

TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

ETAS ID: TM431002

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	Security Interest (Revolver)

CONVEYING PARTY DATA

Name	Formerly	Execution Date	Entity Type
The Spectranetics Corporation		12/07/2015	Corporation: DELAWARE

RECEIVING PARTY DATA

Name:	MIDCAP FINANCIAL TRUST, as agent
Street Address:	7255 WOODMONT AVENUE, SUITE 200
Internal Address:	C/O MIDCAP FINANCIAL SERVICES, LLC, AS SERVICER
City:	BETHESDA
State/Country:	MARYLAND
Postal Code:	20814
Entity Type:	Statutory Trust: DELAWARE

PROPERTY NUMBERS Total: 10

Property Type	Number	Word Mark
Registration Number:	4993727	STELLAREX
Registration Number:	4966361	TURBO-POWER
Serial Number:	87067844	ALWAYS REACHING FARTHER
Serial Number:	87067850	
Serial Number:	86926277	NEXCIMER
Serial Number:	87067855	SPECTRANETICS
Serial Number:	87353486	THOR
Serial Number:	87353491	TURBO-HAMMER
Serial Number:	87353488	TURBO-THOR
Serial Number:	86278131	ENDURACOAT

CORRESPONDENCE DATA

Fax Number: 7036106200

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: +1 703 610 6100

Email: boxip@hoganlovells.com

Correspondent Name: Valerie Brennan, Hogan Lovells US LLP

Address Line 1: 7930 Jones Branch Drive, 9th Floor

Address Line 2: Attn: Box Intellectual Property

TRADEMARK

Address Line 4: McLean, VIRGINIA 22102

NAME OF SUBMITTER: Valerie Brennan

SIGNATURE: /vb/

DATE SIGNED: 06/13/2017

Total Attachments: 21

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INTELLECTUAL PROPERTY SECURITY AGREEMENT

This **INTELLECTUAL PROPERTY SECURITY AGREEMENT** is entered into as of the 7th day of December, 2015 by and between **MIDCAP FUNDING IV TRUST**, a Delaware statutory trust (“**Agent**”), **THE SPECTRANETICS CORPORATION**, a Delaware corporation, and **ANGIOSCORE INC.**, a Delaware corporation (each, a “**Grantor**” and collectively, the “**Grantors**”).

RECITALS

A. The Lenders have agreed to make certain advances of money and to extend certain financial accommodation to the Grantors (the “**Credit Extensions**”) in the amounts and manner set forth in that certain Credit and Security Agreement (Revolving Loan), by and between Agent, the Lenders and the Grantors dated as of the date hereof (as the same may be amended, modified or supplemented from time to time, the “**Credit Agreement**”, capitalized terms used herein are used as defined in the Credit Agreement). The Lenders are willing to make the Credit Extensions to the Grantors, but only upon the condition, among others, that the Grantors shall grant to Agent, for the ratable benefit of the Lenders, a security interest in certain Copyrights, Trademarks, Patents, and Mask Works (as each term is described below) to secure the obligations of the Grantors under the Credit Agreement.

B. Pursuant to the terms of the Credit Agreement, each Grantor has granted to Agent, for the ratable benefit of the Lenders, a security interest in all of such Grantor's right, title and interest, whether presently existing or hereafter acquired, in, to and under all of the Collateral.

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, and intending to be legally bound, as collateral security for the prompt and complete payment when due of its obligations under the Credit Agreement, each Grantor hereby represents, warrants, covenants and agrees as follows:

AGREEMENT

To secure its obligations under the Credit Agreement, each Grantor grants and pledges to Agent, for the ratable benefit of the Lenders, a security interest in all of such Grantor's right, title and interest in, to and under its intellectual property (all of which shall collectively be called the “**Intellectual Property Collateral**”), including, without limitation, the following:

(a) Any and all copyright rights, copyright applications, copyright registrations and like protections in each work or authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret, now or hereafter existing, created, acquired or held, including without limitation those set forth on Exhibit A attached hereto (collectively, the “**Copyrights**”);

(b) Any and all trade secrets, and any and all intellectual property rights in computer software and computer software products now or hereafter existing, created, acquired or held;

(c) Any and all design rights that may be available to such Grantor now or hereafter existing, created, acquired or held;

(d) All patents, patent applications and like protections including, without limitation, improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same, including without limitation the patents and patent applications set forth on Exhibit B attached hereto (collectively, the “**Patents**”);

(e) Any trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of such Grantor connected with and symbolized by such trademarks, including without limitation those set forth on Exhibit C attached hereto (collectively, the “**Trademarks**”);

(f) All mask works or similar rights available for the protection of semiconductor chips, now owned or hereafter acquired, including, without limitation those set forth on Exhibit D attached hereto (collectively, the “**Mask Works**”);

(g) Any and all claims for damages by way of past, present and future infringements of any of the rights included above, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the intellectual property rights identified above;

(h) All licenses or other rights to use any of the Copyrights, Patents, Trademarks, or Mask Works and all license fees and royalties arising from such use to the extent permitted by such license or rights;

(i) All amendments, extensions, renewals and extensions of any of the Copyrights, Trademarks, Patents, or Mask Works; and

(j) All proceeds and products of the foregoing, including without limitation all payments under insurance or any indemnity or warranty payable in respect of any of the foregoing.

Notwithstanding the foregoing, Intellectual Property Collateral shall not include intellectual property expressly excluded under Sections 9.1(b) and 9.1(c) of the Credit Agreement.

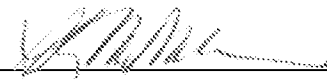
This security interest is granted in conjunction with the security interest granted to Agent, for the ratable benefit of the Lenders, under the Credit Agreement. The rights and remedies of Agent with respect to the security interest granted hereby are in addition to those set forth in the Credit Agreement and the other Financing Documents, and those which are now or hereafter available to Agent as a matter of law or equity. Each right, power and remedy of Agent provided for herein or in the Credit Agreement or any of the Financing Documents, or now or hereafter existing at law or in equity shall be cumulative and concurrent and shall be in addition to every right, power or remedy provided for herein and the exercise by Agent of any one or more of the rights, powers or remedies provided for in this Intellectual Property Security Agreement, the Credit Agreement or any of the other Financing Documents, or now or hereafter existing at law or in equity, shall not preclude the simultaneous or later exercise by any person, including Agent, of any or all other rights, powers or remedies.

[Signature page follows.]


IN WITNESS WHEREOF, the parties have caused this Intellectual Property Security Agreement to be duly executed by its officers thereunto duly authorized as of the first date written above.

GRANTORS:

THE SPECTRANETICS CORPORATION

By: 
Name: Stacy P. McMahan
Title: Chief Financial Officer

ANGIOSCORE INC.,

By: 
Name: Shar Matin
Title: President

Address:

The Spectranetics Corporation
9965 Federal Drive
Colorado Springs, CO 80921
Attn: Stacy P. McMahan
Facsimile: 719-633-4207
E-Mail: stacy.mcmahan@SPNC.com

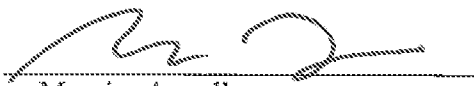
AGENT:

MIDCAP FUNDING IV TRUST

By: Apollo Capital Management, L.P.,
its investment manager

By: Apollo Capital Management GP, LLC,
its general partner

By:


Name: Maurice Amsellem

Title: Authorized Signatory

Address:

Midcap Financial Trust
c/o MidCap Financial Services, LLC, as servicer
7255 Woodmont Avenue, Suite 200
Bethesda, Maryland 20814
Attn: Account Manager for Spectranetics transaction
Facsimile: 301-941-1450
E-mail: notices@midcapfinancial.com

with a copy to:

Midcap Financial Trust
c/o MidCap Financial Services, LLC, as servicer
7255 Woodmont Avenue, Suite 200
Bethesda, Maryland 20814
Attn: General Counsel
Facsimile: 301-941-1450
E-mail: legalnotices@midcapfinancial.com

UNITED STATES ISSUED TRADEMARKS, SERVICE MARKS
AND COLLECTIVE MEMBERSHIP MARKS

REGISTRATIONS
ASSIGNED TO THE SPECTRANETICS CORPORATION

<u>Mark</u>	<u>Registration Number</u>	<u>Registration Date</u>
BRIDGE	5,110,715	December 27, 2016
CVX-300	1,723,546	October 13, 1992
DESIGN (New Diamond Logo)	4,638,019	November 11, 2014
ELCA	1,823,660	February 22, 1994
GLIDELIGHT	4,243,271	November 13, 2012
LLD	2,922,727	February 1, 2005
LLD EZ	3,562,200	January 13, 2009
QUICK-ACCESS	4,522,960	April 29, 2014
QUICK-CROSS	2,928,706	May 1, 2005
QUICK-CROSS CAPTURE	4,548,605	June 10, 2014
SIGHTRAIL	4,673,064	January 13, 2015
SLS	3,072,724	March 28, 2006
SPECTRANETICS	1,741,106	December 22, 1992
SPECTRANETICS	4,708,930	March 24, 2015
SPECTRANETICS	4,708,931	March 24, 2015
SPECTRANETICS (Stylized)	1,717,853	September 22, 1992
SPNC	3,737,800	January 12, 2010
STELLAREX	4,993,727	July 5, 2016
TIGHTRAIL	4,673,065	January 13, 2015
TIGHTRAIL MINI	4,729,002	April 28, 2015
TORQMAX	3,832,560	August 10, 2010
TURBO ELITE	3,367,148	January 8, 2008
TURBO-BOOSTER	4,712,538	March 31, 2015

<u>Mark</u>	<u>Registration Number</u>	<u>Registration Date</u>
TURBO-POWER	4,966,361	May 24, 2016
TURBO-TANDEM	3,782,516	April 27, 2010
TURBO-TAPE	4,814,469	September 15, 2015
VISISHEATH	3,768,583	March 30, 2010

REGISTRATIONS
ASSIGNED TO ANGIOSCORE INC.

<u>Mark</u>	<u>Registration Number</u>	<u>Registration Date</u>
ANGIOSCORE	2,931,808	March 8, 2005
ANGIOSCULPT	2,920,010	January 18, 2005
HYDROCROSS	4,832,482	October 13, 2015

APPLICATIONS
ASSIGNED TO THE SPECTRANETICS CORPORATION

<u>Mark</u>	<u>Application Number</u>	<u>Application Filing Date</u>
ALWAYS REACHING FARTHER	87/067,844	June 10, 2016
BRIDGE TO SURGERY	86,721,317	August 11, 2015
DESIGN (New Diamond Logo)	87/067,850	June 10, 2016
NETICS MEDICAL	86/541,303	February 20, 2015
NEXCIMER	86/926,277	March 2, 2016
SPECTRANETICS	87/067,855	June 10, 2016
SPNC	86/414,400	October 3, 2014
THOR	87/353,486	February 28, 2017
TURBO ELITE BTK	86/441,590	October 31, 2014
TURBO-HAMMER	87/353,491	February 28, 2017

TURBO-THOR

87/353,488

February 28, 2017

ENDURACOAT

86/278,131

May 12, 2014

APPLICATIONS
ASSIGNED TO ANGIOSCORE INC.

NONE

COLLECTIVE MEMBERSHIP MARKS

NONE

UNREGISTERED MARKS

NONE

UNITED STATES PATENTS

**UNITED STATES ISSUED PATENTS – ASSIGNED TO THE SPECTRANETICS
CORPORATION**

<u>Title</u>	<u>Patent Number</u>	<u>Issue Date</u>
ASSEMBLIES AND METHODS FOR ADVANCING A GUIDE WIRE THROUGH BODY TISSUE	5,951,482	9/14/1999
PHOTOTHERAPY DEVICE AND METHOD	5,976,124	11/2/1999
SYSTEMS AND METHODS FOR GUIDING A MEDICAL INSTRUMENT THROUGH A BODY	6,048,349	4/11/2000
SYSTEMS AND METHODS FOR GUIDING A MEDICAL INSTRUMENT THROUGH A BODY	6,063,093	5/16/2000
EXPANDABLE LASER CATHETER	6,106,515	8/22/2000
LEAD LOCKING DEVICE AND METHOD	6,167,315	12/26/2000

ASSEMBLIES AND METHODS FOR ADVANCING A GUIDE WIRE THROUGH BODY TISSUE	6,193,676	2/27/2001
SYSTEM AND METHOD FOR CONTROLLING TISSUE ABLATION	6,228,076	5/8/2001
LIGHT DELIVERY CATHETER AND METHODS FOR THE USE THEREOF	6,290,668	9/18/2001
LEAD LOCKING DEVICE AND METHOD	6,324,434	11/27/2001
CATHETER FOR CONTROLLING THE ADVANCEMENT OF A GUIDE WIRE	6,394,976	5/28/2002
SYSTEMS AND METHODS FOR GUIDING A MEDICAL INSTRUMENT THROUGH A BODY	6,463,313	10/8/2002
EXPANDABLE LASER CATHETER	6,485,485	11/26/2002
SYSTEMS AND METHODS FOR STEERING A CATHETER THROUGH BODY TISSUE	6,663,621	12/16/2003
CATHETER HANDLE FOR CONTROLLING THE ADVANCEMENT OF A GUIDE WIRE	6,752,800	6/22/2004
LEAD LOCKING DEVICE AND METHOD	6,772,014	8/3/2004
METHOD AND APPARATUS FOR GUIDING A GUIDE WIRE	6,842,639	1/11/2005
RADIO FREQUENCY GUIDE WIRE ASSEMBLY WITH OPTICAL COHERENCE REFLECTOMETRY GUIDANCE	6,852,109	2/8/2005
DEFLECTING CATHETER	6,951,554	10/4/2005
SYSTEMS AND METHODS FOR GUIDING A MEDICAL INSTRUMENT THROUGH A BODY	6,970,732	11/29/2005
PROXIMAL COUPLER FOR OPTICAL FIBERS	7,050,692	5/23/2006
EXPANDABLE LASER CATHETER	7,288,087	10/30/2007
SHAPEABLE INTRALUMINAL DEVICE AND METHOD THEREFOR	7,303,533	12/4/2007
LEAD LOCKING DEVICE AND METHOD	7,499,756	3/3/2009

RADIO FREQUENCY GUIDE WIRE ASSEMBLY WITH OPTICAL COHERENCE REFLECTOMETRY GUIDANCE	7,563,262	7/21/2009
APPARATUS AND METHODS FOR DIRECTIONAL DELIVERY OF LASER ENERGY	7,572,254	8/11/2009
ENDOCARDIAL LEAD CUTTING APPARATUS	7,651,503	1/26/2010
THROMBECTOMY AND SOFT DEBRIS REMOVAL DEVICE	7,666,161	2/23/2010
APPARATUS AND METHODS FOR DIRECTIONAL DELIVERY OF LASER ENERGY	7,846,153	12/7/2010
SHAPEABLE INTRALUMINAL DEVICE AND METHOD THEREFOR	7,951,094	5/31/2011
THROMBECTOMY AND SOFT DEBRIS REMOVAL DEVICE	7,959,608	6/14/2011
THROMBECTOMY AND SOFT DEBRIS REMOVAL DEVICE	7,976,528	7/12/2011
ENDOCARDIAL LEAD REMOVING APPARATUS	7,993,359	8/9/2011
LOW-LOSS POLARIZED LIGHT DIVERSION	8,059,274	11/15/2011
ENDOCARDIAL LEAD REMOVING APPARATUS	8,097,012	1/17/2012
LASER CATHETER CALIBRATOR	8,100,893	1/24/2012
MULTI-PORT LIGHT DELIVERY CATHETER AND METHODS FOR THE USE THEREOF	8,104,483	1/31/2012
EXPANDABLE LASER CATHETER	8,182,474	5/22/2012
LASER-ASSISTED GUIDEWIRE HAVING A VARIABLE STIFFNESS SHAFT	8,414,568	4/9/2013
LEAD LOCKING DEVICE AND METHOD	8,428,747	4/23/2013
EXPANDABLE LASER CATHETER	8,465,480	6/18/2013
CARDIOVASCULAR IMAGING SYSTEM	8,545,488	10/1/2013

RAPID EXCHANGE BIAS LASER CATHETER DESIGN	8,628,519	1/14/2014
ECCENTRIC BALLOON LASER CATHETER	8,702,773	4/22/2014
LASER-ASSISTED GUIDEWIRE HAVING A VARIABLE STIFFNESS SHAFT	8,758,333	6/24/2014
THROMBECTOMY AND SOFT DEBRIS REMOVAL DEVICE	8,920,402	12/30/2014
REENTRY CATHETER AND METHOD THEREOF	8,956,376	2/17/2015
RETRACTABLE SEPARATING SYSTEM AND METHODS	8,961,551	2/24/2015
TAPERED LIQUID LIGHT GUIDE	8,979,828	3/17/2015
REENTRY CATHETER AND METHOD THEREOF	8,998,936	4/7/2015
TISSUE SEPARATING SYSTEMS AND METHODS	9,028,520	5/12/2015
INTRA-VASCULAR DEVICE WITH PRESSURE DETECTION CAPABILITIES USING PRESSURE SENSITIVE MATERIAL	9,066,742	6/30/2015
NEEDLE AND GUIDEWIRE HOLDER	9,162,038	10/20/2015
SNARING SYSTEMS AND METHODS	9,220,523	12/29/2015
EXPANDABLE LASER CATHETER	9,254,175	2/9/2016
LASER-ASSISTED GUIDEWIRE HAVING A VARIABLE STIFFNESS SHAFT	9,283,039	3/15/2016
DEVICE AND METHOD OF ABLATIVE CUTTING WITH HELICAL TIP	9,283,040	3/15/2016
INTRA-VASCULAR DEVICE WITH PRESSURE DETECTION CAPABILITIES USING PRESSURE SENSITIVE MATERIAL	9,289,173	3/22/2016
RETRACTABLE SEPARATING SYSTEMS AND METHODS	9,289,226	3/22/2016
ALARM FOR LEAD INSULATION ABNORMALITY	9,291,663	3/22/2016

RAPID EXCHANGE BIAS LASER CATHETER DESIGN	9,308,047	4/12/2016
ASSISTED CUTTING BALLOON	9,320,530	4/26/2016
TAPERED LIQUID LIGHT GUIDE	9,339,337	5/17/2016
MATERIAL CAPTURING GUIDEWIRE	9,345,508	5/24/2016
EXPANDABLE MEMBER FOR PERFORATION OCCLUSION	9,358,042	6/7/2016
OFFSET CATHETER	9,408,665	8/9/2016
REENTRY CATHETER AND METHOD THEREOF	9,408,998	8/9/2016
TISSUE SLITTING METHODS AND SYSTEMS	9,413,896	8/9/2016
STABILIZATION DEVICE ASSISTED LEAD TIP REMOVAL	9,421,035	8/23/2016
LIQUID LIGHT-GUIDE CATHETER WITH OPTICALLY DIVERGING TIP	9,421,065	8/23/2016
LASER ABLATION CATHETER	9,456,872	10/4/2016
EXPANDABLE LASER CATHETER	9,566,116	2/14/2017
MEDICAL DEVICE FOR REMOVING AN IMPLANTED OBJECT	9,603,618	3/28/2017
CATHETER MOVEMENT CONTROL	9,623,211	4/18/2017
RADIOPAQUE TAPE	D740,946	10/13/2015
RADIOPAQUE TAPE	D742,520	11/3/2015
RADIOPAQUE TAPE	D742,521	11/3/2015
RADIOPAQUE TAPE	D742,522	11/3/2015

RADIOPAQUE TAPE	D748,266	1/26/2016
SHEATH	D753,289	4/5/2016
SHEATH SET	D753,290	4/5/2016
MEDICAL DEVICE HANDLE	D765,243	8/30/2016
MEDICAL DEVICE HANDLE	D770,616	11/1/2016
MEDICAL DEVICE HANDLE	D775,728	1/3/2017

UNITED STATES ISSUED PATENTS – ASSIGNED TO ANGIOSCORE INC.

<u>Title</u>	<u>Patent Number</u>	<u>Issue Date</u>
FACILITATED BALLOON CATHETER EXCHANGE	7,022,104	4/4/2006
FACILITATED BALLOON CATHETER EXCHANGE	7,513,886	4/7/2009
APPARATUS AND METHODS FOR TREATING HARDENED VASCULAR LESIONS	7,686,824	3/30/2010
BALLOON CATHETER WITH NON-DEPLOYABLE STENT	7,691,119	4/6/2010
BALLOON CATHETER WITH NON-DEPLOYABLE STENT	7,931,663	4/26/2011
APPARATUS AND METHODS FOR TREATING HARDENED VASCULAR LESIONS	7,955,350	6/7/2011
APPARATUS AND METHODS FOR TREATING HARDENED VASCULAR LESIONS	8,080,026	12/20/2011
APPARATUS AND METHODS FOR TREATING HARDENED VASCULAR LESIONS	8,454,636	6/4/2013

METHOD AND SYSTEM FOR TREATING VALVE STENOSIS	8,632,559	1/21/2014
APPARATUS AND METHODS FOR TREATING HARDENED VASCULAR LESIONS	8,721,667	5/13/2014
METHODS AND SYSTEMS FOR DELIVERING SUBSTANCES INTO LUMINAL WALLS	8,864,743	10/21/2014
COATING FORMULATIONS FOR SCORING OR CUTTING BALLOON CATHETERS	9,011,896	4/21/2015
COATING FORMULATIONS FOR SCORING OR CUTTING BALLOON CATHETERS	9,072,812	7/7/2015
COATING FORMULATIONS FOR SCORING OR CUTTING BALLOON CATHETERS	9,078,951	7/14/2015
COATING FORMULATIONS FOR SCORING OR CUTTING BALLOON CATHETERS	9,101,684	8/11/2015
COATING FORMULATIONS FOR SCORING OR CUTTING BALLOON CATHETERS	9,173,977	11/3/2015
METHOD AND SYSTEM FOR TREATING VALVE STENOSIS	9,351,756	5/31/2016
METHOD AND SYSTEM FOR TREATING VALVE STENOSIS	9,364,254	6/14/2016
BALLOON CATHETER WITH NON-DEPLOYABLE STENT	9,375,328	6/28/2016
METHODS AND SYSTEMS FOR DELIVERING SUBSTANCES INTO LUMINAL WALLS	9,586,031	3/7/2017

**UNITED STATES PATENT APPLICATIONS
ASSIGNED TO THE SPECTRANETICS CORPORATION**

<u>Title</u>	<u>Serial Number</u>	<u>Filing Date</u>
ENDOCARDIAL LEAD CUTTING APPARATUS	11/187,553	1/22/2005
LIQUID LIGHT GUIDE CATHETER HAVING BIOCOMPATIBLE LIQUID LIGHT GUIDE MEDIUM	11/923,488	10/24/2007

TUNABLE NANOPARTICLE TAGS TO ENHANCE TISSUE RECOGNITION	11/966,214	12/28/2007
HYPOTUBE BASED SUPPORT CATHETER	13/390,140	12/12/2011
DEVICE AND METHOD FOR CAPTURING GUIDEWIRES	13/390,146	12/12/2011
ENDOCARDIAL LEAD REMOVING APPARATUS	13/333,783	12/21/2011
REENTRY CATHETER AND METHOD THEREOF	14/128,050	6/29/2012
SYSTEM AND METHOD OF ABLATIVE CUTTING AND PULSED VACUUM ASPIRATION	13/800,651	3/13/2013
LASER CATHETER WITH HELICAL INTERNAL LUMEN	13/800,675	3/13/2013
WIRE CENTERING SHEATH AND METHOD	13/798,985	3/13/2013
ANGULAR OPTICAL FIBER CATHETER	13/800,864	3/13/2013
MATERIAL CAPTURING GUIDEWIRE	13/801,149	3/13/2013
TISSUE SLITTING METHODS AND SYSTEMS	13/828,231	3/14/2013
INTELLIGENT CATHETER	13/804,812	3/14/2013
SMART MULTIPLEXED MEDICAL LASER SYSTEM	13/804,923	3/14/2013
THREADED LEAD EXTRACTION DEVICE	13/828,491	3/14/2013
EXPANDABLE LEAD JACKET	13/828,536	3/14/2013
TISSUE SLITTING METHODS AND SYSTEMS	13/828,383	3/14/2013
TISSUE SLITTING METHODS AND SYSTEMS	13/828,441	3/14/2013
CONTROLLER TO SELECT OPTICAL CHANNEL PARAMETERS IN A CATHETER	13/826,053	3/14/2013

RETRACTABLE BLADE FOR LEAD REMOVAL DEVICE	13/834,405	3/15/2013
CARDIOVASCULAR IMAGING SYSTEM	13/968,993	8/16/2013
ARCH SHAPED LASER CATHETER	14/438,176	10/24/2013
BIASING LASER CATHETER: MONORAIL DESIGN	14/152,334	1/10/2014
ECCENTRIC BALLOON LASER CATHETER	14/175,359	2/7/2014
DISTAL END SUPPORTED TISSUE SLITTING APPARATUS	14/192,445	2/27/2014
DILATOR SHEATH SET	14/195,692	3/3/2014
SURGICAL INSTRUMENT FOR REMOVING AN IMPLANTED OBJECT	14/771,775	3/13/2014
LASER ASSISTED THROMBOLYSIS	14/916,411	9/2/2014
THROMBECTOMY AND SOFT DEBRIS REMOVAL DEVICE	14/562,014	12/5/2014
SURGICAL INSTRUMENT INCLUDING AN INWARDLY DEFLECTING CUTTING TIP FOR REMOVING AN IMPLANTED OBJECT	14/577,976	12/19/2014
MEDICAL DEVICE FOR REMOVING AN IMPLANTED OBJECT	14/627,950	2/20/2015
REENTRY CATHETER AND METHOD THEREOF	14/631,592	2/25/2015
MULTIPLE CONFIGURATION SURGICAL CUTTING DEVICE	14/635,742	3/2/2015
TISSUE SEPARATING SYSTEMS AND METHODS	14/682,779	4/9/2015
MATERIAL REMOVAL CATHETER HAVING AN EXPANDABLE DISTAL END	14/700,550	4/30/2015
SEGMENTED BALLOON LASER ABLATION CATHETER	14/700,556	4/30/2015
REMOTE CONTROL SWITCH FOR A LASER SYSTEM	14/700,576	4/30/2015

SYSTEM AND METHOD FOR COORDINATED LASER DELIVERY AND IMAGING	14/723,956	5/28/2015
SURGICAL INSTRUMENT FOR REMOVING AN IMPLANTED OBJECT	14/725,781	5/29/2015
SYSTEM AND METHOD OF ABLATIVE CUTTING AND VACUUM ASPIRATION THROUGH PRIMARY ORIFICE AND AUXILIARY SIDE PORT	14/725,766	5/29/2015
TERAHERTZ SCANNING SYSTEM FOR AN INTRAVASCULAR SPACE	14/728,168	6/2/2015
CONVERTIBLE OPTICAL AND PRESSURE WAVE ABLATION SYSTEM AND METHOD	14/735,946	6/10/2015
NEEDLE AND GUIDEWIRE HOLDER	14/857,245	9/17/2015
ELECTRODEPOSITION COATING FOR MEDICAL DEVICES	14/869,331	9/29/2015
LEAD REMOVAL SLEEVE	14/877,683	10/7/2015
LASER ENERGY DELIVERY DEVICES INCLUDING LASER TRANSMISSION DETECTION SYSTEMS AND METHODS	14/925,348	10/28/2015
COLLAPSING COIL COUPLING FOR LEAD EXTENSION AND EXTRACTION	14/954,169	11/30/2015
WIRE HOOK COUPLING FOR LEAD EXTENSION AND EXTRACTION	14/954,177	11/30/2015
SNARING SYSTEMS AND METHODS	14/978,731	12/22/2015
MULTI-LOOP COUPLING FOR LEAD EXTENSION AND EXTRACTION	14/983,248	12/29/2015
ELECTRICALLY-INDUCED FLUID FILLED BALLOON CATHETER	14/984,294	12/30/2015
ELECTRICALLY-INDUCED PRESSURE WAVE EMITTING CATHETER SHEATH	14/984,710	12/30/2015
LASER-INDUCED PRESSURE WAVE EMITTING CATHETER SHEATH	14/984,308	12/30/2015
LASER-INDUCED FLUID FILLED BALLOON CATHETER	14/984,050	12/30/2015
DEVICE AND METHOD OF ABLATIVE CUTTING WITH HELICAL TIP	14/994,921	1/13/2016

RETRACTABLE SEPARATING SYSTEMS AND METHODS	14/996,679	1/15/2016
LASER-ASSISTED GUIDEWIRE HAVING A VARIABLE STIFFNESS SHAFT	15/061,594	3/4/2016
INTRA-VASCULAR DEVICE WITH PRESSURE DETECTION CAPABILITIES USING PRESSURE SENSITIVE MATERIAL	15/064,265	3/8/2016
TEMPORARY OCCLUSION BALLOON DEVICES AND METHODS FOR PREVENTING BLOOD FLOW THROUGH A VASCULAR PERFORATION	15/071,533	3/16/2016
ALARM FOR LEAD INSULATION ABNORMALITY	15/072,859	3/17/2016
APPARATUS AND METHOD FOR BALLOON ANGIOPLASTY	15/090,736	4/5/2016
RAPID EXCHANGE BIAS LASER CATHETER DESIGN	15/094,612	4/8/2016
TAPERED LIQUID LIGHT GUIDE	15/138,949	4/26/2016
MATERIAL CAPTURING GUIDEWIRE	15/145,516	5/3/2016
EXPANDABLE MEMBER FOR PERFORATION OCCLUSION	15/174,045	6/6/2016
ENDOCARDIAL LEAD CUTTING APPARATUS	15/218,444	7/25/2016
LASER-INDUCED PRESSURE WAVE EMITTING CATHETER SHEATH	62/366,409	7/25/2016
LASER-INDUCED PRESSURE WAVE EMITTING CATHETER SHEATH	62/366,498	7/25/2016
REENTRY CATHETER AND METHOD THEREOF	15/227,800	8/3/2016
TISSUE SLITTING METHODS AND SYSTEMS	15/229,873	8/5/2016
OFFSET CATHETER	15/230,148	8/5/2016
STABILIZATION DEVICE ASSISTED LEAD TIP REMOVAL	15/241,673	8/19/2016
LIQUID LIGHT-GUIDE CATHETER WITH OPTICALLY DIVERGING TIP	15/243,609	8/22/2016

METHODS FOR TREATING VASCULAR STENOSES INCLUDING LASER ATHERECTOMY AND DRUG DELIVERY VIA DRUG-COATED BALLOONS	15/246,815	8/25/2016
MEDICAL DEVICE FOR REMOVING AN IMPLANTED OBJECT USING LASER CUT HYPOTUBES	15/249,206	8/26/2016
MEDICAL DEVICE HANDLE	29/575,820	8/29/2016
SUPPORT CATHETER AND GUIDEWIRE KIT FOR CROSSING A VASCULAR OCCLUSION	15/274,181	9/23/2016
LASER ABLATION CATHETER	15/281,981	9/30/2016
MEDICAL DEVICE HANDLE	29/580,392	10/7/2016
LIQUID LIGHT GUIDE CATHETER HAVING BIOCOMPATIBLE LIQUID LIGHT GUIDE MEDIUM	15/372,141	12/7/2016
LASER ENERGY DELIVERY DEVICES INCLUDING LASER TRANSMISSION DETECTION SYSTEMS AND METHODS	15/392,987	12/28/2016
EXPANDING TUBE COUPLING FOR REVERSIBLE LEAD LOCKING	62/440,211	12/29/2016
ROTATING AND SLIDING SLEEVE FOR HANDLE PORTION OF LASER CATHETER	62/440,249	12/29/2016
INTERNAL RAIL SYSTEM FOR LASER CATHETER	62/440,257	12/29/2016
LASER-INDUCED PRESSURE WAVE EMITTING CATHETER SHEATH	62/441,021	12/30/2016
LASER-INDUCED PRESSURE WAVE EMITTING CATHETER SHEATH	62/441,030	12/30/2016
MEDICAL DEVICE FOR REMOVING AN IMPLANTED OBJECT	15/406,033	1/13/2017
EXPANDABLE LASER CATHETER	15/429,941	2/10/2017
MEDICAL DEVICE FOR REMOVING AN IMPLANTED OBJECT	15/442,006	2/24/2017
MEDICAL DEVICE FOR REMOVING AN IMPLANTED OBJECT	15/462,357	3/17/2017
LASER ENERGY DELIVERY DEVICES INCLUDING DISTAL TIP ORIENTATION INDICATORS	15/469,240	3/24/2017

LASER ENERGY DELIVERY DEVICES INCLUDING DISTAL TIP ORIENTATION INDICATORS	15/469,247	3/24/2017
TEMPORARY OCCLUSION BALLOON DEVICES AND METHODS FOR PREVENTING BLOOD FLOW THROUGH A VASCULAR PERFORATION	15/474,455	3/30/2017
LASER-INDUCED FLUID FILLED BALLOON CATHETER	15/476,183	3/31/2017

**UNITED STATES PATENT APPLICATIONS
ASSIGNED TO ANGIOSCORE, INC.**

<u>Title</u>	<u>Serial Number</u>	<u>Filing Date</u>
METHODS AND SYSTEMS FOR DELIVERING SUBSTANCES INTO LUMINAL WALLS	11/411,635	4/26/2006
BALLOON CATHETER WITH NON-DEPLOYABLE STENT	13/022,489	2/7/2011
BALLOON CATHETER WITH NON-DEPLOYABLE STENT	13/489,250	6/5/2012
BALLOON CATHETER WITH NON-DEPLOYABLE STENT HAVING IMPROVED STABILITY	14/048,955	10/8/2013
APPARATUS AND METHODS FOR TREATING HARDENED VASCULAR LESIONS	14/275,264	5/12/2014
COATING FORMULATIONS FOR SCORING OR CUTTING BALLOON CATHETERS	14/731,715	6/5/2015
COATING FORMULATIONS FOR SCORING OR CUTTING BALLOON CATHETERS	14/877,284	10/7/2015
METHOD AND SYSTEM FOR TREATING VALVE STENOSIS	15/164,611	5/25/2016
APPARATUS AND METHODS FOR TREATING HARDENED VASCULAR LESIONS	62/381,751	8/31/2016
TRIGGERED RELEASE MECHANISM TO IMPROVE EFFICACY OF DRUG COATED BALLOONS	15/282,579	9/30/2016
BALLOON ANGIOPLASTY CATHETER COATING TO ENCOURAGE VESSEL REPAIR AND FURTHER REDUCE RESTENOSIS	15/354,237	11/17/2016

BALLOON CATHETER WITH NON-DEPLOYABLE STENT HAVING IMPROVED STABILITY	15/373,933	12/9/2016
METHODS AND SYSTEMS FOR DELIVERING SUBSTANCES INTO LUMINAL WALLS	15/431,302	2/13/2017

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Registration Number / Date: TXu001723730 / 2010-10-20

Application Title: Spectranetics Laser Radiation and Hazard Manual for the Safe Operation and Service of the CVX-300 Excimer Laser System.

Title: Spectranetics Laser Radiation and Hazard Manual for the Safe Operation and Service of the CVX-300 Excimer Laser System.

Description: Electronic Deposit.

Copyright Claimant: The Spectranetics Corporation. Address: 9965 Federal Drive, Colorado Springs, CO, 80921, United States.

Date of Creation: 2010

Authorship on Application: The Spectranetics Corporation, employer for hire; Domicile: United States; Citizenship: United States. Authorship: text, photograph(s), compilation, editing, artwork.

Rights and Permissions: Roger Wertheimer, Spectranetics, 9965 Federal Drive, Colorado Springs, CO, 80921, United States, (719) 633-8333, roger.wertheimer@spnc.com

Registration Number / Date: TXu001819329 / 2012-07-18

Application Title: Laser Radiation and Hazard Manual for the Safe Operation and Service of the CVX-300-P Excimer Laser System.

Title: Laser Radiation and Hazard Manual for the Safe Operation and Service of the CVX-300-P Excimer Laser System.

Description: Electronic file (eService)

Copyright Claimant: The Spectranetics Corporation. Address: 9965 Federal Drive, Colorado Springs, CO, 80921, United States.

Date of Creation: 2012

Authorship on Application: The Spectranetics Corporation, employer for hire; Domicile: United States; Citizenship: United States. Authorship: text, photograph(s), compilation, editing, artwork.

Rights and Permissions: Roger Wertheimer, The Spectranetics Corporation, 9965 Federal Drive, Colorado Springs, CO, 80921, United States, (719) 633-8333, roger.wertheimer@spnc.com

LICENSES

The Company is party to license agreements under which the Company licenses patents covering certain aspects of the Company's products. For example, the Company has an amended vascular laser angioplasty catheter license agreement with SurModics, Inc., under which SurModics has granted the Company a worldwide non-exclusive license to use a lubricious coating that is applied to the Company's products using certain SurModics patents. The Company pays SurModics royalties as a specified percentage of net sales of products using its patents, subject to a quarterly minimum royalty. The license agreement expires on the later of the expiration of the last licensed patent or the fifteenth anniversary of the date a licensed product is first sold unless terminated earlier (1) by either party if the other party is involved with insolvency, dissolution or bankruptcy proceedings, (2) by the Company upon 90 days' advance written notice, or (3) by SurModics upon 60 days' advance written notice if the Company has failed to perform its obligations under the agreement and has not cured such breach during such 60-day period, or if the royalties the Company pays SurModics are not greater than specified levels. In 2016, the Company incurred royalties of approximately \$1.4 million to SurModics under this license agreement.

In December 2009, the Company entered into a license agreement with Peter Rentrop, M.D. As part of the agreement, the Company received a worldwide, exclusive license to certain patents and patent applications owned by Dr. Rentrop, which, in general, apply to laser catheters with a tip diameter less than one millimeter. The Company pays Dr. Rentrop royalties of a specified percentage of net sales of products using his patents subject to a quarterly minimum royalty. The license agreement expires in January 2020, unless terminated earlier in accordance with its terms. In 2016, the Company incurred royalties of approximately \$3.0 million to Dr. Rentrop under this license agreement.

In March 2010, AngioScore entered into a development and license agreement with InnoRa GmbH, Ulrich Speck and Bruno Scheller. As part of the agreement, AngioScore received an exclusive license to certain InnoRa intellectual property related to drug coatings of certain balloon catheters in the field of the treatment of coronary artery disease and peripheral arterial disease, and AngioScore obtained ownership of any new technology developed under the agreement. AngioScore pays InnoRa royalties of a specified percentage of net sales of products developed under the agreement. The exclusive rights granted by InnoRa are subject to AngioScore meeting certain milestones. If AngioScore does not satisfy the milestones, then the exclusive license rights will convert to a non-exclusive license, and AngioScore will license certain new technology developed under the agreement to InnoRa. In 2016, AngioScore incurred an immaterial amount in royalties under this license agreement.