### PATENT ASSIGNMENT COVER SHEET

**SUBMISSION TYPE:** NEW ASSIGNMENT  
**NATURE OF CONVEYANCE:** ASSIGNMENT

#### CONVEYING PARTY DATA

<table>
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<tr>
<th>Name</th>
<th>Execution Date</th>
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<tbody>
<tr>
<td>LAWRENCE TOLL</td>
<td>11/24/2014</td>
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#### RECEIVING PARTY DATA

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
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<tr>
<td>THE TORREY PINES INSTITUTE FOR MOLECULAR STUDIES</td>
<td>11350 SW VILLAGE PARKWAY</td>
</tr>
<tr>
<td></td>
<td>PORT ST. LUCIE</td>
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<tr>
<td></td>
<td>FLORIDA</td>
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#### PROPERTY NUMBERS Total: 1

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<tr>
<td>Application Number</td>
<td>15102066</td>
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#### CORRESPONDENCE DATA

- **Fax Number:** (202)371-2540  
  *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:** 2023712600  
- **Email:** resmond@skgf.com, mgross@skgf.com, deniseb@skgf.com  
- **Correspondent Name:** STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C  
- **Address Line 1:** 1100 NEW YORK AVENUE, NW  
- **Address Line 4:** WASHINGTON, D.C. 20005

#### ATTORNEY DOCKET NUMBER:

3502.0180001/RWE/MFG

#### NAME OF SUBMITTER:

ROBERT W. ESMOND

#### SIGNATURE:

/Robert W. Esmond, #32,893/

#### DATE SIGNED:

09/12/2016

**Total Attachments:** 5  
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ASSIGNMENT OF INVENTION & RELATED INTELLECTUAL PROPERTY RIGHTS

PARTIES

(1) LAWRENCE TOLL, LARRY of 5298 SW. Anhinga, Palm City, FL 34990 (the Inventor); and

(2) THE TORREY PINES INSTITUTE FOR MOLECULAR STUDIES of 11350 SW Village Parkway, Port St. Lucie, FL 34987, USA (the Assignee).

BACKGROUND

(A) The Inventor is an inventor of the Invention for which the Patents Applications have been or will be filed. The Inventor was an employee of the Assignee when the Invention was made and the contributions of the Inventor to the Invention were made in the course of the duties of the Inventor as an employee of the Assignee.

(B) It was a term of the Inventor’s agreement with the Assignee that the Assignee would be entitled to any invention made by the Assignor in the course of his employment by the Assignee.

(C) The Inventor and the Assignee believe that by virtue of the said agreement entered into by the Inventor and the Assignee before the making of the Invention, all rights to the Assignor’s contribution to the Invention made in the course of the Assignor’s employment by the Assignee belong, as between the Inventor and the Assignee, to the Assignee absolutely.

(D) In case the Assignee for any reason was not, at the time the Invention was made, entitled to the whole of the property in the contributions of the Inventor to the Invention, and in order to provide documentary evidence that the Assignee is the owner of both the legal title and the beneficial interest in the Patent Applications and in any contributions of the Inventor to the Invention made during the course of his employment by the Assignee, including any further contributions that the Inventor may make to the development or improvement of the Invention, the Inventor has agreed to execute this Assignment.

AGREED TERMS

1. INTERPRETATION

1.1 The definitions and rules of interpretation in this clause apply in this Assignment.

Future Applications means any future applications claiming priority from the Priority Applications and all matter contained in such future applications.
Invention means the invention or inventions entitled NOVEL OPIOID COMPOUNDS AND THEIR USES.

Patent Applications means the Priority Applications and the Future Applications and any and all:

(a) international, national and regional phase applications of all such applications; and

(b) divisions, continuations and continuations-in-part of all such applications; and

(c) patents that may be granted pursuant to any of the aforesaid applications for their full period, including any re-issues, re-examinations, renewals, extensions and Supplementary Protection Certificates.

Priority Applications means the priority patent applications, short particulars of which are set out in Part 1 of the Schedule.

1.2 A person includes a natural person, corporate or unincorporated body (whether or not having separate legal personality) and that person's legal and personal representatives, successors and permitted assigns.

2. ASSIGNMENT

In consideration of the sum of £1 (sufficiency and receipt of which the Inventor expressly acknowledges), the Inventor hereby assigns absolutely to the Assignee all his right, title and interest in Canada, the United States and all other countries of the world in, to and arising from the Invention made during the course of the Assignor's employment by the Assignee and, with effect from immediately prior to the filing of each, the Patent Applications including (but not limited to):

(a) in respect of the Invention and any invention that shall be disclosed in, and all matter that shall be contained in, any of the Patent Applications, the right to file applications, claim priority from such applications, and prosecute and obtain grant of patent or other intellectual property protection in respect of any country, region or territory in the world;

(b) in respect of each and any Patent Application:

(i) the right to claim priority from and to prosecute and obtain grant of patents; and

(ii) the right to file divisional applications based on the Patent Applications and to prosecute and obtain grant of patent on each and any such divisional application;

(c) the right to extend to, or register in or in respect of any country, region or territory in the world, each and any of the Patent
Applications and to extend to or register in, or in respect of, any country, region or territory in the world any patent or other intellectual property protection granted on any of such applications;

(d) the absolute entitlement to any patents granted pursuant to any Patent Application; and

(e) the right to bring, make, oppose or defend claims or actions, appeal proceedings and obtain relief (and to retain any damages recovered) in respect of any infringement, or any other cause of action arising from ownership of the Inventions and the Patent Applications, whether occurring before or after the date of this Assignment.

3. FURTHER ASSURANCE

The Inventor shall, at the Assignee's cost, perform all further acts and things, and execute all further documents, required by law or which the Assignee requests to vest in the Assignee the full benefit of the right, title and interest assigned to the Assignee under this Assignment, including (but not limited to):

(a) documents required to be signed by or on behalf of the Inventor in the course of any and all Canadian or United States or any other applications which relate to the Invention or to any inventions that shall be disclosed in any of the Patent Applications;

(b) registration of the Assignee as applicant for, or proprietor of, the Patent Applications; and

(c) assisting the Assignee in obtaining, defending and enforcing any of the Patent Applications, and assisting with any other proceedings which may be brought by or against the Assignee by any third party or in the resolution of any question concerning the Invention, or the Patent Applications or any inventions that shall be disclosed in any of the Patent Applications.

4. POWER OF ATTORNEY

The Inventor and the Assignee grant the firm of Mewburn Ellis LLP the power to insert in Part 2 of the Schedule to this Assignment any further identification of any existing or future patent applications in Canada or the United States or any other countries, regions or territories of the world, which shall fall within the scope of clause 2 above, or as may be necessary or desirable in order to comply with the rules of the United States Patent Office or the Canadian Patent Office or any other patent office for the recordal of this Assignment. It is agreed that Mewburn Ellis LLP has represented only the Assignee and will continue to represent only the Assignee with respect to this Assignment.
5. ISSUE OF PATENTS

The Inventor requests the US Commissioner of Patents and the relevant authorities in all countries, regions and territories of the world to issue any patents granted for the Invention or pursuant to any of the Patent Applications in the name of the Assignee (either alone or jointly with any co-applicant) in accordance with this Assignment.

6. WAIVER

No failure or delay by a party to exercise any right or remedy provided under this Assignment or by law shall constitute a waiver of that or any other right or remedy, nor shall it preclude or restrict the further exercise of that or any other right or remedy. No single or partial exercise of such right or remedy shall preclude or restrict the further exercise of that or any other right or remedy.

7. COUNTERPARTS

This Assignment may be executed in any number of counterparts, each of which when executed shall constitute an original of this Assignment, but all the counterparts shall together constitute the same agreement.

8. GOVERNING LAW AND JURISDICTION

This Assignment shall be governed by and construed in accordance with the law of the state of Florida, USA. The parties agree that the courts of the State of Florida shall have exclusive jurisdiction to settle any dispute or claim that arises out of or in connection with this Assignment.
Schedule: The Patent Applications

Part 1: Priority Applications

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<thead>
<tr>
<th>Country</th>
<th>Application No.</th>
<th>Application Date</th>
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<td>US</td>
<td>61/912169</td>
<td>5 December 2013</td>
<td>NOVEL OPIOID COMPOUNDS AND THEIR USES</td>
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Part 2: Identification of some, but not necessarily all, patent applications falling within the scope of clause 2 of this Assignment

<table>
<thead>
<tr>
<th>Country/region</th>
<th>Application No.</th>
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Signed by LAWRENCE  
Executed by LARRY TOLL in the presence of: 

**Signature of Inventor**  
LT 5/30/16

Signed by Mary Holmgren  
NAME: Mary Holmgren  
ADDRESS: 11350 S.W. Village Parkway, Port St. Lucie, FL 34998  
OCCUPATION: Outreach and Development Associate  
DATE: 11-24-14

Execution by THE TORREY PINES INSTITUTE FOR MOLECULAR STUDIES acting by President & CEO, an authorised signatory, in the presence of:  

**Signature:** Richard Houghten, Ph.D.  
CAPACITY: President & CEO

Signed by Mary Holmgren  
NAME: Mary Holmgren  
ADDRESS: 11350 S.W. Village Parkway, Port St. Lucie, FL 34998  
OCCUPATION: Outreach + Development Associate  
DATE: 11-24-14

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