

## TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

ETAS ID: TM570212

|   |   |                       |                       |
|---|---|-----------------------|-----------------------|
| <b>SUBMISSION TYPE:</b>   | NEW ASSIGNMENT                            |                       |                       |
| <b>NATURE OF CONVEYANCE:</b>  | SECURITY INTEREST                         |                       |                       |
| <b>CONVEYING PARTY DATA</b>   |   |                       |                       |
| <b>Name</b>   | <b>Formerly</b>                           | <b>Execution Date</b> | <b>Entity Type</b>    |
| AKEBIA THERAPEUTICS, INC.   |   | 04/01/2020            | Corporation: DELAWARE |
| KERYX BIOPHARMACEUTICALS, INC.  |   | 04/01/2020            | Corporation: DELAWARE |
| <b>RECEIVING PARTY DATA</b>   |   |                       |                       |
| <b>Name:</b>  | BIOPHARMA CREDIT PLC                      |                       |                       |
| <b>Street Address:</b>  | 51 New North Road                         |                       |                       |
| <b>Internal Address:</b>  | C/O Beaufort House                        |                       |                       |
| <b>City:</b>  | Exeter EX4 4EP                            |                       |                       |
| <b>State/Country:</b>   | UNITED KINGDOM                            |                       |                       |
| <b>Entity Type:</b>   | Public Limited Company: ENGLAND AND WALES |                       |                       |
| <b>PROPERTY NUMBERS Total: 1</b>  |   |                       |                       |
| <b>Property Type</b>  | <b>Number</b>                             | <b>Word Mark</b>      |                       |
| <b>Registration Number:</b>   | 4956680                                   | AURYXIA               |                       |
| <b>CORRESPONDENCE DATA</b>  |   |                       |                       |
| <b>Fax Number:</b>  | 2028874288                                |                       |                       |
| <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> |   |                       |                       |
| <b>Phone:</b>   | 2149692741                                |                       |                       |
| <b>Email:</b>   | blove@akingump.com                        |                       |                       |
| <b>Correspondent Name:</b>  | Brenda Love                               |                       |                       |
| <b>Address Line 1:</b>  | 2001 K Street N.W.                        |                       |                       |
| <b>Address Line 4:</b>  | Washington, D.C. 20006                    |                       |                       |
| <b>NAME OF SUBMITTER:</b>   | Brenda Love                               |                       |                       |
| <b>SIGNATURE:</b>   | /Brenda Love/                             |                       |                       |
| <b>DATE SIGNED:</b>   | 04/02/2020                                |                       |                       |
| <b>Total Attachments: 9</b>   |   |                       |                       |
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| source=Pharmakon-Akebia - Amended and Restated Intellectual Property Security Agreement#page2.tif   |   |                       |                       |
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source=Pharmakon-Akebia - Amended and Restated Intellectual Property Security Agreement#page9.tif

This AMENDED AND RESTATED INTELLECTUAL PROPERTY SECURITY AGREEMENT, dated as of April 1, 2020, is made by AKEBIA THERAPEUTICS, INC. and KERYX BIOPHARMACEUTICALS, INC., (the “Grantors” and each a “Grantor”), in favor of BIOPHARMA CREDIT PLC (together with its successors and permitted assigns, the “Collateral Agent”) on behalf of Lenders and the other Secured Parties (as defined in the Loan Agreement referred to below).

W I T N E S S E T H:

WHEREAS, pursuant to the Loan Agreement, dated as of November 11, 2019 (as the same may be amended, amended and restated, supplemented or otherwise modified from time to time, the “Loan Agreement”), by and among AKEBIA THERAPEUTICS, INC. (“Borrower”), KERYX BIOPHARMACEUTICALS, INC. (as an additional Credit Party), BIOPHARMA CREDIT PLC (as the “Collateral Agent” and a “Lender”), and BIOPHARMA CREDIT INVESTMENTS V (MASTER) LP (as a “Lender”), each Lender has agreed to make extensions of credit to Borrower upon the terms and subject to the conditions set forth therein;

WHEREAS, each Grantor has agreed, pursuant to a Guaranty and Security Agreement dated as of November 25, 2019 in favor of the Collateral Agent for the benefit of Lenders and the other Secured Parties (as such agreement may be amended, amended and restated, supplemented or otherwise modified from time to time, the “Guaranty and Security Agreement”), to guarantee the Obligations (as defined in the Loan Agreement) of Borrower; and

WHEREAS, each Grantor is party to the Guaranty and Security Agreement pursuant to which Grantor executed and delivered to the Collateral Agent an Intellectual Property Security Agreement, dated as of November 25, 2019 (the “Existing Intellectual Property Security Agreement”);

WHEREAS, one or more Grantors have subsequently acquired additional Collateral and, pursuant to the Guaranty and Security Agreement, are required to execute and deliver to the Collateral Agent this Amended and Restated Intellectual Property Security Agreement Security Agreement; and

WHEREAS, this Amended and Restated Intellectual Property Security Agreement amends and restates the Existing Intellectual Property Security Agreement in its entirety;

NOW, THEREFORE, in consideration of the mutual covenants, terms and conditions set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree, intending to be legally bound, as follows:

Section 1. Defined Terms. Capitalized terms used herein without definition are used as defined in the Guaranty and Security Agreement.

Section 2. Grant of Security Interest in IP Collateral. Each Grantor, as collateral security for the prompt and complete payment and performance when due (whether at stated maturity, by acceleration or otherwise) of the Secured Obligations, hereby mortgages, pledges and hypothecates to the Collateral Agent, for the benefit of Lenders and the other Secured Parties, and grants to the Collateral Agent, for the benefit of Lenders and the other Secured Parties, a Lien on and security interest in, all of its right, title and interest in, to and under the following Collateral of such Grantor, in each case, solely to the extent constituting Collateral (and excluding any Excluded Property) (the “Intellectual Property Collateral”):

(a) any and all United States Patents, Trademarks and other Intellectual Property and IP Licenses (including any IP Licenses under the Current Company IP Agreements to which a Grantor is a party and the rights of such Grantor thereunder, and all of a Grantor’s right, title and interest in, to and

under any Internet Domain Names and Software) owned by a Grantor, in each case, relating to the research, development, manufacture, production, use, commercialization, marketing, importing, storage, transport, offer for sale, distribution or sale of the Product in the Territory, including, without limitation, those referred to on Schedule 1 hereto; and

(b) all proceeds, products, accessions, rents and profits of or in respect of any of the foregoing.

Section 3. Guaranty and Security Agreement. The security interest granted pursuant to this Amended and Restated Intellectual Property Security Agreement is granted in conjunction with the security interest granted to the Collateral Agent for the benefit of Lenders and the other Secured Parties, pursuant to the Guaranty and Security Agreement and each Grantor hereby acknowledges and agrees that the obligations, rights and remedies of such Grantor and of the Collateral Agent on behalf of Lenders and the other Secured Parties with respect to the security interest in the Intellectual Property Collateral made and granted hereby are more fully set forth in the Guaranty and Security Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein.


Section 4. Grantor Remains Liable. Each Grantor hereby agrees that, anything herein to the contrary notwithstanding, such Grantor shall assume full and complete responsibility for the prosecution, defense, enforcement or any other reasonably necessary actions in connection with their Intellectual Property and IP Licenses subject to a security interest hereunder.

Section 5. Counterparts. This Amended and Restated Intellectual Property Security Agreement may be executed in any number of counterparts and by different parties in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement. Signature pages may be detached from multiple separate counterparts and attached to a single counterpart.

Section 6. Governing Law. This Amended and Restated Intellectual Property Security Agreement and the rights and obligations of the parties hereto shall be governed by, and construed and interpreted in accordance with, the law of the State of New York without regard to any principle of conflicts of law that could require the application of the law of any other jurisdiction.

IN WITNESS WHEREOF, each Grantor has caused this Amended and Restated Intellectual Property Security Agreement to be executed and delivered by its duly authorized officer as of the date first set forth above.

Very truly yours,  
AKEBIA THERAPEUTICS, INC.  
as Grantor

By:   
Name: John P. Butler  
Title: President and Chief  
Executive Officer

KERYX BIOPHARMACEUTICALS, INC.  
as Grantor


By:   
Name: John P. Butler  
Title: Director

ACCEPTED AND AGREED  
as of the date first above written:

BIOPHARMA CREDIT PLC,  
as Collateral Agent

By: Pharmakon Advisors, LP,  
its Investment Manager

By: Pharmakon Management I, LLC,  
its General Partner

By  \_\_\_\_\_  
Name: Pedro Gonzalez de Cosio  
Title: Managing Member

SCHEDULE I  
TO  
AMENDED AND RESTATED INTELLECTUAL PROPERTY SECURITY AGREEMENT

Intellectual Property

1. REGISTERED PATENTS, PATENT APPLICATIONS AND PATENT LICENSES

| Patent:<br>Patent ID | Application<br>Number | Filing<br>Date | Patent<br>Number | Issue<br>Date | Status<br>(High-<br>Level) | All Assignees/<br>Owner     | Title  |
|----------------------|-----------------------|----------------|------------------|---------------|----------------------------|-----------------------------|--|
| P20001US1            | 11/206,981            | 2/18/2004      | 7,767,851        | 8/3/2010      | In Force                   | Panion & BF<br>Biotech Inc. | FERRIC ORGANIC<br>COMPOUNDS, USES<br>THEREOF AND METHODS<br>OF MAKING SAME |
| P20001US10           | 16/589,905            | 10/1/2019      |                  |               | Pending                    | Panion & BF<br>Biotech Inc. | FERRIC ORGANIC<br>COMPOUNDS, USES<br>THEREOF AND METHODS<br>OF MAKING SAME |
| P20001US2            | 12/711,679            | 2/18/2004      | 8,338,642        | 12/25/201     | In Force                   | Panion & BF<br>Biotech Inc. | FERRIC ORGANIC<br>COMPOUNDS, USES<br>THEREOF AND METHODS<br>OF MAKING SAME |
| P20001US3            | 13/672,900            | 2/18/2004      | 8,609,896        | 12/17/201     | In Force                   | Panion & BF<br>Biotech Inc. | FERRIC ORGANIC<br>COMPOUNDS, USES<br>THEREOF AND METHODS<br>OF MAKING SAME |
| P20001US4            | 14/011,291            | 2/18/2004      | 8,754,258        | 6/17/2014     | In Force                   | Panion & BF<br>Biotech Inc. | FERRIC ORGANIC<br>COMPOUNDS, USES<br>THEREOF AND METHODS<br>OF MAKING SAME |
| P20001US5            | 14/011,325            | 2/18/2004      | 8,901,349        | 12/2/2014     | In Force                   | Panion & BF<br>Biotech Inc. | FERRIC ORGANIC<br>COMPOUNDS, USES<br>THEREOF AND METHODS<br>OF MAKING SAME |

|           |            |           |           |                |          |                             |  |
|-----------|------------|-----------|-----------|----------------|----------|-----------------------------|--|
| P20001US6 | 14/011,357 | 2/18/2004 | 8,846,976 | 9/30/2014      | In Force | Panion & BF<br>Biotech Inc. | FERRIC ORGANIC<br>COMPOUNDS, USES<br>THEREOF AND METHODS<br>OF MAKING SAME                         |
| P20001US7 | 14/502,774 | 2/18/2004 | 9,328,133 | 5/3/2016       | In Force | Panion & BF<br>Biotech Inc. | FERRIC ORGANIC<br>COMPOUNDS, USES<br>THEREOF AND METHODS<br>OF MAKING SAME                         |
| P20001US8 | 15/143,987 | 2/18/2004 | 9,913,821 | 3/14/2018      | In Force | Panion & BF<br>Biotech Inc. | FERRIC ORGANIC<br>COMPOUNDS, USES<br>THEREOF AND METHODS<br>OF MAKING SAME                         |
| P20002US1 | 12/064,058 | 8/18/2006 | 8,093,423 | 1/10/2012      | In Force | Panion & BF<br>Biotech Inc. | PHARMACEUTICAL-GRADE<br>FERRIC ORGANIC<br>COMPOUNDS, USES<br>THEREOF AND METHODS<br>OF MAKING SAME |
| P20002US2 | 13/289,048 | 8/18/2006 | 8,299,298 | 10/30/201<br>2 | In Force | Panion & BF<br>Biotech Inc. | PHARMACEUTICAL-GRADE<br>FERRIC ORGANIC<br>COMPOUNDS, USES<br>THEREOF AND METHODS<br>OF MAKING SAME |
| P20002US3 | 13/661,558 | 8/18/2006 | 8,754,257 | 6/17/2014      | In Force | Panion & BF<br>Biotech Inc. | PHARMACEUTICAL-GRADE<br>FERRIC ORGANIC<br>COMPOUNDS, USES<br>THEREOF AND METHODS<br>OF MAKING SAME |
| P20002US4 | 14/306,756 | 8/18/2006 | 9,050,316 | 6/9/2015       | In Force | Panion & BF<br>Biotech Inc. | PHARMACEUTICAL-GRADE<br>FERRIC ORGANIC<br>COMPOUNDS, USES<br>THEREOF AND METHODS<br>OF MAKING SAME |
| P20002US5 | 14/701,933 | 8/18/2006 | 9,757,416 | 9/12/2017      | In Force | Panion & BF<br>Biotech Inc. | PHARMACEUTICAL-GRADE<br>FERRIC ORGANIC<br>COMPOUNDS, USES  |



|           |            |            |            |           |          |          |   |   |
|-----------|------------|------------|------------|-----------|----------|----------|---|---|
|           |            |            |            |           |          |          |   | THEREOF AND METHODS OF MAKING SAME  |
| P20002US7 | 16/352,455 | 8/18/2006  |            |           |          | Pending  | Panion & BF Biotech Inc.                    | PHARMACEUTICAL-GRADE FERRIC ORGANIC COMPOUNDS, USES THEREOF AND METHODS OF MAKING SAME                            |
| P20003US1 | 08/794,328 | 2/3/1997   | 5,753,706  | 5/19/1998 | In Force | In Force | HSU, Chen Hsing<br>Panion & BF Biotech Inc. | METHOD FOR TREATING RENAL FAILURE<br>PHARMACEUTICAL-GRADE FERRIC CITRATE  |
| P20004US  | 10/682,045 | 10/8/2003  | 6,903,235  | 6/7/2005  | In Force | In Force | Panion & BF Biotech Inc.                    | METHOD OF REVERSING, PREVENTING OR STABILIZING SOFT TISSUE CALCIFICATION  |
| P20005US1 | 12/162,558 | 1/26/2007  | 9,750,715  | 9/5/2017  | In Force | In Force | Panion & BF Biotech Inc.                    | METHOD OF TREATING CHRONIC KIDNEY DISEASE   |
| P20006US2 | 15/814,767 | 1/26/2007  |            |           | Pending  | Pending  | Keryx Biopharmaceuticals, Inc.              | FERRIC CITRATE DOSAGE FORMS   |
| P20007US1 | 13/255,326 | 7/21/2010  | 9,387,191  | 7/12/2016 | In Force | In Force | Keryx Biopharmaceuticals, Inc.              | FERRIC CITRATE DOSAGE FORMS   |
| P20007US3 | 15/159,008 | 5/19/2016  | 10,300,039 | 5/28/2019 | In Force | In Force | Keryx Biopharmaceuticals, Inc.              | FERRIC CITRATE DOSAGE FORMS   |
| P20007US4 | 16/376,907 | 4/5/2019   |            |           | Pending  | Pending  | Keryx Biopharmaceuticals, Inc.              | USE OF FERRIC CITRATE IN THE TREATMENT OF CHRONIC KIDNEY DISEASE PATIENTS   |
| P20008US5 | 16/154,268 | 10/8/2018  |            |           | Pending  | Pending  | Keryx Biopharmaceuticals, Inc.              | USE OF FERRIC CITRATE IN THE TREATMENT OF AND THE REDUCTION OF MORTALITY AND MORBIDITY RELATED TO ADVERSE CARDIAC |
| P20009US2 | 16/216,772 | 12/11/2018 |            |           | Pending  | Pending  | Keryx Biopharmaceuticals, Inc.              |   |

TRADEMARK

REEL: 006906 FRAME: 0779

|           |            |            |           |           |  |                                |  |  |  |
|-----------|------------|------------|-----------|-----------|--|--------------------------------|--|--|--|
|           |            |            |           |           |  |                                |  |  | EVENTS IN CHRONIC KIDNEY DISEASE PATIENTS                                |
| P20010US1 | 15/553,348 | 3/3/2016   |           |           | Pending  | Keryx Biopharmaceuticals, Inc. |  |  | USE OF FERRIC CITRATE IN THE TREATMENT OF IRON-DEFICIENCY ANEMIA         |
| P20011US6 | 16/405,599 | 5/7/2019   |           |           | Abandoned (in favor of filing P20011US7 application) | Keryx Biopharmaceuticals, Inc. |  |  | HIGH PURITY FERRIC CITRATE, METHODS OF MANUFACTURE AND USES FOR THE SAME |
| P20011US7 | 16/719,570 | 12/18/2019 |           |           | Pending  | Keryx Biopharmaceuticals, Inc. |  |  | HIGH PURITY FERRIC CITRATE, METHODS OF MANUFACTURE AND USES FOR THE SAME |
|           | 14/184,062 | 2/19/2014  | 9,624,155 | 4/18/2017 | Issued   | Japan Tobacco, Inc.            |  |  | IRON (III) CITRATE, SUBSTANTIALLY FREE OF BETA-IRON HYDROXIDE OXIDE      |
|           | 15/449,132 | 3/3/2017   |           |           | Pending  | Japan Tobacco, Inc.            |  |  | IRON (III) CITRATE, SUBSTANTIALLY FREE OF BETA-IRON HYDROXIDE OXIDE      |
|           | 16/438,694 | 6/12/2019  |           |           | Pending  | Japan Tobacco, Inc.            |  |  | TABLET CONTAINING FERRIC CITRATE   |

2. TRADEMARK REGISTRATIONS<sup>1</sup>

| Trademark | Country                  | Status     | Application # | Date Filed   | Registration # | Registration Date | Owner                          |
|-----------|--------------------------|------------|---------------|--------------|----------------|-------------------|--------------------------------|
| AURYYXIA  | United States of America | Registered | 86/390,566    | Sep 10, 2014 | 4956680        | May 10, 2016      | Keryx Biopharmaceuticals, Inc. |

<sup>1</sup> NTD: Any trademarks which are not part of the Collateral have been removed, but these are still referenced in the perfection certificate.

3. IP LICENSES

- a. Second Amended and Restated License Agreement between the Borrower and Panion & BF Biotech, Inc., dated April 17, 2019.
- b. Amended and Restated Sublicense Agreement between Keryx and Japan Tobacco and TORII Pharmaceutical Co., Ltd., dated June 8, 2009.
- c. First Amendment to Amended and Restated Sublicense Agreement between Keryx and Japan Tobacco and TORII Pharmaceutical Co., Ltd., dated June 12, 2013.

**TRADEMARK**

**REEL: 006906 FRAME: 0781**

**RECORDED: 04/02/2020**