

<b>PATENT ASSIGNMENT COVER SHEET</b>
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Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT3974643

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	SECURITY AGREEMENT

**CONVEYING PARTY DATA**

Name	Execution Date
THE TEACHERS' RETIREMENT SYSTEM OF ALABAMA	06/12/2015

**RECEIVING PARTY DATA**

<b>Name:</b>	SIO2 MEDICAL PRODUCTS, INC.
<b>Street Address:</b>	2250 RILEY STREET
<b>City:</b>	AUBURN
<b>State/Country:</b>	ALABAMA
<b>Postal Code:</b>	36822

**PROPERTY NUMBERS Total: 20**

Property Type	Number
Application Number:	13520037
Application Number:	14400079
Application Number:	13941154
Application Number:	14305202
Application Number:	13805835
Application Number:	13894984
Application Number:	14015820
Application Number:	14604634
Application Number:	14511352
Application Number:	14085749
Application Number:	14194221
Application Number:	14205329
Application Number:	14357418
Application Number:	14214030
Application Number:	13436252
Application Number:	14412472
Application Number:	14399678
Application Number:	14404521
Application Number:	13211917
Application Number:	13651299

PATENT

**CORRESPONDENCE DATA****Fax Number:** (205)254-1999*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:** 205-254-1036**Email:** tebbert@maynardcooper.com**Correspondent Name:** C. BRANDON BROWNING**Address Line 1:** 1901 SIXTH AVENUE NORTH**Address Line 2:** SUITE 2400**Address Line 4:** BIRMINGHAM, ALABAMA 35203

<b>NAME OF SUBMITTER:</b>	C. BRANDON BROWNING
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<b>SIGNATURE:</b>	/cbbrowning/
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<b>DATE SIGNED:</b>	07/22/2016
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**Total Attachments: 9**

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## **PATENT SECURITY AGREEMENT AMENDMENT**

**THIS PATENT SECURITY AGREEMENT AMENDMENT** (“this Amendment”) dated as of June 12, 2015 is entered into by and among each party identified on the signature page of this Agreement (collectively referred to herein as “Grantors” and individually as a “Grantor”) in favor of **THE TEACHERS’ RETIREMENT SYSTEM OF ALABAMA**, an instrumentality of the State of Alabama (“TRS”), in its capacity as Agent (“Agent”) for the Lenders (as defined below) under that certain Master Loan Agreement dated as of March 15, 2012 (as amended or supplemented from time to time, the “Loan Agreement”) by and among SiO<sub>2</sub> Medical Products, Inc., a Delaware corporation (“Borrower”), TRS, as such Agent for itself and the other lenders party to the Loan Agreement (collectively, the “Lenders”).

### **Recitals**

A. The Grantors have heretofore entered into a Patent Security Agreement dated as of March 15, 2012 (as amended, restated or supplemented from time to time, the "Security Agreement"), pursuant to which the Grantors secured the Secured Obligations to the Lenders with the Patent Collateral.

B. The Grantors and the Agent now desire to amend the Security Agreement in certain respects, as hereinafter set forth.

### **Agreement**

**NOW, THEREFORE**, in consideration of the foregoing recitals and of the mutual agreements of the parties hereto, the Security Agreement is hereby amended as follows:

**1. Definitions.** Capitalized terms used in this Amendment and not otherwise defined herein have the respective meanings attributed thereto in the Security Agreement.

**2. Amendment to Security Agreement.** Effective as of the date hereof, Exhibit A attached to the Security Agreement is hereby revised to include the Patents referenced in the Amendment to Exhibit A attached hereto. Each of the Grantors acknowledges, agrees, ratifies and reaffirms the grant to the Agent of a first-priority security interest in and lien upon the Patent Collateral and acknowledges, agrees and reaffirms that the Secured Obligations are secured by a properly perfected, first-priority security interest in and lien upon the Patent Collateral, including, but not limited to, the Patents described in the Amendment to Exhibit A attached hereto and each of the Grantors hereby, as security for the Secured Obligations, grants to the Agent security title to and a continuing security interest in, and assigns, transfers, conveys, pledges and sets over to the Agent all of the Grantors’ right, title and interest in, to and under all Patents described in such Amendment to Exhibit A, as further amended or modified from time to time.

**3. Miscellaneous.**

(a) Except as amended hereby, the Security Agreement shall continue in full force and effect.

(b) Each of the Grantors hereby represents and warrants to the Agent that all representations and warranties contained in the Security Agreement are true and correct as of the date hereof (except representations and warranties that are expressly limited to an earlier date); and each of the Grantors hereby certifies that no Event of Default nor any event that, upon notice or lapse of time or both, would constitute an Event of Default, has occurred and is continuing.

(c) This Amendment may be executed in one or more counterparts, each of which shall be deemed an original, and all of which when taken together shall constitute one and the same instrument.

(d) The covenants and agreements contained herein shall apply to and inure to the benefit of and be binding upon the parties hereto and their respective successors and permitted assigns.

(e) Nothing contained herein shall be construed as a waiver, acknowledgment or consent to any breach of or Event of Default under the Security Agreement and other related documents not specifically mentioned herein, and the consents granted herein are effective only in the specific instance and for the purposes for which given.

(f) This Amendment shall be governed by the laws of the State of Alabama.

[Remainder of page left intentionally blank]

IN WITNESS WHEREOF, the Grantors and the Agent have caused this Amendment to be executed and delivered by their duly authorized representatives as of the date set forth above.

GRANTORS:

SIO<sub>2</sub> MEDICAL PRODUCTS, INC.

By: *Robert S. Abrams*

Name: Robert S. Abrams

Title: President

*Robert S. Abrams*

Robert S. Abrams

SiO2 Medical Products, Inc.  
Patent Security Agreement  
Exhibit A

Grantor	Patent Number	Jurisdiction where Registered	Application Number
SiO2 Medical Products, Inc.		Australia	2010249031
SiO2 Medical Products, Inc.		Australia	2013202893
SiO2 Medical Products, Inc.		Brazil	PI10105697
SiO2 Medical Products, Inc.		Canada	2761905
SiO2 Medical Products, Inc.		China	201080029201.4
SiO2 Medical Products, Inc.		Europe	10162758.6
SiO2 Medical Products, Inc.		Hong Kong	12110442.9
SiO2 Medical Products, Inc.		Israel	215913
SiO2 Medical Products, Inc.		India	9646DELNP2011
SiO2 Medical Products, Inc.		Japan	2012-510982
SiO2 Medical Products, Inc.		South Korea	1020117028713
SiO2 Medical Products, Inc.		Mexico	MXa2011012042
SiO2 Medical Products, Inc.	596997	New Zealand	596997
SiO2 Medical Products, Inc.	2523773	Russia	2011150519
SiO2 Medical Products, Inc.	176011	Singapore	201108311-0
SiO2 Medical Products, Inc.		Thailand	1101003095
SiO2 Medical Products, Inc.		Taiwan	100128240
SiO2 Medical Products, Inc.	201107871	South Africa	201107871
SiO2 Medical Products, Inc.	201207881	South Africa	201207881
SiO2 Medical Products, Inc.	2521675	Europe	11732135.6
SiO2 Medical Products, Inc.	8627970	United States	13520037
SiO2 Medical Products, Inc.		Australia	2010249033
SiO2 Medical Products, Inc.		Australia	2013202591
SiO2 Medical Products, Inc.		Brazil	1012173-0
SiO2 Medical Products, Inc.		Canada	2761872

SiO2 Medical Products, Inc.  
Patent Security Agreement  
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Grantor	Patent Number	Jurisdiction where Registered	Application Number
SiO2 Medical Products, Inc.		China	201080029199.0
SiO2 Medical Products, Inc.		Europe	10162761.0
SiO2 Medical Products, Inc.		Hong Kong	12110441.0
SiO2 Medical Products, Inc.		Israel	215914
SiO2 Medical Products, Inc.		India	9578DELNP2011
SiO2 Medical Products, Inc.		Japan	2012510983
SiO2 Medical Products, Inc.		South Korea	1020117028718
SiO2 Medical Products, Inc.		Mexico	MXa2011012038
SiO2 Medical Products, Inc.		Maylasia	PI2011005489
SiO2 Medical Products, Inc.	596239	New Zealand	596239
SiO2 Medical Products, Inc.		New Zealand	626193
SiO2 Medical Products, Inc.		Russia	2011150499
SiO2 Medical Products, Inc.	176008	Singapore	201108308-6
SiO2 Medical Products, Inc.		Singapore	10201402278V
SiO2 Medical Products, Inc.		Thailand	1101003096
SiO2 Medical Products, Inc.	201107835	South Africa	201107835
SiO2 Medical Products, Inc.	2251454	Europe	10162760.2
SiO2 Medical Products, Inc.		Europe	13183579.5
SiO2 Medical Products, Inc.		Europe	14177456.2
SiO2 Medical Products, Inc.		Canada	2799213
SiO2 Medical Products, Inc.		China	201180023474.2
SiO2 Medical Products, Inc.		Europe	11731554.9
SiO2 Medical Products, Inc.		Japan	2013510276
SiO2 Medical Products, Inc.		United States	13697048
SiO2 Medical Products, Inc.		Canada	2887367

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Grantor	Patent Number	Jurisdiction where Registered	Application Number
SiO2 Medical Products, Inc.		China	201380024057.9
SiO2 Medical Products, Inc.		Europe	13726337.2
SiO2 Medical Products, Inc.		Japan	2015511708
SiO2 Medical Products, Inc.		United States	14400079
SiO2 Medical Products, Inc.		Argentina	20110102901
SiO2 Medical Products, Inc.		Brazil	1120120288970
SiO2 Medical Products, Inc.		Canada	2799220
SiO2 Medical Products, Inc.		China	201180023461.5
SiO2 Medical Products, Inc.		Europe	11722664.7
SiO2 Medical Products, Inc.		Hong Kong	13107629.9
SiO2 Medical Products, Inc.		Israel	222932
SiO2 Medical Products, Inc.		India	9844DELNP2012
SiO2 Medical Products, Inc.		Japan	2013-510325
SiO2 Medical Products, Inc.		South Korea	1020127032502
SiO2 Medical Products, Inc.		Mexico	MXa2012013129
SiO2 Medical Products, Inc.		New Zealand	603471
SiO2 Medical Products, Inc.		Russia	2012153671
SiO2 Medical Products, Inc.		Singapore	201208307-7
SiO2 Medical Products, Inc.		Thailand	1201005901
SiO2 Medical Products, Inc.	7985188	United States	12779007
SiO2 Medical Products, Inc.	8834954	United States	13941154
SiO2 Medical Products, Inc.	8512796	United States	13169811
SiO2 Medical Products, Inc.		United States	14305202
SiO2 Medical Products, Inc.	201208501	South Africa	201208501
SiO2 Medical Products, Inc.		WO	PCTUS2013067852



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Grantor	Patent Number	Jurisdiction where Registered	Application Number
SiO2 Medical Products, Inc.		Canada	2803613
SiO2 Medical Products, Inc.		China	201180032145.4
SiO2 Medical Products, Inc.		Europe	11730526.8
SiO2 Medical Products, Inc.		Japan	2013518657
SiO2 Medical Products, Inc.		United States	13805835
SiO2 Medical Products, Inc.		United States	13894984
SiO2 Medical Products, Inc.		WO	PCTUS2014016370
SiO2 Medical Products, Inc.		WO	PCTUS2014039267
SiO2 Medical Products, Inc.		WO	PCTUS2014043810
SiO2 Medical Products, Inc.		United States	14015820
SiO2 Medical Products, Inc.		United States	62120975
SiO2 Medical Products, Inc.		WO	PCTUS2014055309
SiO2 Medical Products, Inc.		United States	14604634
SiO2 Medical Products, Inc.		WO	PCTUS2014059531
SiO2 Medical Products, Inc.		WO	PCTUS2015024558
SiO2 Medical Products, Inc.		United States	14511352
SiO2 Medical Products, Inc.		Europe	10162755.2
SiO2 Medical Products, Inc.		Europe	10162756
SiO2 Medical Products, Inc.		WO	PCTUS2014060586
SiO2 Medical Products, Inc.		United States	62048725
SiO2 Medical Products, Inc.		United States	62145902
SiO2 Medical Products, Inc.		United States	62127308
SiO2 Medical Products, Inc.		United States	62127311
SiO2 Medical Products, Inc.		United States	62079032
SiO2 Medical Products, Inc.		WO	PCTUS2013070325

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Grantor	Patent Number	Jurisdiction where Registered	Application Number
SiO2 Medical Products, Inc.		WO	PCTUS2013071752
SiO2 Medical Products, Inc.		United States	14085749
SiO2 Medical Products, Inc.		WO	PCTUS2015022154
SiO2 Medical Products, Inc.		WO	PCTUS2014019684
SiO2 Medical Products, Inc.		United States	14194221
SiO2 Medical Products, Inc.		WO	PCTUS2014023813
SiO2 Medical Products, Inc.		United States	14205329
SiO2 Medical Products, Inc.		United States	62127313
SiO2 Medical Products, Inc.		United States	62128552
SiO2 Medical Products, Inc.		Australia	2012318242
SiO2 Medical Products, Inc.		Canada	2855353
SiO2 Medical Products, Inc.		China	201280055031.6
SiO2 Medical Products, Inc.		Europe	12848314.6
SiO2 Medical Products, Inc.		Japan	2014541335
SiO2 Medical Products, Inc.		United States	14357418
SiO2 Medical Products, Inc.		WO	PCTUS2014029531
SiO2 Medical Products, Inc.		United States	14214030
SiO2 Medical Products, Inc.		WO	PCTUS2015022189
SiO2 Medical Products, Inc.		WO	PCTUS2014032919
SiO2 Medical Products, Inc.		United States	62080427
SiO2 Medical Products, Inc.		United States	62080428
SiO2 Medical Products, Inc.		United States	13436252
SiO2 Medical Products, Inc.		Canada	2805668
SiO2 Medical Products, Inc.		China	201180034947.9
SiO2 Medical Products, Inc.		Europe	11736511.4

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Grantor	Patent Number	Jurisdiction where Registered	Application Number
SiO2 Medical Products, Inc.		Europe	15157416.7
SiO2 Medical Products, Inc.		Japan	2013519852
SiO2 Medical Products, Inc.		United States	13809455
SiO2 Medical Products, Inc.		Canada	2830226
SiO2 Medical Products, Inc.		China	201280012511.4
SiO2 Medical Products, Inc.		Europe	12757698.1
SiO2 Medical Products, Inc.		Japan	2013558140
SiO2 Medical Products, Inc.		United States	14003095
SiO2 Medical Products, Inc.	2251453	Europe	10162757.8
SiO2 Medical Products, Inc.		Canada	2878638
SiO2 Medical Products, Inc.		China	201380045837.1
SiO2 Medical Products, Inc.		Europe	13737503.6
SiO2 Medical Products, Inc.		Japan	2015520596
SiO2 Medical Products, Inc.		United States	14412472
SiO2 Medical Products, Inc.		Canada	2887352
SiO2 Medical Products, Inc.		United States	14399678
SiO2 Medical Products, Inc.		Japan	2015515247
SiO2 Medical Products, Inc.		United States	14404521
SiO2 Medical Products, Inc.		United States	62129705
SiO2 Medical Products, Inc.		United States	13211917
SiO2 Medical Products, Inc.		United States	13240797
SiO2 Medical Products, Inc.		United States	13651299
SiO2 Medical Products, Inc.		United States	62147430
SiO2 Medical Products, Inc.		United States	62155090
SiO2 Medical Products, Inc.		United States	62159720