PATENT ASSIGNMENT

Electronic Version v1.1
Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY AGREEMENT

CONVEYING PARTY DATA

Name	Execution Date
Cardiovascular Systems, Inc.	04/12/2010

RECEIVING PARTY DATA

Name:	Partners for Growth III, L.P.
Street Address:	180 Pacific Avenue
City:	San Francisco
State/Country:	CALIFORNIA
Postal Code:	94111

PROPERTY NUMBERS Total: 64

Property Type	Number
Patent Number:	7584022
Patent Number:	7507245
Patent Number:	7174240
Patent Number:	6852118
Patent Number:	6638288
Patent Number:	6494890
Patent Number:	6295712
Patent Number:	6217595
Patent Number:	6132444
Patent Number:	6129734
Patent Number:	6077282
Patent Number:	6039747
Patent Number:	6027460
Patent Number:	6024749
Patent Number:	5897566

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Patent Number:	5893857
Patent Number:	5554163
Patent Number:	5443446
Patent Number:	5314438
Patent Number:	5295958
Patent Number:	5221258
Patent Number:	5181911
Application Number:	11432162
Application Number:	11431994
Application Number:	11432119
Application Number:	11761128
Application Number:	11773517
Application Number:	11767725
Application Number:	12130083
Application Number:	11876891
Application Number:	12363914
Application Number:	11951870
Application Number:	12578222
Application Number:	12130024
Application Number:	12580590
Application Number:	12405765
Application Number:	12466130
Application Number:	12466164
Application Number:	12466179
Application Number:	12466152
Application Number:	61218206
Application Number:	12388703
Application Number:	12464524
Application Number:	12568939
Application Number:	61305019
Application Number:	61305041
Application Number:	61305063
Application Number:	61306715
Application Number:	61306750
Application Number:	61306761

Application Number:	61306777
Application Number:	61306790
Application Number:	61305164
Application Number:	61305611
Application Number:	61305626
Application Number:	61305637
Application Number:	61305653
Application Number:	61306191
Application Number:	61306206
Application Number:	61306223
Application Number:	61306236
Application Number:	61306244
Application Number:	12576601
Application Number:	29298320

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	PFG-CSI
NAME OF SUBMITTER:	Benjamin Greenspan

Total Attachments: 6

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PATENT COLLATERAL AGREEMENT AND NOTICE

This Patent Collateral Agreement and Notice dated as of April 14, 2010, is between Cardiovascular Systems, Inc., a Delaware corporation with its principal place of business at 651 Campus Drive, St. Paul, MN 55112 ("Assignor") and Partners for Growth III, L.P., 180 Pacific Avenue, San Francisco, CA 94111 ("Assignee") pursuant to a Loan and Security Agreement dated April 14, 2010, by and between Assignor and Assignee and pursuant to certain other loan documents referenced therein (collectively, the "Loan Documents").

WHEREAS, Assignor is the owner of certain United States patents and/or patent applications as listed on Exhibit 1 hereto (the "Patents"); and

WHEREAS, Assignee has agreed to extend certain credit to Assignor on condition that the Assignor pledge and grant to Assignee as collateral for the Obligations (as defined in the Loan Documents) a security interest and lien in and to the Patents and all proceeds thereof and all other related claims and rights as more fully described in a certain Intellectual Property Security Agreement (the "Security Agreement") in favor of the Assignee dated April 14, 2010, by and between Assignor and Assignee;

NOW THEREFORE, for good and valuable consideration, as security for the due and timely payment and performance of the Obligations, Assignor hereby pledges and grants to Assignee a security interest and lien in and to the Patents and all proceeds thereof and gives notice of such security interest and the existence of such Security Agreement providing therefor.

Executed as of the date first above written.

Assignor:

Cardiovascular Systems, Inc.

By_____
Chief Executive Officer

By_____
Secretary

Assignee:

PARTNERS FOR GROWTH III, L.P.

By_____

Name: _____

Title: Manager, Partners for Growth III, LLC
Its General Partner

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Executed as of the date first above written.

Assignor:

Cardiovascular Systems, Inc.

By_____
Chief Executive Officer

By_____
Secretary

Assignee:

PARTNERS FOR GROWTH III, L.P.

By Lorraine Nield

Name: LORRAINE NIELD

Title: Manager, Partners for Growth III, LLC
Its General Partner

EXHIBIT 1
Cardiovascular Systems, Inc.
Patent Schedule

SCHEDULE B
Cardiovascular Systems, Inc.

Patent Schedule

US Patents

Filing Date	Patent Number	Issue Date
March 5, 2004	7,666,202	February 23, 2010
December 3, 2007	D610258	February 16, 2010
November 5, 2007	D607102	December 29, 2009
June 7, 1995	RE36,764	July 4, 2000
May 5, 2006	7,584,022	September 1, 2009
October 16, 2002	7,507,245	March 24, 2009
October 16, 2002	7,174,240	February 6, 2007
October 19, 2001	6,852,118	February 8, 2005
April 18, 2000	6,638,288	October 28, 2003
August 14, 1997	6,494,890	December 17, 2002
June 20, 2000	6,295,712	October 2, 2001
January 4, 1999	6,217,595	April 17, 2001
March 19, 1998	6,132,444	October 17, 2000
October 27, 1997	6,129,734	October 10, 2000
December 10, 1997	6,077,282	June 20, 2000
April 8, 1998	6,039,747	March 21, 2000
September 14, 1995	6,027,460	February 22, 2000
March 16, 1998	6,024,749	February 15, 2000
July 15, 1996	5,897,566	April 27, 1999
January 21, 1997	5,893,857	April 13, 1999
April 27, 1995	5,554,163	September 10, 1996
February 3, 1994	5,443,446	August 22, 1995
February 2, 1993	5,314,438	May 24, 1994
April 4, 1991	5,295,958	March 22, 1994
January 22, 1991	5,221,258	June 22, 1993
April 22, 1991	5,181,911	January 26, 1993

US Pending Patent Applications

Title	Filing Date	Application Number
SYSTEM FOR CONTROLLING A FLOW OF FLUID THROUGH A ROTATIONAL	5/11/2006	11/432162

ATHERECTOMY DEVICE		
FLUID CONTROL SYSTEM FOR A ROTATIONAL ATHERECTOMY DEVICE	5/11/2006	11/431994
ROTATIONAL ATHERECTOMY SYSTEM	5/11/2006	11/432119
ECCENTRIC ABRADING HEAD FOR HIGH-SPEED ROTATIONAL ATHERECTOMY DEVICES	6/11/2007	11/761128
CLEANING APPARATUS AND METHOD FOR HIGH-SPEED ROTATIONAL ATHERECTOMY DEVICES	7/5/2007	11/773517
SYSTEM, APPARATUS AND METHOD FOR OPENING AN OCCLUDED LESION	6/25/2007	11/767725
ECCENTRIC ABRADING ELEMENT FOR HIGH-SPEED ROTATIONAL ATHERECTOMY DEVICES	5/30/2008	12/130083
ROTATIONAL ATHERECTOMY DEVICE WITH ECCENTRIC ABRASIVE ELEMENT AND COUNTERWEIGHTS	10/23/2007	11/876891
MULTI-MATERIAL ABRADING HEAD FOR ATHERECTOMY DEVICES HAVING LATERALLY DISPLACED CENTER OF MASS	2/2/2009	12/363914
ROTATIONAL ATHERECTOMY DEVICE WITH PRE-CURVED DRIVE SHAFT	12/6/2007	11/951870
ROTATIONAL ATHERECTOMY DEVICE WITH PRE-CURVED DRIVE SHAFT	10/13/2009	12/578222
ECCENTRIC ABRADING AND CUTTING HEAD FOR HIGH-SPEED ROTATIONAL ATHERECTOMY DEVICES	5/30/2008	12/130024
DENSE MATERIAL ABRASIVE CROWN	10/16/2009	12/580590
ROTATIONAL ATHERECTOMY ABRASIVE CROWN	12/3/2007	29/298320
METHOD AND APPARATUS FOR INCREASING ROTATIONAL AMPLITUDE OF ABRASIVE ELEMENT ON HIGH-SPEED ROTATIONAL ATHERECTOMY DEVICE	3/17/2009	12/405765
DIRECTIONAL ROTATIONAL ATHERECTOMY DEVICE WITH OFFSET SPINNING ABRASIVE ELEMENT	5/14/2009	12/465807
BIDIRECTIONAL EXPANDABLE HEAD FOR ROTATIONAL ATHERECTOMY DEVICE	5/14/2009	12/466130
CUTTING AND CORING ATHERECTOMY DEVICE AND METHOD	5/14/2009	12/466164
SPLIT FLEXIBLE TUBE BIASING AND DIRECTIONAL ATHERECTOMY DEVICE AND METHOD	5/14/2009	12/466179
ABRASIVE NOSE CONE WITH EXPANDABLE	5/14/2009	12/466152

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CUTTING AND SANDING REGION FOR ROTATIONAL ATHERECTOMY DEVICE		
OVERLAPPING EXPANDING LEAF LARGE VESSEL ATHERECTOMY DEVICE	6/18/2009	61/218206
ROTATIONAL ATHERECTOMY SEGMENTED ABRADING HEAD AND METHOD TO IMPROVE ABRADING EFFICIENCY	2/19/2009	12/388703
ROTATIONAL ATHERECTOMY DEVICE AND METHOD TO IMPROVE ABRADING EFFICIENCY	5/12/2009	12/464524
ROTATIONAL ATHERECTOMY DEVICE WITH KEYED EXCHANGEABLE DRIVE SHAFT	10/9/2009	12/576601
MAGNETIC DRIVE SHAFT ATTACHMENT AND CLUTCH FOR ORBITAL ATHERECTOMY DEVICE	9/29/2009	12/568939
ULTRASOUND-INFLUENCED DELIVERY OF THERAPEUTIC AGENTS TO VESSEL WALLS	2/16/2010	61/305019
CELL ISOLATION AND DISTAL LOADING OF CELL INJECTION CATHETER	2/16/2010	61/305041
METHOD AND APPARATUS FOR DELIVERING THERAPEUTIC SUBSTANCES INTO A VESSEL USING INJECTION NEEDLES ATTACHED TO A BALLOON	2/16/2010	61/305063
EXPANDABLE NEEDLE CAGE INJECTION CATHETER AND NEEDLE DESIGNS FOR STEM CELL OR THERAPEUTIC AGENT	2/22/2010	61/306715
BALLOON EXPANDABLE THERAPEUTIC SUBSTANCE INJECTION CATHETER	2/22/2010	61/306750
MECHANICALLY EXPANDABLE THERAPEUTIC SUBSTANCE INJECTION CATHETER	2/22/2010	61/306761
DELIVERY OF THERAPEUTIC AGENTS VIA LONGITUDINAL MOVEMENT OF A DELIVERY DEVICE	2/2202010	61/306777
THERAPEUTIC AGENT DELIVERY WITHIN LUMEN VIA PADDLE DEVICE	2/22/2010	61/306790
DELIVERING THERAPEUTIC SUBSTANCES TO A LUMEN USING MECHANICAL NEEDLE EXPANSION THROUGH ROTATIONAL MEANS	2/17/2010	61/305164
VIBRATING NEEDLE FOR MULTI-SITE INTRAVASCULAR INJECTION OF DRUG OR CELLS	2/18/2010	61/305611
DEVICE AND METHOD FOR DELIVERY OF STEM CELLS AND/OR THERAPEUTIC AGENTS DURING AND/OR POST	2/18/2010	61/305626

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ATHERECTOMY PROCEDURE		
DELIVERY OF THERAPEUTIC SUBSTANCES TO ARTERIAL WALL ENHANCED BY SCORING ARTERIAL WALL	2/18/2010	61/305637
ADMINISTRATION OF THERAPEUTIC SUBSTANCES INTO BIOLOGICAL LUMEN WITH LONGITUDINAL STALLING METHODS AND DEVICES TO INCREASE EFFICIENCY OF UPTAKE	2/18/2010	61/305653
IONTOPHORESIS-ASSISTED DELIVERY OF IONICALLY CHARGED THERAPEUTIC SUBSTANCES TO VESSEL WALLS	2/19/2010	61/306191
DELIVERY OF THERAPEUTIC SUBSTANCES TO VESSEL WALLS USING BIOABSORBABLE MATRIX LAYER	2/19/2010	61/306206
DELIVERY OF THERAPEUTIC SUBSTANCES TO VESSEL WALL USING SUCTION FORCE	2/19/2010	61/306223
DELIVERING THERAPEUTIC SUBSTANCES TO VESSEL WALL WITH A DRIVING FORCE	2/19/2010	61/306236
METHOD AND APPARATUS FOR CONTINUOUS OR INTERMEDIATE MIXING OF THERAPEUTIC CELLS BEFORE ADMINISTRATION TO LUMEN WALL	2/19/2010	61/306244