PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5339358

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
DOUG HAKALA	06/24/2013
JOHN M. ADAMS	06/24/2013
RANDY HOLMBERG	06/24/2013

RECEIVING PARTY DATA

Name:	SHOCKWAVE MEDICAL, INC.
Street Address:	5403 BETSY ROSS DRIVE
City:	SANTA CLARA
State/Country:	CALIFORNIA
Postal Code:	95054

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16222679

CORRESPONDENCE DATA

Fax Number: (415)268-7522

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: (415) 268-6003

Email: MStallman@mofo.com
Correspondent Name: MICHAEL A. STALLMAN

Address Line 1: 425 MARKET ST.

Address Line 4: SAN FRANCISCO, CALIFORNIA 94105

ATTORNEY DOCKET NUMBER:	69026-20018.04
NAME OF SUBMITTER:	MICHAEL A. STALLMAN
SIGNATURE:	/Michael Stallman/
DATE SIGNED:	01/23/2019

Total Attachments: 6

source=69026-20018.04 - Assignment (Parent 20018.00)#page1.tif source=69026-20018.04 - Assignment (Parent 20018.00)#page2.tif source=69026-20018.04 - Assignment (Parent 20018.00)#page3.tif source=69026-20018.04 - Assignment (Parent 20018.00)#page4.tif

PATENT 505292581 REEL: 048114 FRAME: 0114

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PATENT REEL: 048114 FRAME: 0115

ASSIGNMENT

This assignment is by:

- Doug HAKALA
 19110 222 Way NE
 Woodinville, Washington 98077
- John M. ADAMS
 18023 Fales Road
 Snohomish, Washington 98296
- Randy HOLMBERG
 24005 30th Drive SE
 Bothell, Washington 98921

(referred to in this Assignment as "Assignors"), who reside at or have a mailing address as listed above.

This Assignment is to:

Assignee: SHOCKWAVE MEDICAL, INC.

Address: 48531 Warm Springs Boulevard, Suite 416, Fremont, California 94539 A corporation duly organized under and pursuant to the laws of: Delaware

(referred to in this Assignment as "Assignee"), who desire to acquire the entire right, title and interest in said inventions and said application for letters patent of the United States, and in any United States or foreign, letters patent or patents, to be obtained therefor and thereon.

Assignors have invented certain new and useful inventions in:

SHOCKWAVE CATHETER SYSTEM WITH ENERGY CONTROL

for which the following application has been filed in the United States of America.

Serial No.: 13/615,107

Filing Date: September 13, 2012

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged,

- Assignors hereby sell, assign, transfer and set over, to Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions, application for letters patent, and any and all letters patent or patents in the United States of America and all foreign countries which may be granted therefor and thereon, and in and to any and all provisionals, divisions, continuations, continuations-in-part and substitutions of said application, or reissues, re-examinations or extensions of said letters patent or patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee (including any right to institute actions and to recover for past, present and future infringement), for its own use and the use of its successors, legal representatives and assigns, to the full end of the term or terms for which letters patent or patents may be granted, as fully and entirely as the same would have been held and enjoyed by Assignors, had this sale and assignment not been made.
- Assignors represent, warrant and covenant that, at the time of execution and delivery of this agreement, Assignors are the sole and lawful owners of the entire right, title and interest in and to said inventions and said application for letters patent, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner set forth in this agreement.

1

- Assignors shall promptly sign and execute all papers and documents, take all lawful oaths, and do all acts necessary, required or useful for the procurement, maintenance, enforcement, defense or otherwise to secure title thereto to the Assignee, at the sole cost and expense of Assignee, its successors, legal representatives and assigns, in each case including, without limitation, arising from or relating to (a) said inventions, or said application for letters patent; (b) letters patent for said inventions in any country, including any reissue, re-examination or extension of or interference proceedings; or (c) any provisional, division, continuation, continuation-in-part, or substitutions of any application for letters patent or any reissues, re-examinations, extensions or interference proceedings involving any letters patent, to be obtained thereon. To be clear, for purposes of this paragraph, "desirable" shall include, without limitation, any act necessary or useful in connection with United States laws and/or international conventions.
- 4. Assignors hereby authorize and request the Commissioner of Patents in the United States to issue the above mentioned letters patents of the United States to Assignee as the assignee of said inventions and the letters patent to be issued thereon for the sole use of Assignee, its successors, legal representatives and assigns.
- 5. "I hereby grant Assignee's attorneys, all of Morrison & Foerster LLP, the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark office for recordation of this document, including the power to insert on this assignment the application number and filing date of said application when known."

In witness whereby, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date:	6-24-13	Signature:	JANA JANA
			Doug Hakala
Date:	TOTAL DESCRIPTION OF THE PROPERTY OF THE PROPE	Signature:	
			John M. Adams
Date:	THE RESIDENCE OF THE PARTY OF T	Signature: _	
			Randy Holmberg

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 19110 222 Way NE
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- 2. Assignors represent, warrant and covenant that, at the time of execution and delivery of this agreement, Assignors are the sole and lawful owners of the entire right, title and interest in and to said inventions and said application for letters patent, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner set forth in this agreement.

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In witness whereby, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date:	Signature:
Date: June 24, 2013 Date:	Signature: John M. Adams
- BARRAL WAS TO BE ABARDON	Signature: Randy Holmberg

ASSIGNMENT

This assignment is by:

- Doug HAKALA
 19110 222 Way NE
 Woodinville, Washington 98077
- John M. ADAMS
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In witness whereby, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date:	THE RESERVE OF THE PROPERTY OF	Signature:
		Doug Hakala
Date:		Signature:
) 04	John M. Adams
Date:	Une 24, 2013	Signature: Dady Ku
		Randy Holmberg