

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | SECURITY AGREEMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-----------------------------------|----------------|
| Data Sciences International, Inc. | 05/12/2009 |

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 44

| Property Type | Number |
|---------------------|----------|
| Patent Number: | 6296615 |
| Patent Number: | 6659959 |
| Patent Number: | 7481774 |
| Patent Number: | 6323256 |
| Patent Number: | 6774157 |
| Patent Number: | 6033366 |
| Patent Number: | 6379308 |
| Patent Number: | 7025727 |
| Patent Number: | 7347822 |
| Application Number: | 12055080 |
| Application Number: | 10717179 |
| Patent Number: | 7464602 |
| Application Number: | 12164870 |
| Patent Number: | 6299582 |
| Patent Number: | 6506161 |

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|---------------------|----------|
| Patent Number: | 5865749 |
| Patent Number: | 6063034 |
| Patent Number: | 6544180 |
| Patent Number: | 6626838 |
| Patent Number: | 5980463 |
| Patent Number: | 6350242 |
| Patent Number: | 6626839 |
| Patent Number: | 6539316 |
| Patent Number: | 6595071 |
| Patent Number: | 6435037 |
| Patent Number: | 7344505 |
| Application Number: | 12033531 |
| Patent Number: | 7413547 |
| Patent Number: | 7489209 |
| Application Number: | 11861124 |
| Application Number: | 11933872 |
| Application Number: | 12265541 |
| Application Number: | 12165430 |
| Patent Number: | D415043 |
| Patent Number: | 6709430 |
| Patent Number: | 6947795 |
| Patent Number: | 7418297 |
| Application Number: | 12198681 |
| Application Number: | 11356304 |
| Patent Number: | D572364 |
| Application Number: | 12113006 |
| Application Number: | 11478936 |
| Application Number: | 11633208 |
| Application Number: | 12165415 |

CORRESPONDENCE DATA

Fax Number: (415)738-5371
Correspondence will be sent via US Mail when the fax attempt is unsuccessful.
Phone: 415-381-3283
Email: bg2@greenspan.org
Correspondent Name: Benjamin Greenspan

Address Line 1: 620 Laguna Road
Address Line 4: Mill Valley, CALIFORNIA 94941

ATTORNEY DOCKET NUMBER: PFG2-TRANSOMA (DSI)

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 May 12, 2009, is between Transoma Medical, Inc., a Delaware corporation with its principal place of business at 119 14th Street NW, Suite 100, St. Paul, Minnesota 55112 ("Assignor") and Partners for Growth II, L.P., 180 Pacific Avenue, San Francisco, CA 94111 ("Assignee") pursuant to an Amendment No. 2 to Loan and Security Agreement dated May 12, 2009, by and among 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 I 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 May 12, 2009, by and among 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:


Transoma Medical, Inc.

By _____
Chief Executive Officer

By _____
Secretary

Assignee:

PARTNERS FOR GROWTH II, L.P.

By  _____

Name: Andrew Kahn

Title: **Manager, Partners for Growth II, LLC
Its General Partner**

PATENT COLLATERAL AGREEMENT AND NOTICE

This Patent Collateral Agreement and Notice dated as of May 12, 2009, is between Transoma Medical, Inc., a Delaware corporation with its principal place of business at 1 Street NW, Suite 100, St. Paul, Minnesota 55112 ("Assignor") and Partners for Growth II, L.P., 180 Pacific Avenue, San Francisco, CA 94111 ("Assignee") pursuant to an Amended Loan and Security Agreement dated May 12, 2009, by and among Assignor and Assignee 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 certain obligations and Assignor pledges 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 related claims and rights as more fully described in a certain Intellectual Property Security Agreement (the "Security Agreement") in favor of the Assignee dated May 12, 2009 among Assignor and Assignee;

NOW THEREFORE, for good and valuable consideration, as security for the 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 in and to the Patents and all proceeds thereof in and to the Patents and all proceeds thereof in notice of such security interest and the existence of such Security Agreement provided

Executed as of the date first above written.

Assignor:

Transoma Medical, Inc.

By 
Chief Executive Officer

By 
Secretary

Assignee:

PARTNERS FOR GROWTH II, L.P.

By _____

Name: _____

Title: Manager, Partners for Growth II, L.P.
Its General Partner

EXHIBIT 1
Transoma Medical, Inc.
Patent Schedule

| Serial No. / Filing date | Patent No./ Issue date | Title |
|---------------------------------|-------------------------------|---|
| 09/264,147 3/5/1999 | 6,296,615 10/2/2001 | Catheter With Physiological Sensor |
| 09/825,130 4/3/2001 | 6,659,959 12/9/2006 | Catheter With Physiological Sensor |
| 10/420,388 4/22/2003 | 7,481,774 1/27/2009 | Catheter With Physiological Sensor |
| 09/329,869 6/11/1999 | 6,323,256 11/27/2001 | Biocompatible Medical Devices with Polyurethane Surface |
| 09/962,727 9/25/2001 | 6,774,157 8/10/2004 | Biocompatible Medical Devices with Polyurethane Surface |
| 08/950,315 10/14/1997 | 6,033,366 3/7/2000 | Pressure Measurement Device |
| 09/491,233 1/25/2000 | 6,379,308 4/30/2002 | Pressure Measurement Device |
| 09/997,850 11/29/2001 | 7,025,727 4/11/2006 | Pressure Measurement Device |
| 11/304,452 12/14/2005 | 7,347,822 3/25/2008 | Pressure Measurement Device |
| 12/055,080 3/25/2008 | N/A | Pressure Measurement Device |
| 2305998 10/7/1998 | 2305998 6/19/2007 | Catheter With Pressure Transducer Next to the Distal End |
| 98952131.5 10/7/1998 | 69829399.1 3/16/2005 | Catheter With Pressure Transducer Next to the Distal End |
| 98952131.5 10/7/1998 | 1022983 3/16/2005 | Catheter With Pressure Transducer Next to the Distal End |
| 98952131.5 10/7/1998 | 1022983 3/16/2005 | Catheter With Pressure Transducer Next to the Distal End |
| 98952131.5 10/7/1998 | 1022983 3/16/2005 | Catheter With Pressure Transducer Next to the Distal End |
| 98952131.5 10/7/1998 | 1022983 3/16/2005 | Catheter With Pressure Transducer Next to the Distal End |
| 10/717,179 11/17/2003 | N/A | Implantable Pressure Sensors |
| 11/479,932 6/30/2006 | 7,464,602 12/16/2008 | Pressure Sensing Device |
| 7799187.5 6/29/2007 | N/A | Pressure Sensing Device |
| 12/164,870 6/30/2008 | N/A | Pressure and Oxygen Saturation Monitoring Devices and Systems |

| Serial No. / Filing date | Patent No. / Issue date | Title |
|--------------------------|-------------------------|---|
| 08/819,888 3/18/1997 | 6,299,582 10/9/2001 | Respiration Monitoring System Based on Sensed Blood Pressure Variations |
| 09/927,588 8/10/2001 | 6,506,161 1/14/2003 | Respiration Monitoring System Based on Sensed Blood Pressure Variations |
| 08/744,360 11/7/1996 | 5,865,749 2/2/1999 | Blood Flow Meter Apparatus and Method of Use |
| 09/179,042 10/26/1998 | 6,063,034 5/16/2000 | Blood Flow Meter Apparatus and Method of Use |
| 09/452,332 11/30/1999 | 6,544,180 4/8/2003 | Blood Flow Meter Apparatus and Method of Use |
| 09/924,739 8/8/2001 | 6,626,838 9/30/2003 | Blood Flow Meter Apparatus and Method of Use |
| 2270961 11/7/1997 | 2270961 1/2/2007 | Blood Flow Meter Apparatus and Method of Use |
| 97946496.3 11/7/1997 | 69730249.0 8/11/2004 | Blood Flow Meter Apparatus and Method of Use |
| 97946496.3 11/7/1997 | 1011451 8/11/2004 | Blood Flow Meter Apparatus and Method of Use |
| 97946496.3 11/7/1997 | 1011451 8/11/2004 | Blood Flow Meter Apparatus and Method of Use |
| 97946496.3 11/7/1997 | 1011451 8/11/2004 | Blood Flow Meter Apparatus and Method of Use |
| 97946496.3 11/7/1997 | 1011451 8/11/2004 | Blood Flow Meter Apparatus and Method of Use |
| 08/746,421 11/8/1996 | 5,980,463 11/9/1999 | Method for Respiratory Tidal Volume Measurement |
| 09/052,509 3/31/1998 | 6,350,242 2/26/2002 | Respiration Monitoring System Based on Sensed Blood Pressure Variations |
| 10/041,823 10/29/2001 | 6,626,839 9/30/2003 | Respiration Monitoring System Based on Sensed Blood Pressure Variations |
| 09/478,486 1/6/2000 | 6,539,316 3/25/2003 | Phase Detector |
| 09/478,762 1/6/2000 | 6,595,071 7/22/2003 | Estimation of Error Angle in Ultrasound Flow Measurement |
| 09/479,268 1/6/2000 | 6,435,037 8/20/2002 | Multiplexed Phase Detector |
| 10/272,489 10/15/2002 | 7,344,505 3/18/2008 | Barriers and Methods for Pressure Measurement Catheters |
| 12/033,531 2/19/2008 | N/A | Barriers and Methods for Pressure Measurement Catheters |
| 10/984,111 11/8/2004 | 7,413,547 8/19/2008 | Reference Sensor Correction for Implantable Sensors |
| 11/409,224 4/20/2006 | 7,489,209 2/10/2009 | High Stability Fast Start Up Oscillator for Implants |
| 11/861,124 9/25/2007 | N/A | Monitoring Physiological Parameters of a Test Subject with a Modular Implantable Device |

| 11/933,872 11/1/2007 | N/A | Calculating Respiration Parameters Using Impedance Plethysmography |
|---------------------------|-------------------------------|--|
| 12/265,541 11/5/2008 | N/A | Neural Signal Processing |
| 12/165,430 6/30/2008 | N/A | Providing Impedance Plethysmography Electrodes |
| Serial No./ Filing date | Patent No./ Issue date | Title |
| 600680 5/17/1989 | 1317482 5/11/1993 | Device for Chronic Measurement of Internal Body Pressure |
| 89906622.9 5/17/1989 | 417171 8/2/1995 | Device for Chronic Measurement of Internal Body Pressure |
| 89906622.9 5/17/1989 | 68923703.0 8/2/1995 | Device for Chronic Measurement of Internal Body Pressure |
| 89906622.9 5/17/1989 | 417171 8/2/1995 | Device for Chronic Measurement of Internal Body Pressure |
| 89906622.9 5/17/1989 | 417171 8/2/1995 | Device for Chronic Measurement of Internal Body Pressure |
| 89906622.9 5/17/1989 | 417171 8/2/1995 | Device for Chronic Measurement of Internal Body Pressure |
| 89906622.9 5/17/1989 | 417171 8/2/1995 | Device for Chronic Measurement of Internal Body Pressure |
| 89906622.9 5/17/1989 | 417171 8/2/1995 | Device for Chronic Measurement of Internal Body Pressure |
| 506345/89 5/17/1989 | 2972251 8/27/1999 | Device for Chronic Measurement of Internal Body Pressure |
| 89906622.9 5/17/1989 | 417171 8/2/1995 | Device for Chronic Measurement of Internal Body Pressure |
| 29/094,112 9/25/1998 | D415053 10/12/1999 | Housing for Physiological Sensor |
| 09/735,378 12/12/2000 | 6709430 3/23/2004 | Adjustable Flow Probe |
| 09/968,644 10/1/2001 | 6947795 9/20/2005 | Frame Length Modulation and Pulse Position Modulation for Telemetry of Analog and Digital Data |
| 11/193,818 7/28/2005 | 7418297 8/26/2008 | System and Method for Telemetry of Analog and Digital Data |
| 12/198,681 8/26/2008 | N/A | System and Method for Telemetry of Analog and Digital Data |
| 11/356,304 2/15/2006 | N/A | Implantable Housing With Catheter Strain Relief |
| 29/258,087 4/14/2006 | D572,364 7/1/2008 | Implantable Housing |
| 117862 10/12/2006 | 117862 4/9/2008 | Implantable Housing |
| 000 603 287 10/12/2006 | 000 603 287-001 10/12/2006 | Implantable Housing |
| 12/113,006 4/30/2008 | N/A | Electrocardiographic (ECG) Data Analysis Systems and Methods |
| 11/478,936 6/30/2006 | N/A | Monitoring Physiologic Conditions via Transtracheal Measurements of Respiratory Parameters |

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|-------------------------|-----|--|
| 11/633,208 12/4/2006 | N/A | Method and Apparatus for Body Implantable Measurement of Flow |
| 12/165,415 6/30/2008 | N/A | Electrocardiogram and Respiration Monitoring in Animals |