for Loading and Deploying an Intravascular Device" (20818.11 family)

Inventors: Randolph VON OEPEN, Sean A. MCNIVEN, and Francisco VALENCIA

Country/Region	Application No.	Filing Date	Patent No. (if granted)
United States of America	62/404511	2016-10-05	
United States of America	62/436922	2016-12-20	
United States of America	62/462776	2017-02-23	
United States of America	15/662142	2017-07-27	
Patent Cooperation Treaty	PCT/US2017/044481	2017-07-28	WO2018/023052
Australia	2017301748	2019-02-07	
China	201780053853.3	2019-03-01	
Costa Rica	2019-0107	2019-02-28	
European Patent	17749090.1	2017-07-28	
Singapore	11201900817X	2019-01-29	

Invention 12

Brief Description/Identification: "Methods, Systems, and Devices for Sealing and Flushing a Delivery System" (20818.12 family)

Inventors: Randolph VON OEPEN, Sean A. MCNIVEN, and Francisco VALENCIA

Country/Region	Application No.	Filing Date	Patent No. (if granted)
United States of America	62/380888	2016-08-29	
United States of America	62/436926	2016-12-20	
United States of America	15/661988	2017-07-27	
Patent Cooperation Treaty	PCT/US2017/044484	2017-07-28	WO2018/044450
China	201780066897.X	2019-04-26	
European Patent	17751896.6	2017-07-28	

Invention 13

Brief Description/Identification: "Systems and Methods for Delivering and Deploying an Artificial Heart Valve within the Mitral Annulus" (20818.14 family)

Inventors: Randolph VON OEPEN, Sean A. MCNIVEN, and Francisco VALENCIA

Country/Region	Application No.	Filing Date	Patent No. (if granted)
United States of America	15/724499	2017-10-04	
Patent Cooperation Treaty	PCT/US2017/055282	2017-10-05	WO2018/067788
European Patent	17787755.2	2017-10-05	

Invention 14

Brief Description/Identification: "Intravascular Delivery System" (20818.17 family)

Inventors: Randolph VON OEPEN, Francisco VALENCIA, Sean A. MCNIVEN, Timothy C. REYNOLDS, Rommel LUMAUIG, ShengMin MEI, Hugo A. COBAR, and Dan WALLACE

Country/Region	Application No.	Filing Date	Patent No. (if granted)
United States of America	62/768446	2018-11-16	

Invention 15

Brief Description/Identification: "Delivery Guidewire" (20818.18 family)

Inventors: Curtis CATON, Randolph VON OEPEN, and Juan F. GRANADA

Country/Region	Application No.	Filing Date	Patent No. (if granted)
United States of America	62/769040	2018-11-19	