

TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

ETAS ID: TM713823

| | | | |
|---|-------------------------------------|-----------------------|-----------------------|
| SUBMISSION TYPE: | NEW ASSIGNMENT | | |
| NATURE OF CONVEYANCE: | SECURITY INTEREST | | |
| CONVEYING PARTY DATA | | | |
| Name | Formerly | Execution Date | Entity Type |
| Acer Therapeutics Inc. | | 03/04/2022 | Corporation: DELAWARE |
| RECEIVING PARTY DATA | | | |
| Name: | SWK Funding LLC | | |
| Street Address: | 14755 Preston Road, Suite 105 | | |
| City: | Dallas | | |
| State/Country: | TEXAS | | |
| Postal Code: | 75254 | | |
| Entity Type: | Limited Liability Company: DELAWARE | | |
| PROPERTY NUMBERS Total: 4 | | | |
| Property Type | Number | Word Mark | |
| Serial Number: | 88169217 | EDSIVO | |
| Serial Number: | 88814846 | OLPRUVA | |
| Serial Number: | 88814853 | ZEVVEZ | |
| Serial Number: | 90559398 | MIX-AID | |
| CORRESPONDENCE DATA | | | |
| Fax Number: | 6175236850 | | |
| <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: | 617-523-2700 | | |
| Email: | susan.dinicola@hkllaw.com | | |
| Correspondent Name: | Holland & Knight LLP | | |
| Address Line 1: | 10 St. James Avenue | | |
| Address Line 4: | Boston, MASSACHUSETTS 02116 | | |
| NAME OF SUBMITTER: | Susan C. DiNicola | | |
| SIGNATURE: | /Susan C. DiNicola/ | | |
| DATE SIGNED: | 03/11/2022 | | |
| Total Attachments: 19 | | | |
| source=SWK-Acer Therapeutics IP Security Agreement (Executed)#page1.tif | | | |
| source=SWK-Acer Therapeutics IP Security Agreement (Executed)#page2.tif | | | |
| source=SWK-Acer Therapeutics IP Security Agreement (Executed)#page3.tif | | | |

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INTELLECTUAL PROPERTY SECURITY AGREEMENT

This INTELLECTUAL PROPERTY SECURITY AGREEMENT, dated as of March 4, 2022 (as may be amended, restated, amended and restated, waived, supplemented, or otherwise modified from time to time, this “**Agreement**”), made by ACER THERAPEUTICS INC., a Delaware corporation (“**Grantor**”), in favor of SWK FUNDING LLC, a Delaware limited liability company as agent (in such capacity, “**Agent**”) for the Lenders (as defined below) party to the Credit Agreement (as defined below).

W I T N E S S E T H:

WHEREAS, pursuant to that certain Credit Agreement, dated on or about the date hereof (as amended, restated, supplemented or otherwise modified from time to time, the “**Credit Agreement**”), by and among Grantor, as the borrower, Agent and the financial institutions party thereto from time to time as lenders (each a “**Lender**” and collectively, the “**Lenders**”), Agent and Lenders have agreed to make certain financial accommodations available to Grantor, and pursuant to that certain Guarantee and Collateral Agreement, dated on or about the date hereof (as amended, restated, supplemented or otherwise modified from time to time, the “**Guarantee and Collateral Agreement**”), by and among Grantor, the other grantors party thereto from time to time, and Agent, Grantor has granted a security interest to Agent, for the benefit of Agent and Lenders, in, among other things, all right, title and interest of Grantor in, to and under all of Grantor’s Intellectual Property (as defined in the Credit Agreement), whether now existing or hereafter arising or acquired as security for the Obligations; and

WHEREAS, Grantor is the owner of the entire right, title and interest in, to and under the Intellectual Property listed on Schedule I hereto, as applicable.

NOW, THEREFORE, in consideration of the premises and to induce Agent and Lenders to enter into the Credit Agreement, Grantor hereby agrees with Agent as follows:

1. Defined Terms.

(a) Definitions. Unless otherwise defined herein or the context otherwise requires, terms used in this Agreement, including its preamble and recitals, have the meanings provided in the Guarantee and Collateral Agreement.

(b) Other Definitional Provisions.

(i) The words “hereof,” “herein” and “hereunder” and words of similar import when used in this Agreement shall refer to this Agreement as a whole and not to any particular provision of this Agreement, and section and paragraph references are to this Agreement unless otherwise specified.

(ii) The meanings given to terms defined herein shall be equally applicable to both the singular and plural forms of such terms.

2. Grant of Security Interest. To secure the payment and performance of the Secured Obligations, Grantor hereby confirms and acknowledges that it has granted (and, to the extent not previously granted under the Guarantee and Collateral Agreement, does hereby grant) to Agent, for the benefit of Agent and Lenders, a lien and security interest in Grantor’s entire right, title and interest in its Intellectual Property and all proprietary rights relating to or arising from such Intellectual Property, in each case whether now owned or hereafter acquired by Grantor, and including, without limitation, Grantor’s right, title and interest in and to the Intellectual Property and proprietary rights identified on Schedule I

attached hereto and made a part hereof, and the right to sue for past, present and future infringements and dilutions, and all rights corresponding thereto throughout the world, and the entire goodwill of Grantor's business connected with and symbolized by such Intellectual Property and all income, fees, royalties, proceeds and other payments at any time due or payable with respect to any of the foregoing (referred to collectively as the "**IP Collateral**"); provided, that the IP Collateral shall not include the Excluded Property. This Agreement is not to be construed as an assignment of any Intellectual Property.

3. **No Limitation; Loan Documents**. This Agreement has been executed and delivered by Grantor for the purpose of recording the security interest granted to Agent with respect to the IP Collateral with the United States Patent and Trademark Office, the United States Copyright Office, as well as with any similar office or department of any other foreign or domestic Governmental Authority. The security interest granted hereby has been granted as a supplement to, and not in limitation of, the security interest granted to Agent, for the benefit of Agent and Lenders, under the Guarantee and Collateral Agreement and the other Loan Documents, and Grantor hereby acknowledges and affirms that the rights and remedies of the Agent with respect to the security interest in the IP Collateral made and granted hereby are more fully set forth in the Guarantee and Collateral Agreement. The other Loan Documents (and all rights and remedies of Grantor, Agent, and Lenders thereunder) shall remain in full force and effect in accordance with their terms.

4. **Binding Effect; Benefits**. This Agreement shall be binding upon Grantor and its successors and assigns, and shall inure to the benefit of Agent, Lenders and their respective successors and assigns.

5. **GOVERNING LAW. THIS AGREEMENT SHALL BE A CONTRACT MADE UNDER AND GOVERNED BY THE INTERNAL LAWS OF THE STATE OF NEW YORK APPLICABLE TO CONTRACTS MADE AND TO BE PERFORMED ENTIRELY WITHIN SUCH STATE.**

6. **Counterparts; Electronic Signatures**. This Agreement may be executed in counterparts with the same effect as if all parties had executed the same document. All counterparts shall be construed together and shall constitute a single agreement. Further, the parties hereto consent and agree that this Agreement may be signed and/or transmitted by e-mail of any .pdf file, .jpeg file, or any other electronic or image file, or any "electronic signature" as defined under the U.S. Electronic Signatures in Global and National Commerce Act or the New York Electronic Signatures and Records Act, which includes any electronic signature provided using Orbit, Adobe Sign, DocuSign, or any other similar platform identified by the parties hereto and reasonably available at no undue burden or expense to the Agent), except to the extent the Agent requires otherwise. Any such electronic signatures shall be valid, effective and legally binding as if such electronic signatures were handwritten signatures and shall be deemed to have been duly and validly delivered for all purposes hereunder. No party hereto shall raise the use of e-mail or other electronic transmission to deliver a signature or the fact that any signature or agreement or amendment was transmitted or communicated through the use of e-mail or other electronic transmission as a defense to the formation or enforceability of a contract and each such party forever waives any such defense.

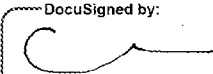

7. **Conflicting Terms**. In the event of any conflict or inconsistency between the terms of this Agreement and the terms of the Credit Agreement or the Guarantee and Collateral Agreement, as the case may be, the terms of the Credit Agreement or the Guarantee and Collateral Agreement, as applicable, shall control.



[Remainder of page intentionally blank; signature page follows.]

IN WITNESS WHEREOF, the parties have caused this Intellectual Property Security Agreement to be executed by its duly authorized representatives as of the date first above written.

GRANTOR:

ACER THERAPEUTICS INC.,
a Delaware corporation


DocuSigned by:  CLO Review: 
By: _____
Name: Chris Schelling COFO: _____
Title: Chief Executive Officer

DS

DS


AGENT:

SWK FUNDING LLC, a Delaware limited liability company, as Agent and a Lender

By: SWK Holdings Corporation, a Delaware corporation, its sole Manager

By: 
Name: Winston Black
Title: Chief Executive Officer

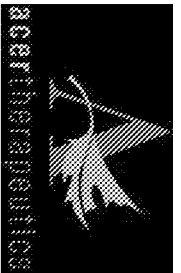
Schedule I

Intellectual Property

(See Attached)

Trademarks - January 2022

| Case Reference | Next Upcoming Action Due | Deadline | Country | Mark | Status | Serial No. | Filing Date | Publication No. | Publication Date | Registration No. | Registration Date | Renewal date |
|----------------|---------------------------------|-----------|---|---------|---|------------|-------------|-----------------|------------------|------------------|-------------------|--------------|
| 51078-T02BR2 | Renewal Fee | 12/4/2028 | BR - Brazil | EDSIVO | Registered | 913319473 | 8/31/2017 | 913319473 | 9/19/2017 | 913319473 | 12/4/2018 | 12/4/2028 |
| 51078-T02CA2 | Renewal Fee | 7/29/2030 | CA - Canada | EDSIVO | Registered | 1,855,144 | 8/30/2017 | 1,855,144 | 10/24/2018 | 1,080,814 | 7/29/2020 | 7/29/2030 |
| 51078-T08001 | File Statement of Use/Re-file | 4/23/2022 | US - United States | EDSIVO | Allowed | 887169,217 | 10/25/2018 | - | 2/26/2019 | - | - | - |
| 51078-T14W02 | Renewal Fee | 8/25/2030 | WIPO - Madrid Protocol (Designations: AU - Australia, BR - Brazil, CA - Canada, CH - Switzerland, CO - Columbia, EM - European Union, GB - United Kingdom, JP - Japan, KR - Korea, MX - Mexico, and TR - Turkey) | OLPRUVA | Registered in WIPO (Not yet registered in all designated countries/regions) | A0099587 | 8/25/2020 | - | - | 155914 | 8/25/2020 | 8/25/2030 |
| 51078-T12001 | File Extension/Statement of Use | 2/18/2022 | US - United States | OLPRUVA | Allowed | 88/814,846 | 2/28/2020 | - | 6/23/2020 | - | - | - |
| 51078-T13001 | File Extension/Statement of Use | 2/18/2022 | US - United States | ZEVVEZ | Allowed | 88/814,853 | 2/28/2020 | - | 6/23/2020 | - | - | - |
| 51078-T14001 | File Extension/Statement of Use | 7/4/2022 | US - United States | MIX-AID | Allowed | 90/559,398 | 3/4/2021 | - | 11/9/2021 | - | - | - |
| 51078-T14W02 | Renewal Fee | 9/2/2031 | WIPO - Madrid Protocol (Designations: AU - Australia, BR - Brazil, CA - Canada, CH - Switzerland, CN - China, CO - Columbia, EM - European Union, GB - United Kingdom, JP - Japan, KR - Korea, MX - Mexico, NZ - New Zealand, and TR - Turkey) | MIX-AID | Registered in WIPO (Not yet registered in all designated countries/regions) | A0113167 | 9/2/2021 | - | - | 1616736 | 9/2/2021 | 9/2/2031 |



IP Status Chart

Prepared: February 10th, 2022
PRIVILEGED & CONFIDENTIAL

I. ACER-001

A. Formulation / Composition of Matter

| Case Description and Number | Next Upcoming Action Due | Deadline | Country | Application Type | Status | Serial No. | Filing Date | Publication Date | Patent No. | Issue Date | Expiration date |
|--|--|------------|--------------------------------|------------------|-----------|----------------------|--------------------------|-------------------------|-------------------|------------|-----------------|
| PALATABLE COMPOSITIONS INCLUDING SODIUM PHENYLBUTYRATE AND USES THEREOF | | | | | | | | | | | |
| 51078-003003 | Maintenance Fee | 10/16/2024 | US - United States | | Issued | | | | 11,154,521 | 10/26/2021 | 2036 |
| 51078-003005 | Maintenance Fee | 12/21/2024 | US - United States | | Issued | | | | 11,202,767 | 12/21/2021 | 2036 |
| 51078-003AU2 | Annuitiy Payment | 10/17/2021 | AU - Australia | National Stage | Published | 2016398029 | 10/17/2016 | 10/11/2018 | - | - | - |
| 51078-003AU2 51078-003BH2 | Request Examination | 10/17/2021 | AU - Australia BH - Bahrain | National Stage | Published | 2016398029 | 10/17/2016 | 10/11/2018 | - | - | - |
| | Awaiting action by Bahraini Patent Office | - | | | | | | | | | |
| 51078-003BR2 | Awaiting response by Brazilian Patent Office | - | BR - Brazil | National Stage | Published | BR112018068665-4 | 10/17/2016 | 2/5/2019 | - | - | - |
| 51078-003BR2 51078-003CA2 | Annuitiy Payment | 10/17/2021 | BR - Brazil CA - Canada | National Stage | Published | BR112018068665-4 | 10/17/2016 | 2/5/2019 | - | - | - |
| | Annuitiy Payment | 10/17/2021 | | | | | | | | | |
| 51078-003CA2 51078-003EP2 | Request Examination | 10/17/2021 | CA - Canada EP - Europe | National Stage | Published | 3,017,573 | 10/17/2016 | 9/21/2017 | - | - | - |
| | Reply to Office Action | 5/5/2021 | | | | | | | | | |
| 51078-003EP2 51078-003IL2 | Annuitiy Payment | 10/17/2021 | EP - Europe IL - Israel | National Stage | Published | 16894786.9 261777 | 10/17/2016 10/17/2016 | 1/23/2019 10/31/2018 | - | - | - |

Confidential

| Case Description and Number | Next Upcoming Action Due | Deadline | Country | Application Type | Status | Serial No. | Filing Date | Publication Date | Patent No. | Issue Date | Expiration date |
|-----------------------------|--|------------|--------------------------------|------------------|----------------|-------------------|-------------|------------------|------------|------------|-----------------|
| | Awaiting response by Israeli Patent Office | - | | National Stage | | | | | | | |
| 51078-003JP2 | Reply to Office Action | 7/6/2021 | JP - Japan | National Stage | Published | 2019-500212 | 10/17/2016 | 4/4/2019 | - | - | - |
| 51078-003KR2 | Request Examination | 10/17/2021 | KR - Republic of Korea | National Stage | Published | 10-2018-7029452 | 10/17/2016 | 1/25/2019 | - | - | - |
| 51078-003KW2 | Annuitly Payment | 1/1/2021 | KW - Kuwait | National Stage | Pending | PCT/139/2018 | 10/17/2016 | - | - | - | - |
| 51078-003MX2 | Awaiting response by Mexican Patent Office | 1/24/2021 | MX - Mexico | National Stage | Published | MX/a2018/011229 | 10/17/2016 | 6/13/2019 | - | - | - |
| 51078-003NZ2 | Annuitly Payment | 10/17/2021 | NZ - New Zealand | National Stage | Pending | 746866 | 10/17/2016 | - | - | - | - |
| 51078-003NZ2 | Request Examination | 10/17/2021 | NZ - New Zealand | National Stage | Pending | 746866 | 10/17/2016 | - | - | - | - |
| 51078-003OM2 | Annuitly Payment | 10/17/2021 | OM - Oman | National Stage | Pending | OM/P/2018/00274 | 10/17/2016 | - | - | - | - |
| 51078-003QA2 | Annuitly Payment | 10/17/2021 | QA - Qatar | National Stage | Pending | QA/201809/00400 | 10/17/2016 | - | - | - | - |
| 51078-003SA2 | Reply to Office Action | 6/8/2021 | SA - Saudi Arabia | National Stage | Pending | 518400020 | 10/17/2016 | - | - | - | - |
| 51078-003AE2 | Annuitly Payment | 10/17/2021 | AE - United Arab Emirates | National Stage | Pending | P6001296/2018 | 10/17/2016 | - | - | - | - |
| 51078-003001 | Expired | - | US - United States | Provisional | Expired | 62/308,614 | 3/15/2016 | - | - | - | - |
| 51078-003WO2 | Expired | - | WO - Patent Cooperation Treaty | PCT | National Phase | PCT/US2016/057445 | 10/17/2016 | 9/21/2017 | - | - | - |
| 51078-003003 | Awaiting action by US Patent Office | - | US - United States | Continuation | Published | 16/746,186 | 1/17/2020 | 8/20/2020 | - | - | - |
| 51078-003004 | Awaiting action by US Patent Office | - | US - United States | Continuation | Pending | 17/196,416 | 3/9/2021 | - | - | - | - |
| 51078-003005 | Awaiting action by US Patent Office | - | US - United States | Continuation | Pending | 17/196,599 | 3/9/2021 | - | - | - | - |

Confidential

B. Methods of Use – MSUD (Licensed from Baylor College of Medicine)

| Appl. No. | Appl. Date | Matter No. | Title | Case Status (Internal) | Reg. No. | Reg. Date | Country |
|------------|------------|------------|--|------------------------|----------|-----------|----------------|
| 10803013.1 | 7/26/2010 | 1000340505 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Issued | 2456304 | 8/19/2015 | Austria |
| 10803013.1 | 7/26/2010 | 1000342292 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Issued | 2456304 | 8/19/2015 | Belgium |
| 10803013.1 | 7/26/2010 | 1000208589 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Issued | 2456304 | 8/19/2015 | Switzerland |
| 10803013.1 | 7/26/2010 | 1000208588 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Issued | 2456304 | 8/19/2015 | Germany |
| 10803013.1 | 7/26/2010 | 1000175619 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Issued | 2456304 | 8/19/2015 | Denmark |
| 10803013.1 | 7/26/2010 | 1000354396 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Issued | 2456304 | 8/19/2015 | Spain |
| 10803013.1 | 7/26/2010 | 1000204918 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Issued | 2456304 | 8/19/2015 | France |
| 10803013.1 | 7/26/2010 | 1000204917 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Issued | 2456304 | 8/19/2015 | United Kingdom |
| 10803013.1 | 7/26/2010 | 1000342293 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Issued | 2456304 | 8/19/2015 | Ireland |
| 10803013.1 | 7/26/2010 | 1000340517 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Issued | 2456304 | 8/19/2015 | Italy |
| 10803013.1 | 7/26/2010 | 1000362920 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Issued | 2456304 | 8/19/2015 | Luxembourg |
| 10803013.1 | 7/26/2010 | 1000175630 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Issued | 2456304 | 8/19/2015 | Monaco |

| | | | | | | | |
|-------------------|-----------|------------|--|---------------------------|----------|-----------|---------------------------|
| 10803013.1 | 7/26/2010 | 1000204919 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Issued | 2456304 | 8/19/2015 | Netherlands |
| 10803013.1 | 7/26/2010 | 1000317155 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | EP Granted - Nationalized | 2456304 | 8/19/2015 | European Patent Office |
| 15173016.5 | 7/26/2010 | 1000354395 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Abandoned | | | European Patent Office |
| 16174310.9 | 7/26/2010 | 1000198683 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Abandoned | | | European Patent Office |
| 10803013.1 | 7/26/2010 | 1000342295 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Issued | 2456304 | 8/19/2015 | Portugal |
| 10803013.1 | 7/26/2010 | 1000208590 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Issued | 2456304 | 8/19/2015 | Sweden |
| 10803013.1 | 7/26/2010 | 1000354397 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Issued | 2456304 | 8/19/2015 | Turkey |
| 13/386549 | 7/26/2010 | 1000003157 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Issued | 9078865 | 7/14/2015 | United States of America |
| 14/745205 | 7/26/2010 | 1000204261 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Issued | 9737499 | 8/22/2017 | United States of America |
| 15/653155 | 7/18/2017 | 1000173420 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Issued | 10092532 | 10/9/2018 | United States of America |
| 16/134558 | 9/18/2018 | 1001047360 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Abandoned | | | United States of America |
| 16/740131 | 1/10/2020 | 1001108069 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Application Filed | | | United States of America |
| 61/228485 | 7/24/2009 | 11007293 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Expired | | | United States of America |
| PCT/US2010/043240 | 7/26/2010 | 11007293 | METHODS OF MODULATION OF BRANCHED CHAIN ACIDS AND USES THEREOF | Expired | | | Patent Cooperation Treaty |

C. ACER-001 Methods of Use

| C&E Reference | Next Upcoming Action Due | Deadline | Country | Application Type | Status | Serial No. | Filing Date | Publication No. | Publication Date | Patent No. | Issue Date | Expiration date |
|---------------|--------------------------|----------|---------|------------------|--------|------------|-------------|-----------------|------------------|------------|------------|-----------------|
|---------------|--------------------------|----------|---------|------------------|--------|------------|-------------|-----------------|------------------|------------|------------|-----------------|

ADMINISTRATION OF SODIUM PHENYLBUTYRATE IN A FASTED STATE TO TREAT UREA CYCLE DISORDERS

| | | | | | | | | | | | | |
|--------------|--------------------------------------|----------|--------------------------------|-------------|---------|-------------------|----------|---|---|---|---|---|
| 51078-011001 | PCT deadline | 7/7/2021 | US - United States | Provisional | Expired | 63/048,892 | 7/7/2020 | - | - | - | - | - |
| 51078-011W02 | Reply to International Search Report | 5/7/2022 | WO - Patent Cooperation Treaty | PCT | Pending | PCT/US2021/040760 | 7/7/2021 | | | | | |

METHODS OF ADMINISTERING TASTE MASKED PHENYLBUTYRATE

| | | | | | | | | | | | | |
|--------------|--------------|-----------|--------------------|-------------|---------|------------|-----------|---|---|---|---|---|
| 51078-012001 | PCT deadline | 8/13/2021 | US - United States | Provisional | Expired | 63/065,272 | 8/13/2020 | - | - | - | - | - |
|--------------|--------------|-----------|--------------------|-------------|---------|------------|-----------|---|---|---|---|---|

METHODS OF TREATING NITROGEN RETENTION AND OTHER DISORDERS

| | | | | | | | | | | | | |
|--------------|--------------|----------|--------------------|-------------|---------|------------|----------|---|---|---|---|---|
| 51078-015001 | PCT deadline | 4/9/2022 | US - United States | Provisional | Pending | 63/173,098 | 4/9/2021 | - | - | - | - | - |
|--------------|--------------|----------|--------------------|-------------|---------|------------|----------|---|---|---|---|---|

DOSAGE FORM FOR IMPROVING PALATABILITY OF DRUG SUBSTANCE – China Specific

| | | | | | | | | | | | | |
|-------------|--|--|--------------------|---------------|---------|----------------|-----------|--|--|--|--|--|
| 51078-16CN2 | Awaiting action by Chinese Patent Office | | CN – China | Utility Model | Pending | 202122004991.9 | 8/24/2021 | | | | | |
| 51078-16001 | PCT deadline | | US - United States | Provisional | Pending | 63/232,011 | 8/11/2021 | | | | | |

II. Osanetant

A. Composition of Matter

| Case Description and Number | Country | Upcoming Due Dates | Action Due | Application Status | App Number | Filing Date | Priority Dates | Assignee | Notes |
|--|---------|--------------------|------------------------------|--------------------|------------|-------------|----------------|-------------------------|--|
| SOLID FORMS OF OSANETANT) 60BB-332184-P | US | 7/02/2022 | File PCT/Utility Application | Provisional | 63218211 | 7/02/2021 | | Acer Therapeutics, Inc. | Covers novel polymorphs and salts of osanetant |

B. Methods of Use (Acer, Univ. Washington and Kansas)

| Case Description and Number | Country | Upcoming Due Dates | Action Due | Application Status | App Number | Filing Date | Priority Dates | Assignee | Patent Number | Notes |
|-----------------------------|---------|--------------------|------------|--------------------|------------|-------------|----------------|----------|---------------|-------|
|-----------------------------|---------|--------------------|------------|--------------------|------------|-------------|----------------|----------|---------------|-------|

| | | | | | | | | | |
|---|----|------------|---|-----------|-------------------------------------|-----------------------|-----------|---|---|
| Osanetant for treating Cancer Patients 60BB-310111-P/P2 | US | 7/30/2021 | File PCT/Utility Application | Completed | 63/059,086 63/134,542 | 7/30/2020 1/6/2021 | 7/30/2020 | Acer Therapeutics Inc. Co-owned with Univ. Washington | Co-owned with Univ. Washington |
| NK RECEPTOR ANTAGONISTS FOR CANCER PATIENTS 60BB-310111-WO | WO | 02/03/2022 | Utility - ORG | Published | PCT/US2021/044016 WO 2022/026900 | 7/30/2021 | 7/30/2020 | Acer Therapeutics, Inc. Co-owned with Univ. Washington | Co-owned with Univ. Washington |
| Osanetant for Contraception 60BB-314373-P | US | 7/30/2021 | File PCT/Utility Application | Completed | 63/059,062 | 7/30/2020 | 7/30/2020 | Acer Therapeutics Inc. | Acer Only |
| Osanetant for Contraception 60BB-314373-WO | WO | 2/3/2022 | Utility - ORG | Published | PCT/US2021/044018 | 7/30/2021 | 7/30/2020 | Acer Therapeutics Inc. | |
| Osanetant for VMS 60BB-314373-WO | US | 7/6/2021 | Pay issue fee; file no fee continuation | Issued | 16/114661 | 8/28/2018 | 12/3/12 | University of Washington | 11,083,726 Negotiating license. Claims currently directed to menopausal patients having short term estrogen therapy. |

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|--|----|-----------|------------------------------|---------|------------|------------|--|------------------------|---|
| METHODS FOR TREATING PATIENTS HAVING LOW ESTROGEN WITH NK3 60BB-337801-P2 | US | 1/31/2023 | File PCT/Utility Application | Pending | 63/306,216 | 02/03/2022 | | Acer Therapeutics Inc. | Added more data/information to original filing of 1/31/22 |
| METHODS FOR TREATING PATIENTS WITH NK3 ANTAGONISTS | US | 1/31/2023 | File PCT/Utility Application | Pending | 63/305,209 | 01/31/2022 | | Acer Therapeutics Inc. | |

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|--|----|-----------|------------------------------|---------|------------|------------|--|---|
| HAVING LOW ESTROGEN 60BB-337801-P | US | 1/31/2023 | File PCT/Utility Application | Pending | 63/306,215 | 02/03/2022 | Co-owned between Acer Therapeutics Inc. and University of Kansas | Co-owned with Kansas. Negotiating license |
| NK RECEPTOR ANTAGONISTS FOR TREATMENT OF PROSTATE CANCER 60BB-342333-P2 | US | 1/31/2023 | File PCT/Utility Application | Pending | 63/305,207 | 01/31/2022 | Acer Therapeutics Inc. | Added additional subject matter from Kansas to original filing of 1/31/22 |

TRADEMARK
REEL: 007657 FRAME: 0607

A. Emory Univ License: Use of Osanetant PTSD

| Case Description and Number | Country | Upcoming Due Dates | Action Due | Application Status | App Number/Patent Number | Filing Date/Issue Date | Priority Date | Assignee | Notes |
|--------------------------------|---------|--|------------|--------------------|--------------------------|------------------------|---------------|------------------|--|
| Osanetant for PTSD | US | None | N/A | Granted | 10,314,835 | 6/11/2019 | 06/25/14 | Emory University | |
| Osanetant for conditioned fear | US | None | N/A | Pending | 16/676,030 | 11/6/2019 | 06/25/14 | Emory University | Response just filed; awaiting next action or Notice of Allowance |
| Osanetant for PTSD | EP | 8/16/2020 (Real Deadline is 10/16/2020) | | Granted | EP3160469 | 04/28/21 | 06/25/14 | Emory University | Validated in France, UK, Germany, Italy, Spain, Switzerland, Ireland and the Netherlands |

III. Celiprolol (EDSIVO®)

A. Methods of Use (Licensed from AP-HP)

| Case Description and Number | Country | Upcoming Due Dates | Action Due | Application Status | App Number | Filing Date | Priority Dates | Assignee | Notes |
|--------------------------------|---------|--------------------------|---|--------------------|------------------|-------------|----------------|--|---------------|
| Dosing Regimen | | | | | | | | | |
| Dosing Regimen 60BB-287147-AR | AR | None | | Pending | 20180103795 | 12/21/18 | 12/21/17 | Assistance Publique- Hopitaux de Paris (AP-HP) Universite de Paris | |
| Dosing Regimen 60BB-287147-US2 | US | 07/15/2021 | Assignment and Declaration Due | Published | 16/930,208 | 07/15/20 | 12/21/17 | Assistance Publique- Hopitaux de Paris (AP-HP) | Filed Track 1 |
| Dosing Regimen 60BB-287147-BR | BR | 12/19/2021 12/19/2021 | Annuity Due Request Examination - Final | Published | BR112020012095-2 | 12/19/18 | 12/21/17 | Assistance Publique- Hopitaux de Paris (AP-HP) | |
| Dosing Regimen | CA | 12/19/2021 12/19/2023 | Maintenance Fee | Pending | 3083432 | 12/19/18 | 12/21/17 | Assistance Publique- | |

| | | | | | | | | | |
|-------------------------------|----|--|-----------------------------|---------|------------------|----------|----------|--|--|
| 60BB-287147-CA | | | Request Examination - Final | | | | | Hopitaux de Paris (AP-HP) | |
| Dosing Regimen 60BB-287147-MX | MX | | | Pending | MX/a/2020/006351 | 12/19/18 | 12/21/17 | Assistance Publique- Hopitaux de Paris (AP-HP) | |

Methods of Use: Pregnancy

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|---------------------------|----|------------|---|-----------|------------------|----------|----------|--|---|
| Pregnancy 60BB-287148-AR | AR | | | Published | 20180103794 | 12/21/18 | 12/21/17 | Assistance Publique- Hopitaux de Paris (AP-HP) Universite de Paris | |
| Pregnancy 60BB-287148-US2 | US | 5/20/2021 | Assignment and Declaration Due | Pending | 16/879,511 | 05/20/20 | 12/21/17 | Assistance Publique- Hopitaux de Paris (AP-HP) Universite de Paris | Awaiting Office Action, SMRH to handle deadline |
| Pregnancy 60BB-287148-BR | BR | 12/19/2021 | Annuity Due Request Examination - Final | Pending | BR112020012529-6 | 12/19/18 | 12/21/17 | Assistance Publique- Hopitaux de Paris (AP-HP) Universite de Paris | |
| Pregnancy 60BB-287148-CA | CA | 12/19/2021 | Maintenance Fee Request Examination - Final | Pending | 3083407 | 12/19/18 | 12/21/17 | Assistance Publique- Hopitaux de Paris (AP-HP) Universite de Paris | |
| Pregnancy 60BB-287148-MX | MX | | | Pending | MX/a/2020/006344 | 12/19/18 | 12/21/17 | Assistance Publique- Hopitaux de Paris (AP-HP) Universite de Paris | |

IV. Emetine

A. Covid and Composition of Matter

| Case Description and Number | Country | Upcoming Due Dates | Action Due | Application Status | App Number | Filing Date | Priority Date | Assignee | Notes |
|---|---------|--------------------|---|--------------------|-------------------|-------------|---------------|--|----------------------------|
| 60BB-314393-WO | US | 9/26/2022 | Deadline for National Phase Filing | Pending | PCT/US2021/024399 | 3/26/2021 | 3/26/2020 | Acer Therapeutics Inc. The United States Of America, As Represented By The Secretary, Department Of Health And Human Services | Emetine for Sars-Cov2 Uses |
| SOLID FORMS OF EMETINE 60BB-322499-P | US | 12/4/2021 | Deadline for filing US and PCT applications | Completed | 63/121,743 | 12/4/2020 | 12/4/2020 | Acer Therapeutics, Inc. | Polymorph application |
| 60BB-322499-WO | WO | | | Pending | PCT/US2021/061867 | 12/03/2021 | 12/4/2020 | Acer Therapeutics Inc. | Polymorph application |
| 60BB-322499-US | US | | | Pending | 17/542,165 | 12/03/2021 | 12/4/2020 | Acer Therapeutics Inc. | Polymorph application |

B. Other Viruses, e.g. Zika

| Case Description and Number | Country | Upcoming Due Dates | Action Due | Application Status | App Number/Patent Number | Filing Date/Issue Date | Priority Dates | Assignee | Notes |
|-----------------------------|---------|--------------------|---------------------------|--------------------|--------------------------|------------------------|----------------|--|---|
| 60BB-318882-US | US | 5/8/2021 | Response to Office Action | Pending | 16/718,343 | 1/31/2020 | 10/10/17 | Florida State University Research Foundation The John Hopkins University The United States of America, as Represented by the Secretary, Department of Health and Human Services | |
| | US | None | N/A | Granted | 10,940,188 | 3/9/2021 | 7/16/2016 | Florida State University Research Foundation The John Hopkins University The United States of America, as Represented by the Secretary, Department of Health and Human Services | Claims to using emetine for Zika Virus |
| | | | | | | | | Florida State University Research Foundation The John Hopkins University The United States of America, as Represented by the Secretary, Department of Health and Human Services | Claims to using cephaeline for Zika Virus |