

<b>PATENT ASSIGNMENT COVER SHEET</b>
--------------------------------------

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4401889

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

**CONVEYING PARTY DATA**

Name	Execution Date
APRECIA PHARMACEUTICALS CORPORATION	05/01/2017

**RECEIVING PARTY DATA**

<b>Name:</b>	HERCULES CAPITAL, INC.
<b>Street Address:</b>	400 HAMILTON AVENUE
<b>Internal Address:</b>	SUITE 310
<b>City:</b>	PALO ALTO
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	94301

**PROPERTY NUMBERS Total: 16**

Property Type	Number
Patent Number:	8828411
Patent Number:	8888480
Patent Number:	9517591
Patent Number:	9517592
Patent Number:	9610735
Patent Number:	9339489
Patent Number:	9492380
Patent Number:	9314429
Patent Number:	9616018
Application Number:	15422969
Application Number:	15095785
Application Number:	15244563
Application Number:	15437966
Application Number:	62208022
Application Number:	62208261
PCT Number:	US2016047709

**CORRESPONDENCE DATA**

**Fax Number:** (212)836-6337

*Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent*

**PATENT**

*using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.*

**Phone:** 212-836-7319  
**Email:** paul.somelofske@apks.com  
**Correspondent Name:** PAUL J. SOMELOFSKE  
**Address Line 1:** C/O ARNOLD & PORTER KAYE SCHOLER LLP  
**Address Line 2:** 250 WEST 55TH STREET  
**Address Line 4:** NEW YORK, NEW YORK 10019-9710

<b>ATTORNEY DOCKET NUMBER:</b>	1029935-00011-05948
--------------------------------	---------------------

<b>NAME OF SUBMITTER:</b>	PAUL J. SOMELOFSKE
---------------------------	--------------------

<b>SIGNATURE:</b>	/Paul J. Somelofske/
-------------------	----------------------

<b>DATE SIGNED:</b>	05/08/2017
---------------------	------------

**Total Attachments: 10**

source=Aprecia - Hercules - Intellectual Property Security Agreement#page1.tif  
source=Aprecia - Hercules - Intellectual Property Security Agreement#page2.tif  
source=Aprecia - Hercules - Intellectual Property Security Agreement#page3.tif  
source=Aprecia - Hercules - Intellectual Property Security Agreement#page4.tif  
source=Aprecia - Hercules - Intellectual Property Security Agreement#page5.tif  
source=Aprecia - Hercules - Intellectual Property Security Agreement#page6.tif  
source=Aprecia - Hercules - Intellectual Property Security Agreement#page7.tif  
source=Aprecia - Hercules - Intellectual Property Security Agreement#page8.tif  
source=Aprecia - Hercules - Intellectual Property Security Agreement#page9.tif  
source=Aprecia - Hercules - Intellectual Property Security Agreement#page10.tif

## INTELLECTUAL PROPERTY SECURITY AGREEMENT

THIS INTELLECTUAL PROPERTY SECURITY AGREEMENT (“Agreement”), dated as of May 1, 2017, is made by and between APRECIA PHARMACEUTICALS CORPORATION, a Delaware corporation (“Borrower”), and HERCULES CAPITAL, INC., a Maryland corporation (“Agent”), as agent for lender under the Loan Agreement referenced below (the “Secured Parties”).

### RECITALS

A. Borrower is party to the Loan and Security Agreement, dated as of June 29, 2016, among Borrower, Agent and the lender thereto, as amended by the First Amendment to Loan and Security Agreement dated the date hereof (as it may be further amended, restated or modified from time to time, the “Loan Agreement”).

B. As a condition to the transactions contemplated by the First Amendment to Loan Agreement, which, among other things, grants to Agent a security interest in the IP Collateral (as defined below), Borrower has agreed to execute and deliver this Agreement.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Borrower agrees with Agent as follows:

1. **Incorporation of Loan Agreement.** The Loan Agreement and the terms and provisions thereof are hereby incorporated in their entirety by this reference thereto. The provisions of the Loan Agreement shall supersede and control over any conflicting or inconsistent provision herein. The rights and remedies of Agent with respect to the IP Collateral (as defined below) are as provided by the Loan Agreement, and nothing in this Agreement shall be deemed to limit such rights and remedies. Capitalized terms used herein which are not defined herein, but are defined in the Loan Agreement, shall have the meanings given to them in the Loan Agreement.

2. **Grant of Security Interest.** To secure the complete and timely satisfaction of the Secured Obligations, Borrower hereby pledges and grants to Agent, for the benefit of Lender, a security interest in and to all of Borrower’s right, title and interest in, to and under the following, whether now existing or hereafter arising (the “IP Collateral”):

(a) patents and patent applications, including, without limitation, those set forth in Schedule 1, and all reissues, divisions, continuations, continuations-in-part, renewals, extensions and reexaminations thereof and amendments thereto (collectively, the “Patents”);

(b) trademark registrations and applications, including, without limitation, those set forth in Schedule 2, together with the goodwill connected with the use thereof and symbolized thereby and all extensions and renewals thereof (collectively, the “Trademarks”);

(c) copyrights, copyright registrations, and copyright applications, including, without limitation, those set forth in Schedule 3, and all extensions and renewals thereof (collectively, the “Copyrights”);

(d) Borrower’s rights under agreements granting to Borrower any right to use any Patents, Trademarks or Copyrights, including, without limitation, the Licenses set forth in Schedule 4 (collectively, the “Licenses”);

(e) all rights of any kind whatsoever of Borrower accruing under any of the foregoing provided by applicable law of any jurisdiction, by international treaties and conventions and otherwise throughout the world;

(f) any and all royalties, fees, income, payments and other proceeds now or hereafter due or payable with respect to any and all of the foregoing; and

(g) any and all claims and causes of action with respect to any of the foregoing, whether occurring before, on or after the date hereof, including all rights to and claims for damages, restitution and injunctive and other legal and equitable relief for past, present and future infringement, dilution, misappropriation, violation, misuse, breach or default, with the right but no obligation to sue for such legal and equitable relief and to collect, or otherwise recover, any such damages; provided that nothing in this Agreement shall constitute an assignment of an “intent to use” application of a trademark, to the extent such assignment would render the application void.

3. **After-Acquired Intellectual Property.** Borrower agrees that should it obtain an ownership interest in any item of the type set forth in Section 2 that is not on the date hereof a part of the IP Collateral (“After-Acquired Intellectual Property”) (i) the provisions of this Agreement shall automatically apply thereto, and (ii) any such After-Acquired Intellectual Property and, in the case of trademarks, the goodwill symbolized thereby, shall automatically become part of the IP Collateral subject to the terms and conditions of this Agreement with respect thereto. Borrower hereby authorizes Agent to modify this Agreement by noting any After-Acquired Intellectual Property constituting IP Collateral on Schedule 1, 2, 3 or 4, as applicable; provided, however, that the failure of Agent to make any such notation shall not limit or affect the obligations of Borrower or rights of Agent hereunder, and provided further that Agent shall provide Borrower with a copy of such modification.

4. **Recordation.** Borrower authorizes the Commissioner for Patents, the Commissioner for Trademarks and the Register of Copyrights and any other government officials to record and register this IP Security Agreement upon request by the Agent.

5. **Execution in Counterparts.** This Agreement may be executed in counterparts (and by different parties hereto in different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. Delivery of an

executed counterpart of a signature page to this Agreement by facsimile or in electronic format shall be effective as delivery of a manually executed counterpart of this Agreement.

6. **Successors and Assigns.** This Agreement will be binding on and shall inure to the benefit of the parties hereto and their respective successors and assigns.

7. **Governing Law.** This Agreement shall be governed by, and construed and enforced in accordance with, the laws of the State of California, excluding conflict of laws principles that would cause the application of laws of any other jurisdiction.

*[Remainder of page intentionally left blank]*

IN WITNESS WHEREOF, Borrower has caused this Agreement to be duly executed and delivered by its officer thereunto duly authorized as of the date first above written.

APRECIA PHARMACEUTICALS  
CORPORATION

By: Donald Wetherhold  
Name: Donald Wetherhold  
Title: CEO

AGREED TO AND ACCEPTED:

HERCULES CAPITAL, INC., AS  
AGENT

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

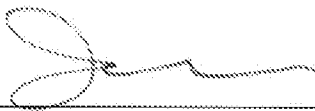
IN WITNESS WHEREOF, Borrower has caused this Agreement to be duly executed and delivered by its officer thereunto duly authorized as of the date first above written.

APRECIA PHARMACEUTICALS  
CORPORATION

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

AGREED TO AND ACCEPTED:

HERCULES CAPITAL, INC., AS  
AGENT

By:  \_\_\_\_\_  
Name: Jennifer Cho  
Title: Assistant general counsel

## SCHEDULE 1

Notes on formatting: patents and applications are grouped by subject matter, using a short title as the header in bold. Each patent or application is denoted by its publication number (or application number), with applications explicitly marked as pending. European cases are grouped under the EP publication number, with individual country codes listed in parentheses for countries in which full validation was completed. Full titles are listed for the U.S. cases.

### **Anti-Counterfeiting – [APR-1]**

US8828411 “Dosage forms and methods of use thereof”  
EP1827391B1 (DE, ES, FR, GB, IT)

### **3DP System and Equipment Assembly – [APR-2]**

US8888480 “Three-dimensional printing system and equipment assembly”  
US9517591  
US9517592  
US9610735  
US app no 15/422969 (pending)

AU2013313053 B2  
KR101572009 B1  
KR101616856 B1  
KR101697105 B1  
JP5860570 B2  
JP6088585 B2

EP app no 13834949.3 (pending)  
JP app no 2017-17254 (pending)  
CA app no 2883771 (pending)  
AU app no 2015203562 (allowed)  
BR app no 112015004530-8 (pending)  
RU app no 2015112225 (allowed)  
IN app no 1776/DELNP/2015 (pending)  
CN app no 201380046053.0 (pending)  
CN app no 201610108014.4 (pending)  
KR app no 10-2017-7000725 (pending)  
MX app no MX/a/2015/002865 (pending)  
HK app no 15107507.4 (pending)  
HK app no 16113483.9 (pending)

### **Rapid Disperse Dosage Form containing Levetiracetam – [APR-5]**

US9339489 “Rapid disperse dosage form containing levetiracetam”  
US app no 15/095785 (allowed)

EP app no 14764259.9 (pending)  
JP app no 2016-502945 (pending)  
JP app no 2016-231964 (pending)  
CA app no 2906029 (pending)  
AU app no. 2014228990(allowed)  
CN app no 201480014761.0 (pending)  
MX app no MX/a/2015/012134 (pending)  
HK app no 16104525 (pending)  
HK app no 16102815 (pending)

### **Rapidly Dispersible Dosage Form of Topiramate – [APR-6]**



US9492380

“Rapidly dispersible dosage form of topiramate”

US app no 15/244563 (pending)  
EP app no 14763925.6 (pending)  
JP app no 2016-503003 (pending)  
CA app no 2906172 (pending)  
AU app no 2014228861 (pending)  
CN app no 201480015723.7 (pending)  
MX app no MX/a/2015/012135 (pending)  
HK app no 16101295.2 (pending)  
HK app no 16102818 (pending)

**Rapidly Dispersible Dosage Form of Oxcarbazepine – [APR-7]**

US9314429  
US9616018

“Rapidly dispersible dosage form of oxcarbazepine”

US app no 15/437966 (pending)  
EP app no 14763545.2 (pending)  
JP app no 2016-502709 (pending)  
CA app no 2906107 (pending)  
AU app no 2014228063 (allowed)  
CN app no 201480014727.3(pending)  
MX app no MX/a/2015/012136 (pending)  
HK app no 16102379 (pending)  
HK app no 16101293 (pending)

**Advanced Three-dimensional Printing System and Equipment Assembly – [APR-9]**

Nonprovisional PCT app no PCT/US16/47709 (pending)

Based upon U.S. provisional pat apps no 62/208022 and no 62/208261

## **SCHEDULE 2**

### **APRECIA PHARMACEUTICALS**

Registered service mark in U.S., Reg. No. 3621718 (SN 77431190)

Registered trademark in U.S., Reg. No. 4978670 (SN 86352559)

Registered trademark w/design in U.S., Reg. No. 4978671 (SN 86352565)

### **APRECIA 3D SUPPORT**

Filed as service mark in U.S., SN 87000026

### **ZIPDOSE**

Registered trademark in U.S., Reg. No. 4444026 (SN 77782635)

Registered trademark in U.S., Reg. No. 4631281 (SN 86153689)

Registered trademark w/design in U.S., Reg. No. 4502502 (SN 85722741)

Additional filing as trademark w/design in U.S., SN 86348610

### **SPRITAM**

Registered trademark in U.S., Reg. No. 4502295 (SN 85630193)

Registered trademark w/design in U.S., Reg. No. 4965262 (SN 86348604)

### **EXPREEZ**

Filed as trademark in U.S., SN 86801831

### **CAROVIQ**

Filed as trademark in U.S., SN 86929859

### **OXPERZA**

Filed as trademark in U.S., SN 86929862

### **NEXTOPA**

Filed as trademark in U.S., SN 86687539

### **LISTOPA**

Filed as trademark in U.S., SN 86687543

### **ZERTOPA**

Filed as trademark in U.S., SN 86687544

### **SCHEDULE 3**

No registered copyrights or copyright applications.

## **SCHEDULE 4**

Massachusetts Institute of Technology and Aprelia Exclusive Patent License Agreement,  
effective May 19, 2004, as amended.