506864802 09/12/2021 PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6911624

SUBMISSION TYPE:	NEW ASSIGNMENT						
NATURE OF CONVEY	ANCE: SEVENTH AMENDED AND F SECURITY AGREEMENT	SEVENTH AMENDED AND RESTATED INTELLECTUAL PROPERTY SECURITY AGREEMENT					
CONVEYING PARTY	DATA						
	Name	Execution Date					
AKEBIA THERAPEUT	ΓICS, INC.	09/03/2021					
KERYX BIOPHARMACEUTICALS, INC.09/03/2021							
RECEIVING PARTY I	DATA BIOPHARMA CREDIT PLC						
Name:	BIOPHARMA CREDIT PLC						
Name: Street Address:	BIOPHARMA CREDIT PLC 51 NEW NORTH ROAD						

PROPERTY NUMBERS Total: 30

Property Type	Number
Patent Number:	5753706
Patent Number:	6903235
Patent Number:	7767851
Patent Number:	8093423
Patent Number:	8299298
Patent Number:	8338642
Patent Number:	8609896
Patent Number:	8754257
Patent Number:	8754258
Patent Number:	8846976
Patent Number:	8901349
Patent Number:	9050316
Patent Number:	9328133
Patent Number:	9387191
Patent Number:	9624155
Patent Number:	9750715
Patent Number:	9757416
Patent Number:	9913821
Patent Number:	10300039

506864802

Property Type	Number	
Patent Number:	10898459	
Application Number:	15553348	
Application Number:	16154268	
Application Number:	16216772	
Application Number:	16376907	
Application Number:	16815472	
Application Number:	16894121	
Application Number:	17119554	
Application Number:	17141765	
Application Number:	17203245	
Application Number:	17350267	

CORRESPONDENCE DATA

Fax Number:(202)887-4288Correspondence 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:	2028874000
Email:	dlee@akingump.com
Correspondent Name:	DAVID C. LEE
Address Line 1:	2001 K STREET, N.W.
Address Line 2:	ROBERT S. STRAUSS TOWER
Address Line 4:	WASHINGTON, D.C. 20006

ATTORNEY DOCKET NUMBER:	687747.0050
NAME OF SUBMITTER:	DAVID C. LEE
SIGNATURE:	/David C. Lee/
DATE SIGNED:	09/12/2021

Total Attachments: 9

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This SEVENTH AMENDED AND RESTATED INTELLECTUAL PROPERTY SECURITY AGREEMENT, dated as of September 3, 2021, (this "<u>Agreement</u>") is made by AKEBIA THERAPEUTICS, INC. and KERYX BIOPHARMACEUTICALS, INC., (the "<u>Grantors</u>" and each a "<u>Grantor</u>"), in favor of BIOPHARMA CREDIT PLC (together with its successors and permitted assigns in such capacity, the "<u>Collateral Agent</u>") on behalf of Lenders and the other Secured Parties (as defined in the Loan Agreement referred to below).

WITNESSETH:

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 <u>Agreement</u>"), by and among AKEBIA THERAPEUTICS, INC. ("<u>Borrower</u>"), KERYX BIOPHARMACEUTICALS, INC. (as an additional Credit Party), BIOPHARMA CREDIT PLC (as the "<u>Collateral Agent</u>"), BPCR LIMITED PARTNERSHIP (as a "<u>Lender</u>") and BIOPHARMA CREDIT INVESTMENTS V (MASTER) LP (as a "<u>Lender</u>"), 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 a Sixth Amended and Restated Intellectual Property Security Agreement, dated as of June 4, 2021 (the "Existing Intellectual Property Security Agreement");

WHEREAS, events impacting certain of the Intellectual Property Collateral (defined below) have subsequently occurred and, pursuant to the Guaranty and Security Agreement, the Grantors are required to execute and deliver to the Collateral Agent this Agreement; and

WHEREAS, this 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. <u>Defined Terms</u>. Capitalized terms used herein without definition are used as defined in the Guaranty and Security Agreement.

Section 2. <u>Grant of Security Interest in IP Collateral</u>. 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 <u>Schedule 1</u> hereto; and

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

foregoing.

Section 3. <u>Guaranty and Security Agreement</u>. The security interest granted pursuant to this 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. <u>Grantor Remains Liable</u>. 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. <u>Counterparts</u>. This 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. <u>Governing Law</u>. This 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 Seventh 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 CEO

KERYX BIOPHARMACEUTICALS, INC.

as Grantor By:

Name: John P. Butler Title: Director

Signature Page to Seventh Amended and Restated Intellectual Property Security Agreement

PATENT REEL: 057474 FRAME: 0774 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: Vedro Gonzalez de Cosio Title: Managing Member

PATENT REEL: 057474 FRAME: 0775

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14/011,357	14/011,325	14/011,291	13/672,900	12/711,679	17/141,765	11/206,981	Application Number
2/18/2004	2/18/2004	2/18/2004	2/18/2004	2/18/2004	2/18/2004	2/18/2004	Effective Filing Date
8,846,976	8,901,349	8,754,258	8,609,896	8,338,642		7,767,851	Patent Number
9/30/2014	12/2/2014	6/17/2014	12/17/2013	12/25/2012		8/3/2010	Issue Date
In Force	In Force	In Force	In Force	In Force	Pending	In Force	Status (High-Level)
Panion & BF Biotech Inc.	Panion & BF Biotech Inc.	Panion & BF Biotech Inc.	Panion & BF Biotech Inc.	Panion & BF Biotech Inc.	Panion & BF Biotech Inc.	Panion & BF Biotech Inc.	All Assignees/ Owner
FERRIC ORGANIC COMPOUNDS, USES	FERRIC ORGANIC COMPOUNDS, USES THEREOF AND METHODS OF MAKING SAME	Title					

SCHEDULE I TO

AMENDED AND RESTATED INTELLECTUAL PROPERTY SECURITY AGREEMENT

Intellectual Property

REGISTERED PATENTS, PATENT APPLICATIONS AND PATENT LICENSES

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

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16/154,268	16/894,121	16/376,907	15/159,008	13/255,326	17/119,554	15/814,767	12/162,558	10/682,045	08/794,328	17/350,267	
6/21/2013	7/21/2020	7/21/2010	7/21/2010	7/21/2010	1/26/2007	1/26/2007	1/26/2007	10/8/2003	2/3/1997	8/18/2006	
			10,300,039	9,387,191		10,898,459	9,750,715	6,903,235	5,753,706		
			5/28/2019	7/12/2016		1/16/2021	9/5/2017	6/7/2005	5/19/1998		
Pending	Pending	Pending	In Force	In Force	Pending	In Force	In Force	In Force	In Force	Pending	Abandoned in favor of filing P20002US10
Keryx Biopharmaceutic als, Inc.	Keryx Biopharmaceutic als, Inc.	Keryx Biopharmaceutic als, Inc.	Keryx Biopharmaceutic als, Inc.	Keryx Biopharmaceutic als, Inc.	Panion & BF Biotech Inc.	Panion & BF Biotech Inc.	Panion & BF Biotech Inc.	Panion & BF Biotech Inc.	HSU, Chen Hsing	Panion & BF Biotech Inc.	
USE OF FERRIC CITRATE IN THE TREATMENT OF	FERRIC CITRATE DOSAGE FORMS	FERRIC CITRATE DOSAGE FORMS	FERRIC CITRATE DOSAGE FORMS	FERRIC CITRATE DOSAGE FORMS	METHOD OF TREATING CHRONIC KIDNEY DISEASE	METHOD OF TREATING CHRONIC KIDNEY DISEASE	METHOD OF REVERSING, PREVENTING OR STABILIZING SOFT TISSUE CALCIFICATION	PHARMACEUTICAL-GRADE FERRIC CITRATE	METHOD FOR TREATING RENAL FAILURE	PHARMACEUTICAL GRADE FERRIC ORGANIC COMPOUNDS, USES THEREOF AND METHODS OF MAKING SAME	

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

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2 TRADEMARK REGISTRATIONS¹

		Abandoned					
IRON (III) CITRATE, SUBSTANTIALLY FREE OF BETA-IRON HYDROXIDE OXIDE	Japan Tobacco, Inc.	Pending			2/19/2014	16/815,472	
IRON (III) CITRATE, SUBSTANTIALLY FREE OF BETA-IRON HYDROXIDE OXIDE	Japan Tobacco, Inc.	Issued	4/18/2017	9,624,155	2/19/2014	14/184,062	
HIGH PURITY FERRIC CITRATE, METHODS OF MANUFACTURE AND USES FOR THE SAME	Keryx Biopharmaceutic als, Inc.	Pending			3/12/2014	17/203,245	P20011US9
USE OF FERRIC CITRATE IN THE TREATMENT OF IRON- DEFICIENCY ANEMIA	Keryx Biopharmaceutic als, Inc.	Pending			3/3/2016	15/553,348	P20010US1
USE OF FERRIC CITRATE IN THE TREATMENT OF AND THE REDUCTION OF MORTALITY AND MORBIDITY RELATED TO ADVERSE CARDIAC EVENTS IN CHRONIC KIDNEY DISEASE PATIENTS	Keryx Biopharmaceutic als, Inc.	Pending			11/3/2014	16/216,772	P20009US2
CHRONIC KIDNEY DISEASE PATIENTS							

AURYXIA
United States of America Registered 86/390,566
Registered
86/390,566
Sep 10, 2014 495668
4956680
May 10, 2016
Keryx Biopharmaceuticals, Inc.

$\dot{\omega}$ IP LICENSES

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