

## TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

ETAS ID: TM571913

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT		
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT OF THE ENTIRE INTEREST AND THE GOODWILL		
<b>CONVEYING PARTY DATA</b>			
<b>Name</b>	<b>Formerly</b>	<b>Execution Date</b>	<b>Entity Type</b>
TELEFLEX INNOVATIONS S.À R.L.		12/16/2019	PRIVATE LIMITED LIABILITY COMPANY: LUXEMBOURG
<b>RECEIVING PARTY DATA</b>			
<b>Name:</b>	Teleflex Medical Devices S.à.r.l.		
<b>Street Address:</b>	26, boulevard de Kockelscheur		
<b>City:</b>	Luxembourg		
<b>State/Country:</b>	LUXEMBOURG		
<b>Postal Code:</b>	L-1821		
<b>Entity Type:</b>	PRIVATE LIMITED LIABILITY COMPANY: LUXEMBOURG		
<b>PROPERTY NUMBERS Total: 19</b>			
<b>Property Type</b>	<b>Number</b>	<b>Word Mark</b>	
<b>Registration Number:</b>	2517658	ACOLYSIS	
<b>Registration Number:</b>	2894004	AUTO-FILL	
<b>Registration Number:</b>	3972115	DRAINER	
<b>Registration Number:</b>	2754442	D-STAT	
<b>Registration Number:</b>	3790069	GREBSET	
<b>Registration Number:</b>	3797195	GUIDELINER	
<b>Registration Number:</b>	3024795	LANGSTON	
<b>Registration Number:</b>	3752325	MINNIE	
<b>Registration Number:</b>	3353155	PRONTO	
<b>Registration Number:</b>	5256745	REPLAS	
<b>Registration Number:</b>	2568826	SMARTNEEDLE	
<b>Registration Number:</b>	5267675	SPECTRE	
<b>Registration Number:</b>	3632771	THROMBI-GEL	
<b>Registration Number:</b>	3032755	THROMBIX	
<b>Registration Number:</b>	4721667	TURNPIKE	
<b>Registration Number:</b>	5200901	TRAPLINER	
<b>Registration Number:</b>	3122103	TWINPASS	
<b>Registration Number:</b>	2846854	VARI-LASE	
<b>Registration Number:</b>	3700341	VENTURE	
<b>TRADEMARK</b>			

CH \$490.00 2517658

**CORRESPONDENCE DATA****Fax Number:** 6123393061*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:** 612-373-6900**Email:** tmg@slwip.com**Correspondent Name:** Schwegman Lundberg & Woessner P.A.**Address Line 1:** P.O. Box 2938**Address Line 4:** Minneapolis, MINNESOTA 55402**NAME OF SUBMITTER:** Jennifer Tintor**SIGNATURE:** /Jennifer Tintor/**DATE SIGNED:** 04/14/2020**Total Attachments: 23**

source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page1.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page2.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page3.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page4.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page5.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page6.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page7.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page8.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page9.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page10.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page11.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page12.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page13.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page14.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page15.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page16.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page17.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page18.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page19.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page20.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page21.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page22.tif  
source=Assignment1of2-20190930-IPConfirmatoryAssignment-TISarltoTMDSarl#page23.tif

## CONFIRMATION OF PATENT AND TRADEMARK ASSIGNMENT

### TELEFLEX MEDICAL DEVICES S.À R.L.

This Confirmation of Patent and Trademark Assignment (hereinafter referred to as “Assignment”) is made by Teleflex Medical Devices S.à r.l., a private limited liability company (*société à responsabilité limitée*) formed under the laws of the Grand Duchy of Luxembourg, having its registered office at 26, boulevard de Kockelscheuer, L-1821 Luxembourg, Grand Duchy of Luxembourg, and registered with the Luxembourg Trade and Companies Register (*Registre de Commerce et des Sociétés de Luxembourg*) under registration number B 185.177 (hereinafter referred to as “Teleflex Medical Devices”).

Teleflex Medical Devices and Teleflex Innovations S.à r.l., a private limited liability company (*société à responsabilité limitée*) formed under the laws of the Grand Duchy of Luxembourg, having its registered office at 26, boulevard de Kockelscheuer, L-1821 Luxembourg, Grand Duchy of Luxembourg, and registered with the Luxembourg Trade and Companies Register (*Registre de Commerce et des Sociétés de Luxembourg*) under registration number B 216.223 (hereinafter referred to as “Teleflex Innovations”) are parties to certain agreements dated September 30, 2019, in which Teleflex Innovations granted to Teleflex Medical Devices all assets and rights, including all intellectual property rights, as set forth in those agreements. Teleflex Innovations was merged into Teleflex Medical Devices and subsequently dissolved as a result of the merger.

Teleflex Medical Devices hereby confirms that, as stated in the agreements dated September 30, 2019, Teleflex Innovations assigned to Teleflex Medical Devices all right, title and interest in and to the patents and patent applications and trademarks and trademark applications listed on Exhibit A attached hereto, any continuations, continuations-in-part, divisionals, reissues, or other patents or patent applications claiming priority to any of the patents or patent applications listed on Exhibit A, and any renewals and extensions of the trademarks or trademark applications, unregistered and common law rights in trademarks and services marks, and the goodwill of the business associated with the trademarks or trademark applications listed on Exhibit A.

*[Signature page follows]*




TELEFLEX MEDICAL DEVICES S.À R.L.

By: Jacob Elguicze  
Its: Manager, Category A  
NOTARY

Date



By: Luc Sunnen  
Its: Manager, Category B  
NOTARY

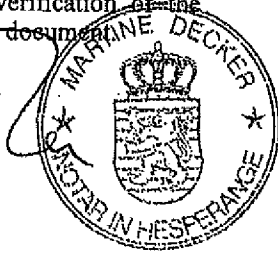
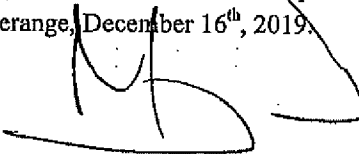


Date

The undersigned Maître Martine DECKER, notary residing in Hesperange (GD of Luxembourg), hereby certifies and attests the signature of Mr Luc SUNNEN apposed on the present document.

This certification doesn't contain any verification of the accuracy of facts mentioned in the present document.

Hesperange, December 16<sup>th</sup>, 2019.



**EXHIBIT A**

Patents									
Attorney Ref.	Status	Title	Country	Application No.	Filing Date	Patent No.	Issue Date		
VSI-0984-US01	Abandoned	ULTRASONIC TRANSMISSION APPARATUS	U.S.	07/842,529	2/27/1992	5269297	12/14/1993		
VSI-0985-US01	Expired	IN VIVO ULTRASONIC SYSTEM WITH ANGIOPLASTY AND ULTRASONIC CONTRAST IMAGING	U.S.	07/449,465	12/12/1989	5163421	11/17/1992		
VSI-0986-US01	Abandoned	ULTRASOUND TRANSMISSION APPARATUS AND METHOD OF USING SAME	U.S.	08/858,247	5/19/1997	5971949	10/26/1999		
VSI-0987-US01	Abandoned	ULTRASOUND TRANSMISSION APPARATUS HAVING A TIP	U.S.	09/321,268	5/27/1999	6241703	6/5/2001		
VSI-0988-US01	Abandoned	VASCULAR SEALING DEVICE	U.S.	08/067,213	5/25/1993	5383896	1/24/1995		
VSI-0988-US02	Abandoned	VASCULAR SEALING DEVICE	U.S.	08/303,088	9/8/1994				
VSI-0988-US03	Expired	VASCULAR SEALING DEVICE	U.S.	08/832,600	3/31/1997	5957952	9/28/1999		
VSI-0989-US01	Abandoned	VASCULAR SEALING APPARATUS	U.S.	08/549,430	10/27/1995				
VSI-0989-US02	Abandoned	VASCULAR SEALING APPARATUS	U.S.	08/877,255	6/17/1997	6017359	1/25/2000		
VSI-0989-US03	Abandoned	Vascular sealing apparatus	U.S.	09/491,108	1/25/2000	6296658	10/2/2001		
VSI-0990-US01	Abandoned	VASCULAR SEALING APPARATUS AND METHOD	U.S.	08/549,332	10/27/1995	5626601	5/6/1997		
VSI-0990-US02	Expired	VASCULAR SEALING APPARATUS AND METHOD	U.S.	08/850,477	5/5/1997	5868778	2/9/1999		
VSI-0991-US01	Expired	THROMBIN AND COLLAGEN PROCOAGULANT AND PROCESS FOR MAKING THE SAME	U.S.	09/031,847	2/27/1998	5951583	9/14/1999		

VSI-0991-US02	Abandoned	THROMBIN AND COLLAGEN PROCOAGULANT AND PROCESS FOR MAKING THE SAME	U.S.	09/345,889	7/1/1999		
VSI-0992-US01	Abandoned	Shaped Introducer For Vascular Access	U.S.	11/942,635	11/19/2007		
VSI-0992-USPR	Expired	Shaped introducer for vascular intervention	U.S.	60/860,678	11/21/2006		
VSI-0993-US01	Abandoned	Laser fiber for endovenous therapy having a shielded distal tip	U.S.	10/879,701	6/29/2004		
VSI-0993-US02	Abandoned	Laser fiber for endovenous therapy having a shielded distal tip	U.S.	11/648,086	12/29/2006		
VSI-0994-EP01	Abandoned	FLOW MONITOR AND VASCULAR ACCESS SYSTEM WITH CONTINUOUSLY VARIABLE FREQUENCY CONTROL	EP	93109712.5	6/17/1993	574923	10/9/2002
VSI-0994-US01	Expired	FLOW MONITOR AND VASCULAR ACCESS SYSTEM WITH CONTINUOUSLY VARIABLE FREQUENCY CONTROL	U.S.	07/901,466	6/19/1992	5259386	11/9/1993
VSI-0994-US02	Expired	FLOW MONITOR AND VASCULAR ACCESS SYSTEM WITH CONTINUOUSLY VARIABLE FREQUENCY CONTROL	U.S.	08/142,151	10/25/1993	5363852	11/15/1994
VSI-0995-CA01	Abandoned	APPARATUS FOR THE CANNULATION OF BLOOD VESSELS	Canada	2085912	12/21/1992		
VSI-0995-EP01	Abandoned	APPARATUS FOR THE CANNULATION OF BLOOD VESSELS	EP	92121687.5	12/21/1992	548872	6/25/1997
VSI-0995-US01	Expired	APPARATUS FOR THE CANNULATION OF BLOOD VESSELS	U.S.	07/813,123	12/23/1991	5259385	11/9/1993

VSI-0996-US01	Expired	SYRINGE WITH ULTRASOUND EMITTING TRANSDUCER FOR FLOW-DIRECTED CANNULATION OF ARTERIES AND VEINS	U.S.	08/003,203	1/12/1993	5311871	5/17/1994
VSI-0997-US01	Expired	APPARATUS FOR USE IN CANNULATION OF BLOOD VESSELS	U.S.	07/296,272	1/11/1989	4887606	12/19/1989
VSI-0998-CA01	Abandoned	COAXIAL CABLE VASCULAR ACCESS SYSTEM	Canada	2168781	8/4/1994		
VSI-0998-EP01	Abandoned	COAXIAL CABLE VASCULAR ACCESS SYSTEM FOR USE IN VARIOUS NEEDLES	EP	94924111.1	8/4/1994	712294	1/2/2003
VSI-0998-US01	Expired	COAXIAL CABLE VASCULAR ACCESS SYSTEM FOR USE IN VARIOUS NEEDLES	U.S.	08/102,607	8/5/1993	5484416	1/16/1996
VSI-0999-CA01	Abandoned	GUIDED HYPODERMIC CANNULA	Canada	2587604	11/16/2005		
VSI-0999-US01	Abandoned	GUIDED HYPODERMIC CANNULA	U.S.	11/084,491	3/18/2005		
VSI-0999-USPR	Expired	NEEDLE AND PROBE ASSEMBLY	U.S.	60/628,809	11/17/2004		
VSI-1000-US01	Issued	GUIDE WIRE LOADING METHOD AND APPARATUS	U.S.	12/218,031	7/9/2008	8206321	6/26/2012
VSI-1001-EP01	Abandoned	GUIDE WIRE LOADING METHOD AND APPARATUS WITH TOWEL ATTACHMENT MECHANISM	EP	9795106.5	7/8/2009		
VSI-1001-US01	Issued	GUIDE WIRE LOADING METHOD AND APPARATUS WITH TOWEL ATTACHMENT MECHANISM	U.S.	12/498,965	7/7/2009	8231550	7/31/2012
VSI-1001-WO01	Expired	GUIDE WIRE LOADING METHOD AND APPARATUS WITH TOWEL ATTACHMENT MECHANISM	PCT	PCT/US2009/049912	7/8/2009		
VSI-1002-US01	Issued	GUIDE WIRE LOADING METHOD AND APPARATUS WITH TOWEL ATTACHMENT MECHANISM AND RETAINING MEMBER	U.S.	12/831,630	7/7/2010	8366638	2/5/2013



VSI-1003-US01	Issued	HAND HELD VEIN REMOVAL DEVICE	U.S.	13/410,440		3/2/2012	8834500	9/16/2014
VSI-1003-USPR	Expired	HAND HELD VEIN REMOVAL DEVICE	U.S.	61/449,334		3/4/2011		
VSI-1004-US01	Issued	VASCULAR ACCESS CLOSURE SYSTEM	U.S.	10/452,826		6/2/2003	7488340	2/10/2009
VSI-1006-US01	Issued	HEMOSTATIC CLIP	U.S.	12/483,698		6/12/2009	8246585	8/21/2012
VSI-1006-USPR	Expired	HEMOSTATIC CLIP	U.S.	61/073,622		6/18/2008		
VSI-1007-CA01	Issued	Elongated Expandable Member for Occluding Varicose Veins	Canada	2817242		11/1/2012	2817242	5/1/2018
VSI-1007-DEEP	Issued	Elongated Expandable Member for Occluding Varicose Veins	Germany	12801657.3		11/1/2012	2673014	5/4/2016
VSI-1007-EP01	Issued	Elongated Expandable Member for Occluding Varicose Veins	EP	12801657.3		11/1/2012	2673014	5/4/2016
VSI-1007-GBEP	Issued	Elongated Expandable Member for Occluding Varicose Veins	United Kingdom	12801657.3		11/1/2012	2673014	5/4/2016
VSI-1007-IEEP	Issued	Elongated Expandable Member for Occluding Varicose Veins	Ireland	12801657.3		11/1/2012	2673014	5/4/2016
VSI-1007-NOEP	Issued	Elongated Expandable Member for Occluding Varicose Veins	Norway	12801657.3		11/1/2012	2673014	5/4/2016
VSI-1007-US01	Issued	Elongated Expandable Member for Occluding Varicose Veins	U.S.	13/310,503		12/2/2011	8758427	6/24/2014
VSI-1007-US02	Issued	Elongated Expandable Member for Occluding Varicose Veins	U.S.	14/298,066		6/6/2014	9351736	5/31/2016
VSI-1007-WO01	Expired	Elongated Expandable Member for Occluding Varicose Veins	PCT	PCT/US2012/063101		11/1/2012		
VSI-1008-US01	Issued	SMALL DIAMETER INTRAVASCULAR CATHETER WITH SCREW TIP AND LIMITED TORSIONAL DISPLACEMENT	U.S.	11/585,371		10/24/2006	7981091	7/19/2011
VSI-1010-US01	Issued	COAXIAL GUIDE CATHETER FOR INTERVENTIONAL CARDIOLOGY PROCEDURES	U.S.	11/416,629		5/3/2006	8048032	11/1/2011

VSI-1010-US02	Issued	COAXIAL GUIDE CATHETER FOR INTERVENTIONAL CARDIOLOGY PROCEDURES	U.S.	12/824,734	6/28/2010	8142413	3/27/2012
VSI-1010-US03	Issued	COAXIAL GUIDE CATHETER FOR INTERVENTIONAL CARDIOLOGY PROCEDURES	U.S.	13/359,059	1/26/2012	8292850	10/23/2012
VSI-1010-USRE1	Issued	COAXIAL GUIDE CATHETER FOR INTERVENTIONAL CARDIOLOGY PROCEDURES	U.S.	14/070,161	11/1/2013	RE45380	2/17/2015
VSI-1010-USRE10	Pending	COAXIAL GUIDE CATHETER FOR INTERVENTIONAL CARDIOLOGY PROCEDURES	U.S.	16/220,996	12/14/2018		
VSI-1010-USRE2	Issued	COAXIAL GUIDE CATHETER FOR INTERVENTIONAL CARDIOLOGY PROCEDURES	U.S.	14/195,385	3/3/2014	RE45760	10/20/2015
VSI-1010-USRE3	Issued	COAXIAL GUIDE CATHETER FOR INTERVENTIONAL CARDIOLOGY PROCEDURES	U.S.	14/195,413	3/3/2014	RE45776	10/27/2015
VSI-1010-USRE4	Issued	COAXIAL GUIDE CATHETER FOR INTERVENTIONAL CARDIOLOGY PROCEDURES	U.S.	14/195,435	3/3/2014	RE46116	8/23/2016
VSI-1010-USRE5	Issued	COAXIAL GUIDE CATHETER FOR INTERVENTIONAL CARDIOLOGY PROCEDURES	U.S.	14/984,273	12/30/2015	RE47379	5/7/2019
VSI-1010-USRE6	Pending	COAXIAL GUIDE CATHETER FOR INTERVENTIONAL CARDIOLOGY PROCEDURES	U.S.	16/184,706	11/8/2018		
VSI-1010-USRE7	Pending	COAXIAL GUIDE CATHETER FOR INTERVENTIONAL CARDIOLOGY PROCEDURES	U.S.	16/220,925	12/14/2018		
VSI-1010-USRE8	Pending	COAXIAL GUIDE CATHETER FOR INTERVENTIONAL CARDIOLOGY PROCEDURES	U.S.	16/220,951	12/14/2018		
VSI-1010-USRE9	Pending	COAXIAL GUIDE CATHETER FOR INTERVENTIONAL CARDIOLOGY PROCEDURES	U.S.	16/220,975	12/14/2018		

VSI-1012-US01	Abandoned	ABDOMINAL TISSUE SUPPORT FOR FEMORAL PUNCTURE PROCEDURES	U.S.	11/029,908	1/5/2005	7455649	11/25/2008
VSI-1013-US01	Issued	METAL VASCULAR APERTURE CLOSURE DEVICE	U.S.	12/501,998	7/13/2009	8192456	6/5/2012
VSI-1013-US02	Issued	METAL VASCULAR APERTURE CLOSURE DEVICE	U.S.	12/502,034	7/13/2009	8252022	8/28/2012
VSI-1014-DEEP	Abandoned	SURGICAL SNARE APPARATUS	Germany	1916539.8	3/9/2001	1263336	2/18/2004
VSI-1014-EP01	Abandoned	SURGICAL SNARE APPARATUS	EP	1916539.8	3/9/2001	1263336	2/18/2004
VSI-1014-ESEP	Abandoned	SURGICAL SNARE APPARATUS	Spain	1916539.8	3/9/2001	1263336	2/18/2004
VSI-1014-FREP	Abandoned	SURGICAL SNARE APPARATUS	France	1916539.8	3/9/2001	1263336	2/18/2004
VSI-1014-GBEP	Abandoned	SURGICAL SNARE APPARATUS	United Kingdom	1916539.8	3/9/2001	1263336	2/18/2004
VSI-1014-IEEP	Abandoned	SURGICAL SNARE APPARATUS	Ireland	1916539.8	3/9/2001	1263336	2/18/2004
VSI-1014-ITEP	Abandoned	SURGICAL SNARE APPARATUS	Italy	1916539.8	3/9/2001	1263336	2/18/2004
VSI-1014-US01	Issued	SMALL DIAMETER SNARE	U.S.	09/803,308	3/9/2001	6554842	4/29/2003
VSI-1014-USPR	Expired	SMALL DIAMETER SNARE	U.S.	60/188,390	3/10/2000		
VSI-1014-W001	Expired	SURGICAL SNARE APPARATUS	PCT	PCT/US01/07680	3/9/2001		
VSI-1015-US01	Issued	CONVERTIBLE GUIDEWIRE SYSTEM AND METHODS	U.S.	12/204,583	9/4/2008	8083690	12/27/2011
VSI-1016-IT01	Issued	Two-lumen suction catheter for distal protection in a percutaneous intervention	Italy	MI2002A002666	12/17/2002	102002901072607	10/18/2007
VSI-1016-US01	Issued	TWO-LUMEN CATHETER FOR DISTAL PROTECTION IN PERCUTANEOUS CORONARY AND PERIPHERAL INTERVENTION	U.S.	10/462,079	6/13/2003	7025751	4/11/2006

VSI-1017-US01	Issued	GUIDEWIRE AND CATHETER MANAGEMENT DEVICE	U.S.	12/498,985	7/7/2009	8523824	9/3/2013
VSI-1018-US01	Expired	MEDICAL DEVICE PACKAGE	U.S.	29/182,858	6/2/2003	D489973	5/18/2004
VSI-1019-US01	Issued	GUIDEWIRE TIPPED LASER FIBER DEVICES AND METHODS FOR CROSSING A CHRONIC TOTAL OCCLUSION	U.S.	11/860,880	9/25/2007	8298215	10/30/2012
VSI-1020-EP01	Abandoned	DEVICES AND METHODS FOR CROSSING A CHRONIC TOTAL OCCLUSION	EP	4781984.2	8/19/2004		
VSI-1020-EP02	Abandoned	DEVICES AND METHODS FOR CROSSING A CHRONIC TOTAL OCCLUSION	EP	7023966	8/19/2004		
VSI-1020-JP01	Abandoned	DEVICES AND METHODS FOR CROSSING A CHRONIC TOTAL OCCLUSION	Japan	2006-525359	8/19/2004	4680907	
VSI-1020-US01	Issued	DEVICES AND METHODS FOR CROSSING A CHRONIC TOTAL OCCLUSION	U.S.	10/653,879	9/2/2003	7763012	7/27/2010
VSI-1020-WO01	Expired	DEVICES AND METHODS FOR CROSSING A CHRONIC TOTAL OCCLUSION	PCT	PCT/US04/27405	8/19/2004		
VSI-1021-US01	Issued	VASCULAR DILATOR SYSTEMS, KITS, AND METHODS	U.S.	13/784,073	3/4/2013	9078991	7/14/2015
VSI-1021-US02	Abandoned	VASCULAR DILATOR SYSTEMS, KITS, AND METHODS	U.S.	14/735,974	6/10/2015		
VSI-1022-US01	Issued	SYSTEM AND METHOD FOR FREEZE-DRYING AND PACKAGING	U.S.	14/553,722	11/25/2014	9561893	2/7/2017
VSI-1022-US02	Issued	SYSTEM AND METHOD FOR FREEZE-DRYING AND PACKAGING	U.S.	15/399,643	1/5/2017	10377520	8/13/2019
VSI-1022-US03	Published	SYSTEM AND METHOD FOR FREEZE-DRYING AND PACKAGING	U.S.	16/386,026	4/16/2019		
VSI-1022-USPR	Expired	SYSTEM AND METHOD FOR FREEZE-DRYING AND PACKAGING	U.S.	61/912,281	12/5/2013		
VSI-1023-US01	Abandoned	ELONGATE EXPANDABLE MEMBER FOR OCCLUDING VASCULAR VESSEL	U.S.	14/630,291	2/24/2015		

VSI-1023-USPR	Expired	ELONGATE EXPANDABLE MEMBER FOR OCCLUDING VASCULAR VESSEL	U.S.	61,945,699	2/27/2014		
VSI-1024-US01	Published	GUIDEWIRE CAPTURE	U.S.	14,709,531	5/12/2015		
VSI-1024-USPR	Expired	GUIDEWIRE CAPTURE	U.S.	62,048,734	9/10/2014		
VSI-1025-US01	Issued	GUIDEWIRES AND METHODS FOR PERCUTANEOUS OCCLUSION CROSSING	U.S.	14,697,819	4/28/2015	10391282	8/27/2019
VSI-1025-USPR	Expired	GUIDEWIRES AND METHODS FOR PERCUTANEOUS OCCLUSION CROSSING	U.S.	62,022,024	7/8/2014		
VSI-1026-CN01	Issued	PERFUSION CATHETERS AND RELATED METHODS	China	201580060554.3	9/10/2015	ZL201580060554.3	6/28/2019
VSI-1026-CN02	Published	PERFUSION CATHETERS AND RELATED METHODS	China	201710468567.5	9/10/2015		
VSI-1026-DEEP	Issued	PERFUSION CATHETERS AND RELATED METHODS	Germany	3125781	9/10/2015	3125781	11/7/2018
VSI-1026-DEEP2	Unfiled	PERFUSION CATHETERS AND RELATED METHODS	Germany	3400886	9/10/2015	3400886	
VSI-1026-EP01	Issued	PERFUSION CATHETERS AND RELATED METHODS	EP	15770712.6	9/10/2015	3125781	11/7/2018
VSI-1026-EP02	Published	PERFUSION CATHETERS AND RELATED METHODS	EP	18177601.4	9/10/2015		
VSI-1026-ESEP	Issued	PERFUSION CATHETERS AND RELATED METHODS	Spain	3125781	9/10/2015	3125781	11/7/2018
VSI-1026-FREP	Issued	PERFUSION CATHETERS AND RELATED METHODS	France	3125781	9/10/2015	3125781	11/7/2018
VSI-1026-FREP2	Unfiled	PERFUSION CATHETERS AND RELATED METHODS	France	3400886	9/10/2015	3400886	
VSI-1026-GBEP	Issued	PERFUSION CATHETERS AND RELATED METHODS	United Kingdom	3125781	9/10/2015	3125781	11/7/2018
VSI-1026-GBEP2	Unfiled	PERFUSION CATHETERS AND RELATED METHODS	United Kingdom	3400886	9/10/2015	3400886	

VSI-1026-HKCN	PERFUSION CATHETERS AND RELATED METHODS	Published	Hong Kong	17109379.3	9/10/2015		
VSI-1026-HKCN2	PERFUSION CATHETERS AND RELATED METHODS	Published	Hong Kong	18105018.7	9/10/2015		
VSI-1026-JEEP2	PERFUSION CATHETERS AND RELATED METHODS	Unfiled	Ireland	3400886	9/10/2015	3400886	
VSI-1026-ITEP	PERFUSION CATHETERS AND RELATED METHODS	Issued	Italy	3125781	9/10/2015	3125781	11/7/2018
VSI-1026-JP01	PERFUSION CATHETERS AND RELATED METHODS	Issued	Japan	2016-515958	9/10/2015	6097447	2/24/2017
VSI-1026-JP02	PERFUSION CATHETERS AND RELATED METHODS	Issued	Japan	2017-28336	9/10/2015	6326517	4/20/2018
VSI-1026-NLEP2	PERFUSION CATHETERS AND RELATED METHODS	Unfiled	Netherlands	3400886	9/10/2015	3400886	
VSI-1026-US01	PERFUSION CATHETERS AND RELATED METHODS	Issued	U.S.	14/850,095	9/10/2015	10159821	12/25/2018
VSI-1026-US02	PERFUSION CATHETERS AND RELATED METHODS	Issued	U.S.	15/296,183	10/18/2016	9968763	5/15/2018
VSI-1026-US03	PERFUSION CATHETERS AND RELATED METHODS	Published	U.S.	16/191,833	11/15/2018		
VSI-1026-USPR	PERFUSION CATHETER	Expired	U.S.	62/048,726	9/10/2014		
VSI-1026-WO01	PERFUSION CATHETERS AND RELATED METHODS	Expired	PCT	PCT/US15/49356	9/10/2015		
VSI-1027-USPR	PERFUSION CATHETERS AND RELATED METHODS	Expired	U.S.	62/078,240	11/11/2014		
VSI-1028-US01	VASCULAR INTRODUCER INCLUDING EXPANDABLE PASSAGE MEMBER	Abandoned	U.S.	13/191,889	7/27/2011		
VSI-1028-US02	VASCULAR INTRODUCER INCLUDING EXPANDABLE PASSAGE MEMBER	Abandoned	U.S.	14/734,967	6/9/2015		
VSI-1029-US01	DRAINAGE OR FEEDING CATHETER ASSEMBLY	Issued	U.S.	14/206,940	3/12/2014	9522253	12/20/2016
VSI-1029-USPR	DRAINAGE OR FEEDING CATHETER ASSEMBLY	Expired	U.S.	61/780,832	3/13/2013		

VSI-1030-CA01	Issued	CAPTURE ASSEMBLY AND METHOD	Canada	2955841	9/10/2015	2955841	6/27/2017
VSI-1030-DEEP	Issued	CAPTURE ASSEMBLY AND METHOD	Germany	3125789	9/10/2015	602015004478.9	8/30/2017
VSI-1030-EP01	Issued	CAPTURE ASSEMBLY AND METHOD	EP	15767400.3	9/10/2015	3125789	8/30/2017
VSI-1030-ESEP	Issued	CAPTURE ASSEMBLY AND METHOD	Spain	15767400.3	9/10/2015	3125789	8/30/2017
VSI-1030-FREP	Issued	CAPTURE ASSEMBLY AND METHOD	France	15767400.3	9/10/2015	3125789	8/30/2017
VSI-1030-GBEP	Issued	CAPTURE ASSEMBLY AND METHOD	United Kingdom	15767400.3	9/10/2015	3125789	8/30/2017
VSI-1030-ITEP	Issued	CAPTURE ASSEMBLY AND METHOD	Italy	3125789	9/10/2015	502017000132140	8/30/2017
VSI-1030-US01	Issued	CAPTURE ASSEMBLY AND METHOD	U.S.	14/849,774	9/10/2015	9351747	5/31/2016
VSI-1030-US02	Issued	CAPTURE ASSEMBLY AND METHOD	U.S.	15/148,038	5/6/2016	10390849	8/27/2019
VSI-1030-USPR	Expired	THROMBECTOMY ASSEMBLY AND METHOD	U.S.	62/048,736	9/10/2014		
VSI-1030-WO01	Expired	CAPTURE ASSEMBLY AND METHOD	PCT	PCT/US15/49299	9/10/2015		
VSI-1031-USPR	Abandoned	GUIDEWIRE CATHETER	U.S.	62/048,741	9/10/2014		
VSI-1032-US01	Issued	CATHETER	U.S.	14/673,966	3/31/2015	9636477	5/2/2017
VSI-1032-US02	Published	CATHETER	U.S.	15/441,352	2/24/2017		
VSI-1032-USPR	Expired	CATHETER	U.S.	62/061,781	10/9/2014		
VSI-1033-EP01	Abandoned	GUIDE WIRE CONTROL CATHETERS FOR CROSSING OCCLUSIONS AND RELATED METHODS OF USE	EP	3783618.6	11/18/2003		
VSI-1033-JP01	Abandoned	GUIDE WIRE CONTROL CATHETERS FOR CROSSING	Japan	2004-555478	11/18/2003	4546250	

VSI-1033-US01	Abandoned	Guide wire control catheters for crossing occlusions and related methods of use	U.S.	10/301,779	11/22/2002		
VSI-1033-US02	Abandoned	GUIDE WIRE CONTROL CATHETER FOR CROSSING OCCLUSIONS AND RELATED METHODS OF USE	U.S.	12/207,391	9/9/2008		
VSI-1033-US03	Abandoned	GUIDE WIRE CONTROL CATHETER FOR CROSSING OCCLUSIONS AND RELATED METHODS OF USE	U.S.	14/619,730	2/11/2015		
VSI-1033-WO01	Expired	GUIDE WIRE CONTROL CATHETERS FOR CROSSING OCCLUSIONS AND RELATED METHODS OF USE	PCT	PCT/US03/36783	11/18/2003	EP1722697	11/22/2006
VSI-1035-EP01	Abandoned	SMALL-DIAMETER SNARE	EP	5724826.2	3/7/2005		
VSI-1035-US01	Abandoned	SMALL-DIAMETER SNARE	U.S.	11/074,827	3/7/2005		
VSI-1035-USPR	Expired	SMALL-DIAMETER SNARE	U.S.	60/551,313	3/8/2004		
VSI-1035-WO01	Expired	SMALL-DIAMETER SNARE	PCT	PCT/US05/07361	3/7/2005		
VSI-1036-US01	Abandoned	SYSTEM AND METHOD FOR REMOVAL OF MATERIAL FROM A BLOOD VESSEL USING A SMALL DIAMETER CATHETER	U.S.	11/583,873	10/19/2006		
VSI-1036-WO01	Expired	SYSTEM AND METHOD FOR REMOVAL OF MATERIAL FROM A BLOOD VESSEL USING A SMALL DIAMETER CATHETER	PCT	PCT/US07/22216	10/18/2007		
VSI-1037-US01	Abandoned	SYSTEM AND METHOD FOR REMOVAL OF MATERIAL FROM A BLOOD VESSEL	U.S.	12/275,822	11/21/2008		



VSI-1038-US01	Abandoned	SYSTEM AND METHOD FOR REMOVAL OF MATERIAL FROM A BLOOD VESSEL USING A SMALL DIAMETER CATHETER	U.S.	12/098,201	4/4/2008	
VSI-1039-EP01	Abandoned	GUIDE WIRE AND CATHETER MANAGEMENT DEVICE	EP	9795110.7	7/8/2009	
VSI-1039-JP01	Abandoned	GUIDE WIRE AND CATHETER MANAGEMENT DEVICE	Japan	2011-517563	7/8/2009	
VSI-1039-US01	Abandoned	GUIDE WIRE AND CATHETER MANAGEMENT DEVICE	U.S.	12/217,852	7/8/2008	
VSI-1039-WO01	Expired	GUIDE WIRE AND CATHETER MANAGEMENT DEVICE	PCT	PCT/US09/49919	7/8/2009	
VSI-1040-US01	Abandoned	GUIDE WIRE RETENTION AND POSITIONING APPARATUS	U.S.	12/148,681	4/21/2008	
VSI-1042-US01	Abandoned	TISSUE TRACT SEALING DEVICE	U.S.	10/007,786	12/7/2001	6840952
VSI-1043-US01	Abandoned	TISSUE TRACT SEALING DEVICE	U.S.	10/145,179	5/13/2002	
VSI-1044-US01	Abandoned	METHOD AND APPARATUS FOR COAGULATION AND CLOSURE OF PSEUDOANEURYSMS	U.S.	09/943,584	8/30/2001	
VSI-1045-US01	Allowed	Stenotic Region Scoring Assembly and Method	U.S.	14/991,065	1/8/2016	
VSI-1045-USPR	Expired	Stenotic Region Scoring Assembly and Method	U.S.	62/129,997	3/9/2015	
VSI-1046-US01	Published	PATH CREATION THROUGH OCCLUSION	U.S.	15/254,386	9/1/2016	
VSI-1046-USPR	Expired	PATH CREATION THROUGH OCCLUSION	U.S.	62/257,777	11/20/2015	
VSI-1047-CA01	Issued	Guidewire Fixation	Canada	2974544	5/24/2016	2974544
VSI-1047-CN01	Issued	Guidewire Fixation	China	201680011318.7	5/24/2016	ZL201680011318.7
VSI-1047-DEEP	Issued	Guidewire Fixation	Germany	3302674	5/24/2016	3302674

VSI-1047-EP01	Issued	Guidewire Fixation	EP	16728179.9	5/24/2016	3302674	1/30/2019
VSI-1047-EP02	Published	Guidewire Fixation	EP	18204252.3	5/24/2016		
VSI-1047-ESEP	Issued	Guidewire Fixation	Spain	3302674	5/24/2016	3302674	1/30/2019
VSI-1047-FREP	Issued	Guidewire Fixation	France	3302674	5/24/2016	3302674	1/30/2019
VSI-1047-GBEP	Issued	Guidewire Fixation	United Kingdom	3302674	5/24/2016	3302674	1/30/2019
VSI-1047-HKCN	Published	Guidewire Fixation	Hong Kong	17111832	5/24/2016		
VSI-1047-IIEP	Issued	Guidewire Fixation	Ireland	3302674	5/24/2016	3302674	1/30/2019
VSI-1047-ITEP	Issued	Guidewire Fixation	Italy	3302674	5/24/2016	502019000029906	1/30/2019
VSI-1047-JP01	Published	Guidewire Fixation	Japan	2017-542898	5/24/2016		
VSI-1047-JP02	Published	Guidewire Fixation	Japan	2018-212119	5/24/2016		
VSI-1047-NLEP	Issued	Guidewire Fixation	Netherlands	3302674	5/24/2016	3302674	1/30/2019
VSI-1047-US01	Published	Guidewire Fixation	U.S.	15/163,044	5/24/2016		
VSI-1047-USPR	Expired	Guidewire Fixation	U.S.	62/166,259	5/26/2015		
VSI-1047-USPR2	Expired	Guidewire Fixation	U.S.	62/190,879	7/10/2015		
VSI-1047-WO01	Expired	Guidewire Fixation	PCT	PCT/US2016/033904	5/24/2016		
VSI-1048-US01	Issued	Magnetically-Driven Delivery Assembly and Method	U.S.	15/004,012	1/22/2016	9943314	4/17/2018
VSI-1048-USPR	Expired	Magnetically-Driven Delivery Assembly and Method	U.S.	62/147,008	4/14/2015		
VSI-1049-CA01	Issued	Closure Device for Sealing Percutaneous Opening in a Vessel	Canada	2975309	2/10/2016	2975309	3/5/2019

VSI-1049-CN01	Published	Closure Device for Sealing Percutaneous Opening in a Vessel	China	201680009204.9	2/10/2016	
VSI-1049-EP01	Published	Closure Device for Sealing Percutaneous Opening in a Vessel	EP	16712553.3	2/10/2016	
VSI-1049-HKCN	Published	Closure Device for Sealing Percutaneous Opening in a Vessel	Hong Kong	17111871.2	2/10/2016	
VSI-1049-JP01	Published	Closure Device for Sealing Percutaneous Opening in a Vessel	Japan	2017-539600	2/10/2016	
VSI-1049-US01	Issued	Closure Device for Sealing Percutaneous Opening in a Vessel	U.S.	15/040,023	2/10/2016	10016188
VSI-1049-US02	Published	Closure Device for Sealing Percutaneous Opening in a Vessel	U.S.	15/920,665	3/14/2018	
VSI-1049-USPR	Expired	Closure Device for Sealing Percutaneous Opening in a Vessel	U.S.	62/114,101	2/10/2015	
VSI-1049-WO01	Expired	Closure Device for Sealing Percutaneous Opening in a Vessel	PCT	PCT/US2016/017238	2/10/2016	
VSI-1050-US01	Issued	RESORBABLE EMBOLIZATION SPHERES	U.S.	15/131,534	4/18/2016	10071181
VSI-1050-US02	Pending	RESORBABLE EMBOLIZATION SPHERES	U.S.	15/664,358	7/31/2017	
VSI-1050-US03	Issued	RESORBABLE EMBOLIZATION SPHERES	U.S.	16/034,670	7/13/2018	10179188
VSI-1050-US04	Pending	RESORBABLE EMBOLIZATION SPHERES	U.S.	16/034,695	7/13/2018	
VSI-1050-USPR	Expired	RESORBABLE EMBOLIZATION SPHERES	U.S.	62/148,889	4/17/2015	
VSI-1051-USPR	Abandoned	RESORBABLE EMBOLIZATION SPHERES	U.S.	62/148,899	4/17/2015	
VSI-1052-US01	Issued	CATHETER CUTTING DEVICE	U.S.	15/063,575	3/8/2016	10065331
VSI-1052-USPR	Expired	CATHETER CUTTING DEVICE	U.S.	62/166,274	5/26/2015	
VSI-1053-US01	Published	FLUID DELIVERY OR REMOVAL SYSTEM	U.S.	15/144,879	5/3/2016	
VSI-1053-USPR	Expired	FLUID DELIVERY OR REMOVAL SYSTEM	U.S.	62/203,439	8/11/2015	

VSI-1054-US01	Issued	CATHETER TIP	U.S.	14/860,997	9/22/2015	9782561	10/10/2017
VSI-1054-USPR	Expired	CATHETER TIP	U.S.	62/203,431	8/11/2015		
VSI-1055-US01	Published	SYSTEM AND METHOD FOR FREEZE-DRYING AND PACKAGING	U.S.	15/343,381	11/4/2016		
VSI-1055-USPR	Expired	SYSTEM AND METHOD FOR FREEZE-DRYING AND PACKAGING	U.S.	62/279,955	1/18/2016		
VSI-1056-CA01	Pending	PACING GUIDEWIRE	Canada	3012709	3/10/2017		
VSI-1056-CN01	Published	PACING GUIDEWIRE	China	201780018077.3	3/10/2017		
VSI-1056-EP01	Published	PACING GUIDEWIRE	EP	17712389	3/10/2017		
VSI-1056-HKEP	Pending	PACING GUIDEWIRE	Hong Kong	19100446.9	3/10/2017		
VSI-1056-JP01	Published	PACING GUIDEWIRE	Japan	2019-500221	3/10/2017		
VSI-1056-US01	Published	PACING GUIDEWIRE	U.S.	15/455,254	3/10/2017		
VSI-1056-US02	Issued	PACING GUIDEWIRE	U.S.	15/455,265	3/10/2017	10173052	1/8/2019
VSI-1056-US03	Published	PACING GUIDEWIRE	U.S.	16/214,800	12/10/2018		
VSI-1056-USPR	Expired	PACING GUIDEWIRE	U.S.	62/310,044	3/18/2016		
VSI-1056-USPR2	Expired	PACING GUIDEWIRE	U.S.	62/346,214	6/6/2016		
VSI-1056-USPR3	Expired	PACING GUIDEWIRE	U.S.	62/378,258	8/23/2016		
VSI-1056-USPR4	Expired	PACING GUIDEWIRE	U.S.	62/436,750	12/20/2016		
VSI-1056-WO01	Expired	PACING GUIDEWIRE	PCT	PCT/US2017/021719	3/10/2017		
VSI-1057-US01	Issued	METHODS FOR FACILITATING REVASCULARIZATION OF OCCLUSION	U.S.	15/340,026	11/1/2016	10245050	4/2/2019

VSI-1057-USPR	Expired	METHODS FOR FACILITATING REVASCULARIZATION OF OCCLUSION	U.S.	62/401,964	9/30/2016	
VSI-1058-DEEP	Unfiled	GUIDE EXTENSION CATHETER	Germany		9/27/2017	
VSI-1058-EP01	Published	GUIDE EXTENSION CATHETER	EP	17193571.1	9/27/2017	
VSI-1058-FREP	Unfiled	GUIDE EXTENSION CATHETER	France		9/27/2017	
VSI-1058-GBEP	Unfiled	GUIDE EXTENSION CATHETER	United Kingdom		9/27/2017	
VSI-1058-IIEP	Unfiled	GUIDE EXTENSION CATHETER	Ireland		9/27/2017	
VSI-1058-US01	Published	GUIDE EXTENSION CATHETER	U.S.	15/581,176	4/28/2017	
VSI-1058-USPR	Expired	GUIDE EXTENSION CATHETER	U.S.	62/431,911	12/9/2016	
VSI-1058-USPR2	Expired	GUIDE EXTENSION CATHETER	U.S.	62/440,438	12/30/2016	
VSI-1059-USPR	Closed	INTRA-VESSEL SEALING COMPONENT	U.S.			
VSI-1061-CA01	Allowed	CATHETER	Canada	3029522	6/6/2018	
VSI-1061-CA02	Pending	CATHETER	Canada	3050931	6/6/2018	
VSI-1061-CN01	Published	CATHETER	China	201880003146.8	6/6/2018	
VSI-1061-CN02	Published	CATHETER	China	201910214671.0	6/6/2018	
VSI-1061-EP01	Published	CATHETER	EP	18737025.9	6/6/2018	
VSI-1061-EP02	Published	CATHETER	EP	19163614.1	6/6/2018	
VSI-1061-HKEP	Pending	CATHETER	Hong Kong	19127209.5	6/6/2018	
VSI-1061-HKEP2	Unfiled	CATHETER	Hong Kong		6/6/2018	

VSI-1061- JP01	Pending	CATHETER	Japan	2019-508840	6/6/2018	
VSI-1061- JP02	Published	CATHETER	Japan	2019-042568	6/6/2018	
VSI-1061- US01	Issued	CATHETER	U.S.	15/686,962	8/25/2017	10238834
VSI-1061- US02	Published	CATHETER	U.S.	16/266,785	2/4/2019	
VSI-1061- WO01	Published	CATHETER	PCT	PCT/IB2018/054054	6/6/2018	
VSI-1063- US01	Published	GUIDE EXTENSION CATHETER	U.S.	16/264,803	2/1/2019	
VSI-1063- USPR	Expired	GUIDE EXTENSION CATHETER	U.S.	62/630,321	2/14/2018	
VSI-1063- WO01	Published	GUIDE EXTENSION CATHETER	PCT	PCT/US19/16235	2/1/2019	
VSI-1064- EP01	Pending	SUBINTIMAL CATHETER DEVICE AND ASSEMBLY	EP	18797326.8	10/15/2018	
VSI-1064- US01	Published	SUBINTIMAL CATHETER DEVICE, ASSEMBLY AND RELATED METHODS	U.S.	16/160,162	10/15/2018	
VSI-1064- USPR	Expired	SUBINTIMAL CATHETER DEVICE, ASSEMBLY AND RELATED METHODS	U.S.	62/577,283	10/26/2017	
VSI-1064- WO01	Published	SUBINTIMAL CATHETER DEVICE AND ASSEMBLY	PCT	PCT/US18/55832	10/15/2018	
VSI-1065- US01	Published	BALLOON CATHETER FOR CONTRAST AGENT FILTRATION AND REMOVAL	U.S.	16/264,790	2/1/2019	
VSI-1065- USPR	Expired	BALLOON CATHETER FOR CONTRAST AGENT FILTRATION AND REMOVAL	U.S.	62/630,468	2/14/2018	
VSI-1067- EP01	Pending	PERFUSION CATHETERS AND RELATED METHODS	EP	19178585.6	6/5/2019	
VSI-1067- US01	Pending	PERFUSION CATHETERS AND RELATED METHODS	U.S.	16/414,921	5/17/2019	

VSI-1067-USPR	Expired	PERFUSION CATHETERS AND RELATED METHODS	U.S.	62/701,362	7/20/2018	
VSI-1068-US01	Pending	ELUTING PERFUSION CATHETERS AND RELATED METHODS	U.S.	16/540,844	8/14/2019	
VSI-1068-USPR	Expired	ELUTING PERFUSION CATHETERS AND RELATED METHODS	U.S.	62/719,000	8/16/2018	
VSI-1068-WO01	Pending	ELUTING PERFUSION CATHETERS AND RELATED METHODS	PCT	PCT/US2019/046545	8/14/2019	
VSI-1069-USPR	Pending	GUIDE EXTENSION CATHETER	U.S.	62/807,613	2/19/2019	
VSI-1070-USPR	Pending	GUIDE EXTENSION CATHETER	U.S.	62/771,658	11/27/2018	
VSI-1070-WO01	Pending	GUIDE EXTENSION CATHETER	PCT	PCT/US2019/058783	10/30/2019	
VSI-1071-USPR	Pending	GUIDE EXTENSION CATHETER	U.S.	62/781,973	12/19/2018	
VSI-1071-WO01	Pending	GUIDE EXTENSION CATHETER	PCT	PCT/US2019/058786	10/30/2019	
VSI-1072-USPR	Pending	GUIDE EXTENSION CATHETER	U.S.	62/789,000	1/7/2019	
VSI-1072-WO01	Pending	GUIDE EXTENSION CATHETER	PCT	PCT/US2019/058794	10/30/2019	
VSI-1073-US01	Pending	SYSTEM AND METHOD FOR FREEZE-DRYING AND PACKAGING	U.S.	16/295,165	3/7/2019	

Trademarks						
Mark	Country	Application No.	Registration No.	Reg. Date	Status	
ACOLYSIS	U.S.	75-256,292	2517658	12/11/2001	Registered	
AUTO-FILL	U.S.	78-329,341	2894004	10/12/2004	Registered	
BANDIT	U.S.	87-625,101	5618758	11/27/2018	Registered	
DRAINER	U.S.	85-066,819	3972115	5/31/2011	Registered	
D-STAT	U.S.	78-102,841	2754442	8/19/2003	Registered	
EZPLAZ	Madrid protocol	1455699	1455699	2/12/2019	Registered	
EZPLAZ	European Community, United Kingdom (via Madrid protocol)	1455699	1455699	2/12/2019	Registered	
FLUENT	U.S.	86-654,688	5129777	1/24/2017	Registered	
GREBSET	U.S.	77-840,407	3790069	5/18/2010	Registered	
GUIDELINER	U.S.	77-706,364	3797195	6/1/2010	Registered	
GUIDELINER	Japan, European Community, Norway, Switzerland, United Kingdom (via Madrid protocol)	1399698	1399698	1/25/2018	Registered	
GUIDELINER	Canada	1,876,752	1,876,752	9/5/2019	Registered	
GUIDELINER	China (via Madrid protocol)	1,399,698			Pending	
LANGSTON	U.S.	78-455,490	3024795	12/6/2005	Registered	
LANGSTON	Japan, European Community, Norway, Switzerland, United Kingdom (via Madrid protocol)	1399699	1399699	1/25/2018	Registered	
LANGSTON	Canada	1,876,762			Pending	
MINNIE	U.S.	77-818,971	3752325	2/23/2010	Registered	
OCTANE	U.S.	87-037,941	5551287	8/28/2018	Registered	
PIGGYBACK	U.S.	77-840,531	3858113	10/5/2010	Registered	
PRONTO	U.S.	78-181,211	3353155	12/11/2007	Registered	
RAIDER	U.S.	87-625,094	5562562	9/11/2018	Registered	
REPLAS	U.S.	86-604,593	5256745	8/1/2017	Registered	



RINGER	European Community	17997580	17997580	5/7/2019	Registered
SMARTNEEDLE	U.S.	75-620,674	2568826	5/14/2002	Registered
SMARTNEEDLE	Canada	1022096	TMA574650	1/29/2003	Registered
SPECTRE	U.S.	87-207,092	5,267,675	8/15/2017	Registered
THROMBI-GEL (Stylized)	U.S.	77-450,693	3,632,771	6/2/2009	Registered
THROMBIX	U.S.	78-139,033	3,032,755	12/20/2005	Registered
TURNPIKE	U.S.	86-327,454	4,721,667	4/14/2015	Registered
TURNPIKE	Japan, European Community, Norway, Switzerland, United Kingdom (via Madrid protocol)	1405113	1405113	1/25/2018	Registered
TURNPIKE	Canada	1,876,753	1,876,753	9/5/2019	Registered
TRAPLINER	U.S.	86-830,610	5,200,901	5/9/2017	Registered
TWIN-PASS	U.S.	78-602,796	3,122,103	7/25/2006	Registered
TWIN-PASS	Japan, European Community, United Kingdom (via Madrid protocol)	1399596	1399596	1/25/2018	Registered
TWIN-PASS	Canada	1,876,754	1,876,754	9/5/2019	Registered
TWIN-PASS	Switzerland (via Madrid protocol)	1399596			Pending
TWIN-PASS	Norway (via Madrid protocol)	1399596			Pending
TWIN-PASS TORQUE	Canada	1,876,761	1,876,761	9/5/2019	Registered
VARI-LASE	U.S.	78-217,901	2,846,854	5/25/2004	Registered
VENTURE	U.S.	78-378,442	3,700,341	10/20/2009	Registered