

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | Short-Form Patent Security Agreement |
| CONVEYING PARTY DATA | |
| Name | Execution Date |
| TRIVASCULAR, INC. | 10/12/2012 |
| RECEIVING PARTY DATA | |
| Name: | CAPITAL ROYALTY PARTNERS II L.P. |
| Street Address: | 1000 Main Street, Suite 2500 |
| City: | Houston |
| State/Country: | TEXAS |
| Postal Code: | 77002 |
| Name: | PARALLEL INVESTMENT OPPORTUNITIES PARTNERS II L.P. |
| Street Address: | 1000 Main Street, Suite 250 |
| City: | Houston |
| State/Country: | TEXAS |
| Postal Code: | 77002 |
| PROPERTY NUMBERS Total: 73 | |
| Property Type | Number |
| Application Number: | 12245620 |
| Application Number: | 11861739 |
| Patent Number: | 8226701 |
| Patent Number: | 6602280 |
| Patent Number: | 7066951 |
| Patent Number: | 7338518 |
| Patent Number: | 6733521 |
| Patent Number: | 6761733 |
| Patent Number: | 8224632 |
| Application Number: | 13523765 |

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| Patent Number: | 7840393 |
| Patent Number: | 7241276 |
| Patent Number: | 7901379 |
| Patent Number: | 8083789 |
| Application Number: | 11861828 |
| Application Number: | 12747499 |
| Application Number: | 13277117 |
| Patent Number: | 8066755 |
| Application Number: | 11941434 |
| Application Number: | 13649066 |
| Application Number: | 13024255 |
| Application Number: | 61620362 |
| Application Number: | 61621286 |
| Application Number: | 13297219 |
| Patent Number: | 7178978 |
| Patent Number: | 7708163 |
| Patent Number: | 7971751 |
| Application Number: | 13089960 |
| Patent Number: | 7147661 |
| Patent Number: | 7147660 |
| Patent Number: | 7766954 |
| Application Number: | 12491336 |
| Application Number: | 12566808 |
| Patent Number: | 8241346 |
| Application Number: | 13246651 |
| Application Number: | 12566104 |
| Patent Number: | 8167927 |
| Application Number: | 13245652 |
| Patent Number: | 8226708 |
| Application Number: | 13532887 |
| Patent Number: | 7090693 |
| Application Number: | 11429735 |
| Patent Number: | 7682475 |
| Application Number: | 12729182 |
| Patent Number: | 6395019 |

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|---------------------|----------|
| | 7081129 |
| Patent Number: | 7615071 |
| Application Number: | 12566793 |
| Patent Number: | 6331191 |
| Application Number: | 61547421 |
| Patent Number: | 8216297 |
| Application Number: | 11031311 |
| Patent Number: | 7150758 |
| Application Number: | 11097718 |
| Patent Number: | 7803178 |
| Patent Number: | 8267989 |
| Application Number: | 12915636 |
| Application Number: | 12910281 |
| Patent Number: | 6776604 |
| Patent Number: | 7147455 |
| Patent Number: | 7125464 |
| Patent Number: | 7678217 |
| Application Number: | 12697504 |
| Application Number: | 61547470 |
| Patent Number: | 7632291 |
| Application Number: | 12628623 |
| Application Number: | 61621036 |
| Application Number: | 61621038 |
| Application Number: | 61619715 |
| Application Number: | 61660413 |
| Application Number: | 61660103 |
| Application Number: | 61660105 |
| Application Number: | 61711797 |

CORRESPONDENCE DATA

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PATENT

REEL: 029117 FRAME: 0325

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|---|-----------|
| | 67478-7 |
| NAME OF SUBMITTER: | Tuan Dinh |
| <p>Total Attachments: 8 source=PSA#page1.tif source=PSA#page2.tif source=PSA#page3.tif source=PSA#page4.tif source=PSA#page5.tif source=PSA#page6.tif source=PSA#page7.tif source=PSA#page8.tif</p> | |

EXECUTION VERSION

SHORT-FORM PATENT SECURITY AGREEMENT

WHEREAS, TRIVASCULAR, INC. (formerly known as TriVascular2, Inc. and Boston Scientific Santa Rosa Corp.) (the “Grantor”) has applied for letters patent and has been granted letters patents in the United States Patent and Trademark Office, and is the owner of the patent applications and patents listed in the attached Schedule of Patents and Patent Applications associated therewith;

WHEREAS, the Grantor has contemporaneously with the execution of this Short-Form Patent Security Agreement entered into the Security Agreement dated as of October 12, 2012 (as modified from time to time, the “Security Agreement”), in which the Grantor has granted certain interests in favor of CAPITAL ROYALTY PARTNERS II L.P. and PARALLEL INVESTMENT OPPORTUNITIES PARTNERS II L.P. (together, with their successors and assigns, the “Secured Parties”); and


WHEREAS, pursuant to the Security Agreement, the Grantor has agreed with the Secured Parties to execute this Short-Form Patent Security Agreement;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Grantor hereby grants to the Secured Parties, to the extent provided in the Security Agreement (the terms and conditions of which are hereby incorporated herein), a security interest in all of its right, title and interest in, to and under all the patents and patent applications whether now owned or at any time hereafter acquired, of the Grantor issued by, or for which applications have been filed with, the United States Patent and Trademark Office, including the patents and applications on the attached Schedule of Patents and Patent Applications, and all related patents and applications thereto, including all reissuances, continuations, continuations-in-part, revisions, extensions, re-examinations thereof, any patents and patent applications claiming priority to said patents and patent applications or from which said patents and patent applications claim priority, and pending applications associated therewith, as collateral security for the prompt and complete payment and performance when due of all the Secured Obligations (as defined in the Security Agreement). Notwithstanding the foregoing, in the event of any conflict between this Short-Form Patent Security Agreement and the Security Agreement, the Security Agreement shall control.

Date: October 12, 2012

IN WITNESS WHEREOF, the party hereto has caused this Short-Form Patent Security Agreement to be duly executed and delivered as of the day and year first above written.

TRIVASCULAR, INC.

By: 
Name: Michael R. Kramer
Title: Chief Financial Officer

[Signature Page to Short-Form Patent Security Agreement]

sf-3203106

PATENT
REEL: 029117 FRAME: 0328

SCHEDULE OF
PATENTS AND PATENT APPLICATIONS

sf-3203106

PATENT
REEL: 029117 FRAME: 0329

SCHEDULE OF PATENTS AND PATENT APPLICATIONS

| TITLE | APPLICATION / PATENT NO. | FILING DATE / ISSUE DATE |
|---|-----------------------------|-----------------------------|
| MODULAR VASCULAR GRAFT FOR LOW PROFILE PERCUTANEOUS DELIVERY | 12/245,620 | 10/03/2008 |
| APPARATUS FOR SECURING STENT BARBS | 11/861,739 | 09/26/2007 |
| STENT AND DELIVERY SYSTEM FOR DEPLOYMENT THEREOF | 8,226,701 | Issued 07/24/2012 |
| DELIVERY SYSTEM AND METHOD FOR EXPANDABLE INTRACORPOREAL DEVICE | 6,602,280 | Issued 08/05/2003 |
| DELIVERY SYSTEM AND METHOD FOR EXPANDABLE INTRACORPOREAL DEVICE | 7,066,951 | Issued 06/27/2006 |
| DELIVERY SYSTEM AND METHOD FOR EXPANDABLE INTRACORPOREAL DEVICE | 7,338,518 | Issued 03/04/2008 |
| DELIVERY SYSTEM AND METHOD FOR ENDOVASCULAR GRAFT | 6,733,521 | Issued 05/11/2004 |
| DELIVERY SYSTEM AND METHOD FOR BIFURCATED ENDOVASCULAR GRAFT | 6,761,733 | Issued 07/13/2004 |
| VIRTUAL PROTOTYPING AND TESTING FOR MEDICAL DEVICE DEVELOPMENT | 8,224,632 | Issued 7/17/2012 |
| VIRTUAL PROTOTYPING AND TESTING FOR MEDICAL DEVICE DEVELOPMENT | 13/523,765 | 06/14/2012 |
| VIRTUAL PROTOTYPING AND TESTING FOR MEDICAL DEVICE DEVELOPMENT | 7,840,393 | Issued 11/23/2010 |
| PASSIVE HEMOSTATIC SHEATH VALVE | 7,241,276 | Issued 07/10/2007 |
| PASSIVE HEMOSTATIC SHEATH VALVE | 7,901,379 | Issued 03/08/2011 |
| SECUREMENT ASSEMBLY AND METHOD FOR EXPANDABLE ENDOVASCULAR DEVICE | 8,083,789 | Issued 12/27/2011 |
| ASYMMETRIC STENT APPARATUS AND METHOD | 11/861,828 | 09/26/2007 |
| HINGED ENDOVASCULAR DEVICE | 12/747,499 | 09/07/2010 |
| SYSTEM AND METHOD OF PIVOTED STENT DEPLOYMENT | 13/277,117 | 10/19/2011 |
| SYSTEM AND METHOD OF PIVOTED STENT DEPLOYMENT | 8,066,755 | Issued 11/29/2011 |
| DELIVERY SYSTEM AND METHOD FOR BIFURCATED GRAFT | 11/941,434 | 11/16/2007 |
| IN VITRO TESTING OF ENDOVASCULAR DEVICE | 13/649,066 | 10/10/2012 |
| FILL TUBE MANIFOLD AND DELIVERY METHODS FOR ENDOVASCULAR GRAFT | 13/024,255 | 02/09/2011 |

| TITLE | APPLICATION / PATENT NO. | FILING DATE / ISSUE DATE |
|--|-----------------------------|-----------------------------|
| DURABLE STENT GRAFT WITH TAPERED STRUTS AND STABLE DELIVERY METHODS AND DEVICES | 61/620,362 | 04/04/2012 |
| DELIVERY CATHETER FOR ENDOVASCULAR DEVICE | 61/621,286 | 04/06/2012 |
| ADVANCED ENDOVASCULAR GRAFT AND DELIVERY SYSTEM | 13/297,219 | 11/15/2011 |

TriVascular Inc. USA Portfolio With Hoffmann & Baron
(Effective October 10, 2012)

| <u>H&B Docket No.</u> | <u>Title</u> | <u>Appln. No.</u> | <u>Filing Date</u> | <u>Patent No.</u> | <u>Grant Date</u> |
|----------------------------------|---|--------------------------|---------------------------|--------------------------|--------------------------|
| 1880-2 | Fluid Mixing Apparatus and Method | 10/658,074 | 09-08-2003 | 7,178,978 | 02-20-2007 |
| 1880-3 | Constant Force Material Delivery System And Method | 11/360,077 | 02-23-2006 | 7,708,163 | 05-04-2010 |
| 1880-3 CON | Constant Force Material Delivery System And Method | 12/724,068 | 03-15-2010 | 7,971,751 | 07-05-2011 |
| 1880-4 RCE/CON | Non-Degradable, Low Swelling, Water Soluble Radiopaque Hydrogel Polymer | 13/089,960 | 04-19-2011 | | |
| 1880-5 | Radially Expandable Stent | 10/029,559 | 12-20-2001 | 7,147,661 | 12-12-2006 |
| 1880-5 CON/CIP | Advanced Endovascular Graft | 10/327,711 | 12-20-2002 | 7,147,660 | 12-12-2006 |
| 1880-5 CON II | Advanced Endovascular Graft | 11/333,595 | 01-17-2006 | 7,766,954 | 08-03-2010 |
| 1880-5 CON II/CON/RCE | Advanced Endovascular Graft | 12/491,336 | 06-25-2009 | | |
| 1880-5 CON II/A | Method Of Delivering Advanced Endovascular Graft | 12/566,808 | 09-25-2009 | | |
| 1880-5 CON II/A/CON | Advanced Endovascular Graft | 13/246,643 | 09-27-2011 | 8,241,346 | 08-14-2012 |
| 1880-5 CON II/A/CON II/RCE | Advanced Endovascular Graft | 13/246,651 | 09-27-2011 | | |
| 1880-5 CON II/B/RCE | Advanced Endovascular Graft Delivery System And Method Of Treatment | 12/566,104 | 09-24-2009 | | |
| 1880-5 CON II/B/CON | Barbed Radially Expandable Stent | 13/245,661 | 09-26-2011 | 8,167,927 | 05-01-2012 |
| 1880-5 CON II/B/CON II/RCE | Barbed Radially Expandable Stent With Slotted Struts | 13/245,652 | 09-26-2011 | | |
| 1880-6 PCT/US/RCE III | Inflatable Intraluminal Graft | 10/168,053 | 06-14-2002 | 8,226,708 | 07-24-2012 |
| 1880-6 PCT/US/RCE III/CON | Inflatable Intraluminal Graft | 13/532,887 | 06-26-2012 | | |
| 1880-8 | Endovascular Graft Joint and Method for Manufacture | 10/029,584 | 12-20-2001 | 7,090,693 | 08-15-2006 |

TriVascular Inc. USA Portfolio With Hoffmann & Baron
(Effective October 10, 2012)

| <u>H&B Docket No.</u> | <u>Title</u> | <u>Appln. No.</u> | <u>Filing Date</u> | <u>Patent No.</u> | <u>Grant Date</u> |
|----------------------------------|--|--------------------------|---------------------------|--------------------------|--------------------------|
| 1880-8 CON/RCE II | Endovascular Graft Joint and Method for Manufacture | 11/429,735 | 05-08-2006 | | |
| 1880-8 DIV/CON | Endovascular Graft Joint and Method for Manufacture | 11/870,748 | 10-11-2007 | 7,682,475 | 03-23-2010 |
| 1880-8 DIV/CON/CON/RCE | Endovascular Graft Joint and Method for Manufacture | 12/729,182 | 03-22-2010 | | |
| 1880-9 CPA | Endovascular Graft | 09/133,978 | 08-14-1998 | 6,395,019 | 05-28-2002 |
| 1880-9 CON/CON | Endovascular Graft | 10/132,754 | 04-24-2002 | 7,081,129 | 07-25-2006 |
| 1880-9 CON/CON III | Endovascular Graft | 11/390,732 | 03-28-2006 | 7,615,071 | 11-10-2009 |
| 1880-9 CON/CON IV | Endovascular Graft | 12/566,793 | 09-25-2009 | | |
| 1880-10 | Layered Endovascular Graft | 09/200,317 | 11-25-1998 | 6,331,191 | 12-18-2001 |
| 1880-11 P | Fenestrated Inflatable Graft | 61/547,421 | 10-14-2011 | | |
| 1880-12 RCE II | Dual Chamber Cuff Design | 11/504,434 | 08-14-2006 | 8,216,297 | 07-10-2012 |
| 1880-14 RCE II | Methods, Compositions And Devices For Embolizing Body Lumens | 11/031,311 | 01-07-2005 | | |
| 1880-15 RCE | Kink Resistant Endovascular Graft | 10/384,103 | 03-06-2003 | 7,150,758 | 12-19-2006 |
| 1880-16 RCE II | Hybrid Modular Endovascular Graft | 11/097,718 | 04-01-2005 | | |
| 1880-17 RCE III | Inflatable Porous Implants And Methods Of Drug Delivery | 10/769,532 | 01-30-2004 | 7,803,178 | 09-28-2010 |
| 1880-17 RCE III/DIV | Inflatable Porous Implants And Methods For Drug Delivery | 12/860,364 | 08-20-2010 | 8,267,989 | 09-18-2012 |
| 1880-18 CON II | PTFE Layers And Methods Of Manufacturing | 12/915,636 | 10-29-2010 | | |
| 1880-19 CON II | PTFE Layers And Methods Of Manufacturing | 12/910,281 | 10-22-2010 | | |
| 1880-20 | Method And Apparatus For Shape Forming Endovascular Graft Material | 10/029,570 | 12-20-2001 | 6,776,604 | 08-17-2004 |

TriVascular Inc. USA Portfolio With Hoffmann & Baron
(Effective October 10, 2012)

| <u>H&B Docket No.</u> | <u>Title</u> | <u>Appln. No.</u> | <u>Filing Date</u> | <u>Patent No.</u> | <u>Grant Date</u> |
|----------------------------------|--|--------------------------|---------------------------|--------------------------|--------------------------|
| 1880-20 DIV | Method And Apparatus For Shape Forming Endovascular Graft Material | 10/868,292 | 06-14-2004 | 7,147,455 | 12-12-2006 |
| 1880-21 | Method And Apparatus For Manufacturing An Endovascular Graft Section | 10/029,557 | 12-20-2001 | 7,125,464 | 10-24-2006 |
| 1880-21 DIV | Method And Apparatus For Manufacturing An Endovascular Graft Section | 11/522,490 | 09-15-2006 | 7,678,217 | 03-16-2010 |
| 1880-21 DIV/DIV | Method And Apparatus For Manufacturing An Endovascular Graft Section | 12/697,504 | 02-01-2010 | | |
| 1880-25 P | Vascular Graft Having Limited End Structure | 61/547,470 | 10-14-2011 | | |
| 1880-26 | Inflatable Implant | 10/461,853 | 06-13-2003 | 7,632,291 | 12-15-2009 |
| 1880-26 DIV | Inflatable Implant | 12/628,623 | 12-01-2009 | | |
| 1880-29 P | Low Profile Stent Attachments | 61/621,036 | 04-06-2012 | | |
| 1880-29 P2 | Low Profile Stent Attachments | 61/621,038 | 04-06-2012 | | |
| 1880-30 P | Advanced Kink Resistance Stent Graft | 61/619,715 | 04-03-2012 | | |
| 1880-42 P | Endovascular Delivery System With An Improved Radiopaque Marker Scheme | 61/660,413 | 06-15-2012 | | |
| 1880-43 P | Endovascular Delivery System With Flexible And Torqueable Hypotube | 61/660,103 | 06-15-2012 | | |
| 1880-44 P | Endovascular Graft Having Tethered Contralateral Leg | 61/660,105 | 06-15-2012 | | |
| 1880-45 P | Endovascular grafts for aneurysms involving major branch vessels | 61/711,797 | 10-10-2012 | | |