

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT3429275

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST
CONVEYING PARTY DATA	
Name	Execution Date
Q-STATE BIOSCIENCES, INC.	06/30/2015
RECEIVING PARTY DATA	
Name:	SANFORD BIOSCIENCES, LLC
Street Address:	3820 N. LOUISE AVE.
City:	SIOUX FALLS
State/Country:	SOUTH DAKOTA
Postal Code:	57117
PROPERTY NUMBERS Total: 10	
Property Type	Number
Application Number:	14303178
Application Number:	62058935
Application Number:	62058943
Application Number:	62132850
Application Number:	62013775
Application Number:	14692214
Application Number:	14692387
Application Number:	61563537
Application Number:	61982589
Application Number:	61376049
CORRESPONDENCE DATA	
Fax Number:	(612)371-3207
<i>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.</i>	
Phone:	612-371-3296
Email:	tmg@lindquist.com
Correspondent Name:	GARRETT M. WEBER
Address Line 1:	80 SOUTH EIGHTH STREET
Address Line 2:	4200 IDS CENTER
Address Line 4:	MINNEAPOLIS, MINNESOTA 55402
ATTORNEY DOCKET NUMBER:	520911.0002

PATENT

NAME OF SUBMITTER:	MARILYN S. HARGENS
SIGNATURE:	/Marilyn Hargens/
DATE SIGNED:	07/08/2015
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 10

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PATENT AND TRADEMARK SECURITY AGREEMENT

This Patent and Trademark Security Agreement (this "Agreement") is entered into as of June 30, 2015, by and between Q-STATE BIOSCIENCES, INC., a Delaware corporation (the "Debtor"), and SANFORD BIOSCIENCES, LLC, a South Dakota limited liability company ("Secured Party") pursuant to the Securities Purchase Agreement dated June 30, 2015, between the Debtor and the Secured Party (as the same may be amended, supplemented or otherwise modified, or replaced or refinanced, from time to time, the "Purchase Agreement").

Whereas, the execution and delivery of this Agreement is a condition to the Secured Party extending credit to Debtor pursuant to the Purchase Agreement;

Now, therefore, Debtor agrees with Secured Party as follows:

1. Definitions. All terms defined in the Purchase Agreement that are not otherwise defined herein shall have the meanings stated in the Purchase Agreement. In addition, the following terms have the meanings set forth below:

"Obligations" means, collectively: (i) all obligations under the Notes, the Warrants and all extensions, renewals or modifications thereof, and (ii) all obligations of Debtor under the Purchase Agreement, this Agreement and all of the other Loan Documents now or hereafter entered into by Debtor.

"Patents" means all of the Debtor's right, title and interest in and to patents or applications for patents, fees or royalties with respect to each, and including without limitation the right to sue for past infringement and damages therefor, and licenses thereunder, all as presently existing or hereafter arising or acquired, including without limitation the patents listed on Exhibit A and any divisions, continuations, continuations-in-part, reissues or corresponding foreign patents and patent applications.

"Trademarks" means all of the Debtor's right, title and interest in and to registered trademarks, service marks, collective membership marks, and all applications for registration therefor, together with the respective goodwill associated with each, fees or royalties with respect to each, including without limitation the right to sue for past infringement and damages therefor, and licenses thereunder, all as presently existing or hereafter arising or acquired, including, without limitation, the marks listed on Exhibit B and any divisions or renewals thereof or corresponding foreign trademark registrations and applications.

2. Security Interest. The Debtor hereby irrevocably pledges and assigns to, and grants to the Secured Party a security interest, with power of sale to the extent permitted by law, (the "Security Interest") in the Patents and in the Trademarks to secure payment and performance of the Obligations. As set forth in greater detail in the Security Agreement, the Security Interest in the Trademarks is coupled with a security interest in substantially all of the assets (without regard to real property) of the Debtor.

3. Representations, Warranties and Agreements. Debtor hereby represents, warrants and agrees as follows:

(a) The Debtor has full power to and authority to make and deliver this Agreement. The execution, delivery and performance of this Agreement by the Debtor have been duly authorized by all necessary action of the Debtor's Board of Directors or other governing body, and if necessary its equity holders, and do not and will not violate the provisions of, or constitute a default under, any presently applicable law or its certificate of formation or limited liability company agreement or any agreement presently binding on it. This Agreement has been duly executed and delivered by the Debtor and constitutes the Debtor's lawful, binding and legally enforceable obligation. The correct legal name of the Debtor is as set forth at the beginning of this Agreement. Except for any financing statement required to be filed under the applicable Uniform Commercial Code (the "UCC") and any filing or recording of this Agreement in the U.S. Patent and Trademark Office, the authorization, execution, delivery and performance of this Agreement do not require notification to, registration with, or consent or approval by, any federal, state or local regulatory body or administrative agency.

(b) All of the Patents identified in Exhibit A are owned or controlled by the Debtor as of the date hereof and the information in Exhibit A accurately reflects the existence and status of the Patents listed therein as of the date hereof.

(c) All of the Trademarks identified in Exhibit B are owned or controlled by the Debtor as of the date hereof and the information in Exhibit B accurately reflects the existence and status of Trademarks listed therein as of the date hereof.

(d) Except as set forth in Exhibit C, the Debtor has absolute title to each Patent and each Trademark listed on Exhibits A and B, free and clear of all security interests, liens and encumbrances, except the Security Interest and the other liens permitted under the Purchase Agreement. Except as set forth in Exhibit C, the Debtor (i) will have, at the time the Debtor acquires ownership in Patents or Trademarks hereafter arising, absolute title to each such Patent or Trademark, free and clear of all security interests, liens and encumbrances, except the Security Interest and the other liens permitted under the Purchase Agreement, and (ii) except for licenses entered into hereafter in the ordinary course of business for fair consideration, will keep all Patents and Trademarks free and clear of all security interests, liens and encumbrances except the Security Interest and the other liens permitted under the Purchase Agreement.

(e) The Debtor will not sell or otherwise dispose of the Patents or Trademarks, or any interest therein, without the Secured Party's prior written consent, except (i) as permitted in Section 3(d)(ii) above, and (ii) sale or disposition of Patents or Trademarks that provide no material continuing benefit to Debtor.

The Debtor will at its own expense, and using its best efforts, protect and defend the Patents and Trademarks against all claims or demands of all persons other than the Secured Party, which would cause material harm to the Secured Party.

(f) The Debtor will at its own expense maintain the Patents and the Trademarks to the extent reasonably advisable in its business including, but not limited to, filing all applications to register or obtain letters patent, file all affidavits and renewals, and pay all annuities and maintenance fees possible with respect to issued registrations and letters patent. The Debtor covenants that it will not abandon nor fail to pay any maintenance fee or annuity due and payable

on any Patent or Trademark (except for those that provide no material continuing benefit to Debtor), nor fail to file any required affidavit in support thereof, without first providing the Secured Party: (i) sufficient written notice to allow the Secured Party to timely pay any such maintenance fees or annuity or take such other action which may become due on any of the Patents or Trademarks, or to file any affidavit with respect thereto, and (ii) a separate written power of attorney or other authorization to pay such maintenance fees or annuities, or to file such affidavit, or take such other action, should such be necessary or desirable.

(g) If the Debtor fails to perform or observe any of its covenants or agreements set forth in this Section 3, and if such failure continues for a period of ten (10) calendar days after the Secured Party gives the Debtor written notice thereof (or, in the case of the agreements contained in subsection (g), immediately upon the occurrence of such failure, without notice or lapse of time), or if the Debtor notifies the Secured Party that it intends to abandon a Patent or Trademark, the Secured Party may (but need not) perform or observe such covenant or agreement on behalf and in the name, place and stead of the Debtor and may (but need not) take any and all other actions which the Secured Party may reasonably deem necessary to cure or correct such failure.

(h) Except to the extent that the effect of such payment would be to render any loan or forbearance of money usurious or otherwise illegal under any applicable law, the Debtor shall pay the Secured Party on demand the amount of all monies expended and all reasonable costs and expenses (including reasonable attorneys' fees) incurred by the Secured Party in connection with or as a result of the Secured Party's taking action under subsection (h) or exercising its rights under Section 6, together with interest thereon from the date expended or incurred by the Secured Party at the highest rate then applicable to any of the Obligations.

(i) To facilitate the Secured Party's taking action under subsection (h) and exercising its rights under Section 6, the Debtor hereby irrevocably appoints (which appointment is coupled with an interest) the Secured Party, or its delegate, as the attorney-in-fact of the Debtor with the right (but not the duty) from time to time to create, prepare, complete, execute, deliver, endorse or file, in the name and on behalf of the Debtor, any and all instruments, documents, applications, financing statements, and other agreements and writings required to be obtained, executed, delivered or endorsed by the Debtor under this Section 3, or, necessary for the Secured Party, after an Event of Default, to enforce or use the Patents or Trademarks or to grant or issue any exclusive or non-exclusive license under the Patents or Trademarks to any third party, or to sell, assign, transfer, pledge, encumber or otherwise transfer title in or dispose of the Patents or Trademarks to any third party. The Debtor hereby ratifies all that such attorney shall lawfully do or cause to be done by virtue hereof. The power of attorney granted herein shall terminate upon the payment and performance of all Obligations.

4. Debtor's-Use of the Patents and Trademarks. The Debtor shall be permitted to control and manage the Patents and Trademarks, including the right to exclude others from making, using or selling items covered by the Patents and Trademarks and any licenses thereunder, in the same manner and with the same effect as if this Agreement had not been entered into, so long as no Event of Default occurs and remains unwaived or uncured.

5. Events of Default. The occurrence of a Default, as defined in the Purchase Agreement, shall constitute an event of default under this Agreement (herein called "Event of Default").

6. Remedies. Upon the occurrence of an Event of Default and at any time thereafter during its continuance, the Secured Party may, at its option, take any or all of the following actions:

(a) The Secured Party may exercise any or all remedies available under the Purchase Agreement.

(b) The Secured Party may sell, assign, transfer, pledge, encumber or otherwise dispose of the Patents and Trademarks in each case in accordance with the provisions of the UCC.

(c) The Secured Party may enforce the Patents and Trademarks and any licenses thereunder, and if the Secured Party shall commence any suit for such enforcement, the Debtor shall, at the request of the Secured Party, do any and all lawful acts and execute any and all proper documents required by the Secured Party in aid of such enforcement.

7. Miscellaneous. This Agreement and Secured Party's rights under this Agreement or under applicable law may be enforced by Secured Party, at its discretion, against any one or more of the parties referred to above which are encompassed within the term Debtor, without any need to bring any enforcement action against the other parties who are encompassed within the term Debtor. This Agreement has been duly and validly authorized by all necessary action, corporate or otherwise. This Agreement can be waived, modified, amended, terminated or discharged, and the Security Interest can be released, only explicitly in a writing signed by the Secured Party. A waiver signed by the Secured Party shall be effective only in the specific instance and for the specific purpose given. Mere delay or failure to act shall not preclude the exercise or enforcement of any of the Secured Party's rights or remedies. All rights and remedies of the Secured Party shall be cumulative and may be exercised singularly or concurrently, at the Secured Party's option, and the exercise or enforcement of any one such right or remedy shall neither be a condition to nor bar the exercise or enforcement of any other.

Except as required by the UCC, the Secured Party shall not be obligated to preserve any rights the Debtor may have against prior parties, to realize on the Patents and Trademarks at all or in any particular manner or order, or to apply any cash proceeds of Patents and Trademarks in any particular order of application. This Agreement shall be binding upon and inure to the benefit of the Debtor and the Secured Party and their respective participants, successors and assigns and shall take effect when signed by the Debtor and delivered to the Secured Party, and the Debtor waives notice of the Secured Party's acceptance hereof. The Secured Party may execute this Agreement if appropriate for the purpose of filing, but the failure of the Secured Party to execute this Agreement shall not affect or impair the validity or effectiveness of this Agreement. A carbon, photographic or other reproduction of this Agreement or of any financing statement shall have the same force and effect as the original for all purposes of a financing statement. This Agreement shall be governed by the internal law of South Dakota without regard to conflicts of law provisions. If any provision or application of this Agreement is held unlawful or unenforceable in any respect, such illegality or unenforceability shall not affect other provisions or applications which can be given effect and this Agreement shall be construed as if the

unlawful or unenforceable provision or application had never been contained herein or prescribed hereby. All representations and warranties contained in this Agreement shall survive the execution, delivery and performance of this Agreement and the creation and payment of the Obligations.

8. Consent to Jurisdiction. AT THE OPTION OF THE SECURED PARTY, THIS AGREEMENT MAY BE ENFORCED IN ANY FEDERAL COURT OR SOUTH DAKOTA A STATE COURT SITTING IN SIOUX FALLS, SOUTH DAKOTA; AND EACH PARTY HERETO CONSENTS TO THE JURISDICTION AND VENUE OF ANY SUCH COURT AND WAIVES ANY ARGUMENT THAT VENUE IN SUCH FORUMS IS NOT CONVENIENT. IN THE EVENT ANY PARTY COMMENCES ANY ACTION IN ANOTHER JURISDICTION OR VENUE UNDER ANY TORT OR CONTRACT THEORY ARISING DIRECTLY OR INDIRECTLY FROM THE RELATIONSHIP CREATED BY THIS AGREEMENT, SECURED PARTY AT ITS OPTION SHALL BE ENTITLED TO HAVE THE CASE TRANSFERRED TO ONE OF THE JURISDICTIONS AND VENUES ABOVE-DESCRIBED, OR IF SUCH TRANSFER CANNOT BE ACCOMPLISHED UNDER APPLICABLE LAW, TO HAVE SUCH CASE DISMISSED WITHOUT PREJUDICE.

9. Waiver of Trial by Jury. EACH PARTY TO THIS AGREEMENT HEREBY KNOWINGLY, VOLUNTARILY AND INTENTIONALLY WAIVES ANY RIGHTS IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LITIGATION ARISING OUT OF, UNDER OR IN CONNECTION WITH THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREIN OR THEREIN, WHETHER SOUNDING IN CONTRACT, TORT OR OTHERWISE.

[The signature page follows.]

In Witness Whereof, the parties have executed this Patent and Trademark Security Agreement as of the date first written above.

Q-STATE BIOSCIENCES, INC.

By: *David Margulies*
Name: David M. Margulies
Its: Executive Chairman

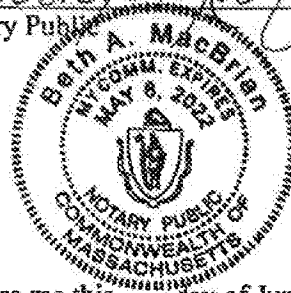
SANFORD BIOSCIENCES, LLC

By: _____
Name: T. Denny Sanford
Its: Manager

STATE OF Massachusetts
COUNTY OF Middlesex

The foregoing instrument was acknowledged before me this 29th day of June, 2015 by David M. Margulies, the Executive Chairman of Q-STATE BIOSCIENCES, INC., a Delaware corporation, on behalf of corporation.

Beth A. MacBrien
Notary Public



STATE OF _____)
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of June, 2015, by T. Denny Sanford, the Manager of SANFORD BIOSCIENCES, LLC, a South Dakota limited liability company, on behalf of the limited liability company.

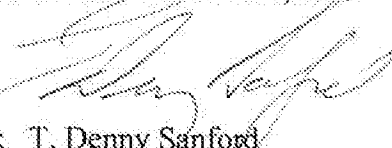
Notary Public

In Witness Whereof, the parties have executed this Patent and Trademark Security Agreement as of the date first written above.

Q-STATE BIOSCIENCES, INC.

By:
Name: David M. Margulies
Its: Executive Chairman

SANFORD BIOSCIENCES, LLC

By: 
Name: T. Denny Sanford
Its: Manager

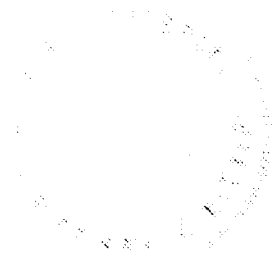
STATE OF)
)
COUNTY OF)

The foregoing instrument was acknowledged before me this ___ day of June, 2015 by David M. Margulies, the Executive Chairman of Q-STATE BIOSCIENCES, INC., a Delaware corporation, on behalf of corporation.

Notary Public

STATE OF *South Dakota*)
)
COUNTY OF *Minnehaha*)

The foregoing instrument was acknowledged before me this 16th day of June, 2015, by T. Denny Sanford, the Manager of SANFORD BIOSCIENCES, LLC, a South Dakota limited liability company, on behalf of the limited liability company.





Notary Public
SUSAN PETERSON
My Commission Expires August 29, 2018

Signature Page to Patent and Trademark Security Agreement

PATENT
REEL: 036022 FRAME: 0052

**EXHIBIT A
TO PATENT AND TRADEMARK SECURITY AGREEMENT**

U.S. & FOREIGN REGISTERED PATENTS

<u>Description or Title</u>	<u>Patent or Application No.</u>	<u>Country</u>	<u>Date of Issue</u>

PATENT APPLICATIONS:

<u>Application Number</u>	<u>Country</u>	<u>Title</u>
14/303178	U.S.	METHODS, AND WORKFLOWS FOR OPTOGENETICS ANALYSIS
62/058935	U.S.	SYSTEMS AND METHODS FOR ASSESSING RESPONSE TO STIMULI
62/058943	U.S.	SYSTEMS AND METHODS FOR ASSESSING INTER-CELL COMMUNICATION
62/132850	U.S.	CARDIOTOXICITY SCREENING METHODS
62/013775	U.S.	IMPROVED OPTOGENETIC PROBES FOR MEASURING MEMBRANE POTENTIAL
14/692214	U.S.	ANALYSIS OF COMPOUNDS FOR PAIN AND SENSORY DISORDERS
14/692387	U.S.	MODELS FOR PARKINSON'S DISEASE STUDIES
61/563537	U.S.	SYSTEMS AND METHODS FOR IMAGING AT HIGH SPATIAL AND/OR TEMPORAL PRECISION*
61/982589	U.S.	DIAGNOSTIC METHODS FOR NEURONAL DISORDERS
61/376049	U.S.	OPTOGENETIC PROBES FOR MEASURING MEMBRANE POTENTIAL*

*covered under Harvard License Agreement dated 12/13/2013

**EXHIBIT B
TO PATENT AND TRADEMARK SECURITY AGREEMENT**

U.S. & FOREIGN REGISTERED TRADEMARKS

Country	Registration No.	Mark

U.S. & FOREIGN TRADEMARKS APPLICATIONS

Country	Application No.	Mark

TRADENAMES

REGISTERED DOMAIN NAMES

www.qstatebio.com

**EXHIBIT C
TO PATENT AND TRADEMARK SECURITY AGREEMENT**

LICENSES AND ROYALTY AGREEMENTS

SECURITY INTERESTS, LIENS AND ENCUMBRANCES

1. Security Agreement dated August 1, 2013 by and between the Debtor and David Margulies.
2. Security Agreement dated September 11, 2013 by and between the Debtor and Fidelity Biosciences Corp.
3. Security Agreement dated May 5, 2014 by and between the Debtor and Andrew L. Ross.

OTHER INTERESTS