PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT7328467

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Execution Date
GLYCOSYN LLC	05/06/2022
GLYCOSYN, INC.	05/06/2022

RECEIVING PARTY DATA

Name:	GINKGO BIOWORKS, INC.
Street Address:	27 DRYDOCK AVE., 8TH FLOOR
City:	BOSTON
State/Country:	MASSACHUSETTS
Postal Code:	02210

PROPERTY NUMBERS Total: 34

Property Type	Number
Patent Number:	9453230
Patent Number:	11028419
Patent Number:	10815511
Patent Number:	9970018
Patent Number:	10487346
Application Number:	16694094
Application Number:	17241441
Patent Number:	9587241
Patent Number:	9567361
Patent Number:	10286001
Application Number:	16403095
Patent Number:	9029136
Patent Number:	10273516
Application Number:	16397755
Patent Number:	9758803
Patent Number:	10415069
Application Number:	16554460
Application Number:	15509820
Patent Number:	11046984

Property Type	Number
Application Number:	62599481
Application Number:	16221193
PCT Number:	US1865656
Application Number:	63049492
Application Number:	63049503
PCT Number:	US2140915
Application Number:	63134315
Application Number:	63134320
Application Number:	63024464
Application Number:	63024473
PCT Number:	US2132283
PCT Number:	US2132282
Application Number:	17320003
Application Number:	17320152
Application Number:	17354819

CORRESPONDENCE DATA

Fax Number: (617)235-9492

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: 617-951-7000
Email: maryjane.dipalma@ropesgray.com
Correspondent Name: ROPES & GRAY LLP
Address Line 1: PRUDENTIAL TOWER 800 BOYLSTON SREET
Address Line 4: BOSTON, MASSACHUSETTS 02199-3600

ATTORNEY DOCKET NUMBER:	115021-0054
NAME OF SUBMITTER:	MARY JANE DIPALMA
SIGNATURE:	/ Mary Jane DiPalma /
DATE SIGNED:	05/11/2022

Total Attachments: 19
source=Glycosyn - AR Intellectual Property Security Agreement#page1.tif
source=Glycosyn - AR Intellectual Property Security Agreement#page2.tif
source=Glycosyn - AR Intellectual Property Security Agreement#page3.tif
source=Glycosyn - AR Intellectual Property Security Agreement#page4.tif
source=Glycosyn - AR Intellectual Property Security Agreement#page5.tif
source=Glycosyn - AR Intellectual Property Security Agreement#page6.tif
source=Glycosyn - AR Intellectual Property Security Agreement#page7.tif
source=Glycosyn - AR Intellectual Property Security Agreement#page8.tif
source=Glycosyn - AR Intellectual Property Security Agreement#page9.tif
source=Glycosyn - AR Intellectual Property Security Agreement#page10.tif
source=Glycosyn - AR Intellectual Property Security Agreement#page11.tif

source=Glycosyn - AR Intellectual Property Security Agreement#page12.tif
source=Glycosyn - AR Intellectual Property Security Agreement#page13.tif
source=Glycosyn - AR Intellectual Property Security Agreement#page14.tif
source=Glycosyn - AR Intellectual Property Security Agreement#page15.tif
source=Glycosyn - AR Intellectual Property Security Agreement#page16.tif
source=Glycosyn - AR Intellectual Property Security Agreement#page17.tif
source=Glycosyn - AR Intellectual Property Security Agreement#page18.tif
source=Glycosyn - AR Intellectual Property Security Agreement#page19.tif

AMENDED & RESTATED INTELLECTUAL PROPERTY SECURITY AGREEMENT

THIS AMENDED & RESTATED INTELLECTUAL PROPERTY SECURITY AGREEMENT (this "Agreement"), dated as of May 6, 2022, is made by Glycosyn LLC, a Massachusetts limited liability company and Glycosyn, Inc., a Massachusetts corporation (individually and collectively, jointly and severally, "Grantor"), in favor of Ginkgo Bioworks, Inc., a Delaware corporation (together with its successors and assigns, the "Secured Party").

RECITALS

A. Grantor has entered into (i) a Secured Convertible Promissory Note with Secured Party, dated as of October 30, 2018 (as amended, restated, supplemented or otherwise modified from time to time, the "Note"), (ii) a Security Agreement, dated as of October 30, 2018 (as amended, restated, supplemented, and/or modified from time to time, the "Security Agreement"), with Secured Party, and (iii) an Intellectual Property Security Agreement, dated as of October 30, 2018 (the "Original IP Security Agreement"), with Secured Party. All capitalized terms used but not otherwise defined herein shall have the respective meanings given to them in the Security Agreement.

B. Pursuant to the terms of the Note, the Security Agreement, and the Original IP Security Agreement, Grantor has granted to Secured Party a security interest in all of Grantor's right, title and interest, whether presently existing or hereafter acquired, in, to and under all of the Collateral.

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, and intending to be legally bound, as collateral security for the prompt and complete payment when due of its obligations under the Note, Grantor hereby represents, warrants, covenants and agrees as follows:

AGREEMENT

1. Amendment & Restatement. Grantor and Secured Party have agreed to amend and restate the Original IP Security Agreement as set forth herein.

2. Grant of Security Interest. To secure its obligations under the Note, Grantor grants and pledges to Secured Party a security interest in all of Grantor's right, title and interest in, to and under its Intellectual Property (all of which shall collectively be called the "Intellectual Property Collateral"), including, without limitation, the following:

(a) Any and all copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret, now or hereafter existing, created, acquired or held, including without limitation those set forth on Exhibit A attached hereto (collectively, the "Copyrights");

(b) Any and all trade secrets, and any and all intellectual property rights in computer software and computer software products now or hereafter existing, created, acquired or held;

(c) Any and all design rights that may be available to Grantor now or hereafter existing, created, acquired or held;

(d) All patents, patent applications and like protections including, without limitation, improvements, divisions, continuations, renewals, reissues, extensions, re-examination certificates, utility models, and continuations-in-part of the same, including without limitation the patents and patent applications set forth on Exhibit B attached hereto (collectively, the "Patents");

(e) Any trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of Grantor connected with and symbolized by such trademarks, including without limitation those set forth on Exhibit C attached hereto (collectively, the "Trademarks");

(f) All mask works or similar rights available for the protection of semiconductor chips, now owned or hereafter acquired, including, without limitation those set forth on Exhibit D attached hereto (collectively, the "Mask Works");

(g) Any and all claims for damages by way of past, present and future infringements of any of the rights included above, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the intellectual property rights identified above;

(h) All licenses or other rights to use any of the Copyrights, Patents, Trademarks, or Mask Works and all license fees and royalties arising from such use to the extent permitted by such license or rights;

(i) All amendments, renewals and extensions of any of the Copyrights, Trademarks, Patents, or Mask Works; and

(j) All proceeds and products of the foregoing, including without limitation all payments under insurance or any indemnity or warranty payable in respect of any of the foregoing.

Notwithstanding the foregoing, the Intellectual Property Collateral does not include any United States intent-to-use trademark or service mark application to the extent that, and solely during the period in which, the grant of a security interest therein would impair the validity or enforceability of such intent-to-use trademark or service mark application under United States federal law.

3. Recordation. Grantor authorizes the Commissioner for Patents, the Commissioner for Trademarks and the Register of Copyrights and any other government officials to record and register this Agreement upon request by Secured Party. Grantor hereby authorizes Secured Party to (a) modify this Agreement unilaterally by amending the exhibits to this Agreement to include any Intellectual Property Collateral which Grantor obtains subsequent to the date of this Agreement and (b) file a duplicate original of this Agreement containing amended exhibits reflecting such new Intellectual Property Collateral.

4. Note Documents. This Agreement has been entered into pursuant to and in conjunction with the Note and Security Agreement, which are hereby incorporated by reference.

The provisions of the Note and Security Agreement shall supersede and control over any conflicting or inconsistent provision herein. The rights and remedies of Secured Party with respect to the Intellectual Property Collateral are as provided by the Note and Security Agreement and related documents, and nothing in this Agreement shall be deemed to limit such rights and remedies.

5. Execution in Counterparts. This Agreement and any amendments, waivers, consents or supplements hereto may be executed in any number of counterparts, and by different parties hereto in separate counterparts, each of which when so delivered shall be deemed an original, but all of which counterparts shall constitute but one and the same instrument. Delivery of an executed counterpart of a signature page of this Agreement by facsimile, portable document format (.pdf) or other electronic transmission will be as effective as delivery of a manually executed counterpart hereof.

6. Successors and Assigns. The provisions of this Agreement shall inure to the benefit of the parties hereto and their respective successors and assigns. Grantor shall not assign its obligations under this Agreement without Secured Party's express prior written consent, and any such attempted assignment shall be void and of no effect. Secured Party may assign, transfer, or endorse its rights hereunder pursuant to the terms of the Note without prior notice to Grantor, and all of such rights shall inure to the benefit of Secured Party's successors and assigns.

7. Governing Law. This Agreement has been negotiated and delivered to Secured Party in the Commonwealth of Massachusetts, and shall have been accepted by Secured Party in the Commonwealth of Massachusetts. This Agreement shall be governed by, and construed and enforced in accordance with, the laws of the Commonwealth of Massachusetts, excluding conflict of laws principles that would cause the application of laws of any other jurisdiction.

[*signature page follows*]

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

GRANTOR:

GLYCOSYN LLC, a Massachusetts limited liability company

By: _____
Name: Howard Newburg
Title: Manager

GLYCOSYN, INC., a Massachusetts corporation

By: _____
Name: Howard Newburg
Title: President

SECURED PARTY:

GINKGO BIOWORKS, INC., a Delaware corporation

By: _____
Name: Reshma Shetty
Title: President

[Signature Page to Intellectual Property Security Agreement)

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

GRANTOR:

GLYCOSYN LLC, a Massachusetts limited liability company

By:_____
Name: Howard Newburg
Title: Manager

GLYCOSYN, INC., a Massachusetts corporation

By:_____
Name: Howard Newburg
Title: President

SECURED PARTY:

GINKGO BIOWORKS, INC., a Delaware corporation

By: Reshma Shetty
Name: Reshma Shetty
Title: President

[Signature Page to Intellectual Property Security Agreement)

EXHIBIT A

Copyrights

None.

EXHIBIT B

Patents

TITLE	COUNTRY	APPLICATION #	PATENT NUMBER	DATE FILED
Biosynthesis Of Human Milk Oligosaccharides In Engineered Bacteria	United States of America	13/398,526	9,453,230	Feb 16, 2012
Biosynthesis Of Human Milk Oligosaccharides In Engineered Bacteria	United States of America	15/442,127	11,028,419	Feb 24, 2017
Biosynthesis Of Human Milk Oligosaccharides In Engineered Bacteria	United States of America	15/442,131	10,815,511	Feb 24, 2017
Biosynthesis Of Human Milk Oligosaccharides In Engineered Bacteria	United States of America	15/712,074	9,970,018	Sep 21, 2017
BIOSYNTHESIS OF HUMAN MILK OLIGOSACCHARIDES IN ENGINEERED BACTERIA	United States of America	15/980,349	10,487,346	May 15, 2018
BIOSYNTHESIS OF HUMAN MILK OLIGOSACCHARIDES IN ENGINEERED BACTERIA	United States of America	16/694,097		Nov 25, 2019
BIOSYNTHESIS OF HUMAN MILK OLIGOSACCHARIDES IN ENGINEERED BACTERIA	United States of America	17/241,441		Apr 27, 2021
Biosynthesis of Human Milk Oligosaccharides in Engineered Bacteria	United States of America	14/033,664	9,587,241	Sep 23, 2013
Biosynthesis Of Human Milk Oligosaccharides In Engineered Bacteria	Australia	2012217650	2012217650	Feb 16, 2012
Biosynthesis Of Human Milk Oligosaccharides In Engineered Bacteria	Australia	2017210559	2017210559	Feb 16, 2012

TITLE	COUNTRY	APPLICATION #	PATENT NUMBER	DATE FILED
Compositions And Methods For Engineering	Australia	2019253776		Feb 16, 2012
Biosynthesis Of Human Milk Oligosaccharides In Engineered Bacteria	Canada	2,827,313		Feb 16, 2012
BIOSYNTHESIS OF HUMAN MILK OLIGOSACCHARIDES IN ENGINEERED BACTERIA	Canada	3,098,403		Feb 16, 2012
Biosynthesis Of Human Milk Oligosaccharides In Engineered Bacteria	Germany	12746649.8		Feb 16, 2012
Biosynthesis Of Human Milk Oligosaccharides In Engineered Bacteria	Denmark	12746649.8		Feb 16, 2012
Biosynthesis Of Human Milk Oligosaccharides In Engineered Bacteria	European Patent Office	12746649.8		Feb 16, 2012
Biosynthesis Of Human Milk Oligosaccharides In Engineered Bacteria	Japan	2013-554607	6047505	Feb 16, 2012
Biosynthesis Of Human Milk Oligosaccharides In Engineered Bacteria IN ENGINEERED BACTERIA	Japan	2016-225751	6737691	Feb 16, 2012
Compositions And Methods For Engineering	Japan	2016-255725	6580549	Feb 16, 2012
Compositions And Methods For Engineering	Japan	2019-155229	6788714	Feb 16, 2012
Compositions And Methods For Engineering	Japan	2020-182022		Feb 16, 2012
Use of purified 2'-fucosyllactose, 3-fucosyllactose and lactodifucotetraose as prebiotics	United States of America	13/469,499	9,567,361	May 11, 2012

TITLE	COUNTRY	APPLICATION #	PATENT NUMBER	DATE FILED
USE OF PURIFIED 2'-FUCOSYLLACTOSE, 3-FUCOSYLLACTOSE AND LACTODIFUCOTETRAOSE AS PREBIOTICS	United States of America	15/419,241	10,286,001	Jan 30, 2017
USE OF PURIFIED 2'-FUCOSYLLACTOSE, 3-FUCOSYLLACTOSE AND LACTODIFUCOTETRAOSE AS PREBIOTICS	United States of America	16/403,095		May 3, 2019
The Use Of Purified 2'-Fucosyllactose, 3-Fucosyllactose and Lactodifucotetraose as Prebiotics	European Patent Office	12785392.7		May 11, 2012
The Use Of Purified 2'-Fucosyllactose, 3-Fucosyllactose and Lactodifucotetraose as Prebiotics	Japan	2014-510495	6129821	May 11, 2012
The Use Of Purified 2'-Fucosyllactose, 3-Fucosyllactose and Lactodifucotetraose as Prebiotics	Japan	2017-078862	6416308	May 11, 2012
The Use Of Purified 2'-Fucosyllactose, 3-Fucosyllactose and Lactodifucotetraose as Prebiotics	Japan	2018-187840		May 11, 2012
Alpha (1,2) Fucosyltransferases Suitable For Use In The Production Of Fucosylated Oligosaccharides	United States of America	13/557,655	9,029,136	Jul 25, 2012
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	United States of America	14/708,568	10,273,516	May 11, 2015
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	United States of America	16/397,755		Apr 29, 2019
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	Australia	2013293116	2013293116	Jul 24, 2013

TITLE	COUNTRY	APPLICATION #	PATENT NUMBER	DATE FILED
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	Australia	2019203433		Jul 24, 2013
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	Australia	2019226246		Jul 24, 2013
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	Canada	2,879,677		Jul 24, 2013
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	European Patent Office	13823740.9	EP2877574B1	Jul 24, 2013
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	European Patent Office	19174435.8		May 14, 2019
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	Japan	2015-524410	6355632	Jul 24, 2013
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	Japan	2018-018760	6944886	Jul 24, 2013
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	Belgium	13823740.9	2877574	Jul 24, 2013
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	Bulgaria	13823740.9	2877574	Jul 24, 2013
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	Switzerland	13823740.9	2877574	Jul 24, 2013
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	Czech Republic	13823740.9	2877574	Jul 24, 2013

TITLE	COUNTRY	APPLICATION #	PATENT NUMBER	DATE FILED
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	Germany	13823740.9	2877574	Jul 24, 2013
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	Denmark	13823740.9	2877574	Jul 24, 2013
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	Spain	13823740.9	2877574	Jul 24, 2013
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	Finland	13823740.9	2877574	Jul 24, 2013
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	France	13823740.9	2877574	Jul 24, 2013
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	United Kingdom	13823740.9	2877574	Jul 24, 2013
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	Hungary	13823740.9	2877574	Jul 24, 2013
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	Ireland	13823740.9	2877574	Jul 24, 2013
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	Italy	13823740.9	2877574	Jul 24, 2013
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	Netherlands	13823740.9	2877574	Jul 24, 2013
Alpha (1,2) Fucosyltransferases Suitable for Use in the Production of Fucosylated Oligosaccharides	Sweden	13823740.9	2877574	Jul 24, 2013

TITLE	COUNTRY	APPLICATION #	PATENT NUMBER	DATE FILED
Microorganisms And Methods For Producing Sialylated And N-Acetylglucosamine-Containing Oligosaccharides	United States of America	14/776,216	9,758,803	Mar 14, 2014
Microorganisms And Methods For Producing Sialylated And N-Acetylglucosamine-Containing Oligosaccharides	United States of America	15/700,978	10,415,069	Sep 11, 2017
Microorganisms And Methods For Producing Sialylated And N-Acetylglucosamine-Containing Oligosaccharides	United States of America	16/554,460		Aug 28, 2019
Microorganisms And Methods For Producing Sialylated And N-Acetylglucosamine-Containing Oligosaccharides	Canada	2,904,091		Mar 14, 2014
Microorganisms And Methods For Producing Sialylated And N-Acetylglucosamine-Containing Oligosaccharides	Germany	14769797.3	2970872	Mar 14, 2014
Microorganisms And Methods For Producing Sialylated And N-Acetylglucosamine-Containing Oligosaccharides	Denmark	14769797.3	2970872	Mar 14, 2014
Microorganisms And Methods For Producing Sialylated And N-Acetylglucosamine-Containing Oligosaccharides	European Patent Office	14769797.3	EP2970872B1	Mar 14, 2014
Microorganisms And Methods For Producing Sialylated And N-Acetylglucosamine-Containing Oligosaccharides	European Patent Office	18192520.7		Mar 14, 2014

TITLE	COUNTRY	APPLICATION #	PATENT NUMBER	DATE FILED
Microorganisms And Methods For Producing Sialylated And N-Acetylglucosamine-Containing Oligosaccharides	Spain	14769797.3	2970872	Mar 14, 2014
Microorganisms And Methods For Producing Sialylated And N-Acetylglucosamine-Containing Oligosaccharides	United Kingdom	14769797.3	2970872	Mar 14, 2014
Microorganisms And Methods For Producing Sialylated And N-Acetylglucosamine-Containing Oligosaccharides	Netherlands	14769797.3	2970872	Mar 14, 2014
Microorganisms And Methods For Producing Sialylated And N-Acetylglucosamine-Containing Oligosaccharides	France	14769797.3	2970872	Mar 14, 2014
Microorganisms And Methods For Producing Sialylated And N-Acetylglucosamine-Containing Oligosaccharides	Italy	14769797.3	2970872	Mar 14, 2014
Alpha (1,3) Fucosyltransferases For Use In The Production of Fucosylated Oligosaccharides	United States of America	15/509,820		Sep 9, 2015
Alpha (1,3) Fucosyltransferases For Use In The Production of Fucosylated Oligosaccharides	Australia	2015315110	2015315110	Sep 9, 2015
Alpha (1,3) Fucosyltransferases For Use In The Production of Fucosylated Oligosaccharides	Canada	2,960,835		Sep 9, 2015
Alpha (1,3) Fucosyltransferases For Use In The Production of Fucosylated Oligosaccharides	European Patent Office	15840178.6		Sep 9, 2015

TITLE	COUNTRY	APPLICATION #	PATENT NUMBER	DATE FILED
Alpha (1,3) Fucosyltransferases For Use In The Production of Fucosylated Oligosaccharides	Japan	2017-533174	6737788	Sep 9, 2015
Alpha (1,3) Fucosyltransferases For Use In The Production of Fucosylated Oligosaccharides	Japan	2019-039551	6967540	Sep 9, 2015
Alpha (1,2) Fucosyltransferase Syngenes For Use in the Production of Fucosylated Oligosaccharides	United States of America	15/307,914	11,046,984	May 15, 2015
Alpha (1,2) Fucosyltransferase Syngenes For Use in the Production of Fucosylated Oligosaccharides	Australia	2015259088	2015259088	May 14, 2015
Alpha (1,2) Fucosyltransferase Syngenes For Use in the Production of Fucosylated Oligosaccharides	Canada	2,945,661		May 14, 2015
Alpha (1,2) Fucosyltransferase Syngenes For Use in the Production of Fucosylated Oligosaccharides	China	201580028020.2		May 14, 2015
Alpha (1,2) Fucosyltransferase Syngenes For Use in the Production of Fucosylated Oligosaccharides	European Patent Office	15792578.5		May 14, 2015
ALPHA (1 2) FUCOSYLTRANSFERASE SYNGENES FOR USE IN THE PRODUCTION OF FUCOSYLATED OLIGOSACCHARIDES	India	201617038265		Nov 9, 2016
Alpha (1,2) Fucosyltransferase Syngenes For Use in the Production of Fucosylated Oligosaccharides	Japan	2016-549476		May 14, 2015
Alpha (1,2) Fucosyltransferase Syngenes For Use in the Production of Fucosylated Oligosaccharides	Japan	2020-086439		May 14, 2015

TITLE	COUNTRY	APPLICATION #	PATENT NUMBER	DATE FILED
Alpha (1,2) Fucosyltransferase Syngenes For Use in the Production of Fucosylated Oligosaccharides	Republic of Korea	2016-7033842		May 14, 2015
Alpha (1,2) Fucosyltransferase Syngenes For Use in the Production of Fucosylated Oligosaccharides	Mexico	MX/a/2016/014807		May 14, 2015
Alpha (1,2) Fucosyltransferase Syngenes For Use in the Production of Fucosylated Oligosaccharides	New Zealand	722185		May 14, 2015
Alpha (1,2) Fucosyltransferase Syngenes For Use in the Production of Fucosylated Oligosaccharides	Singapore	11201609366T		May 14, 2015
Alpha (1,2) Fucosyltransferase Syngenes For Use in the Production of Fucosylated Oligosaccharides	Singapore	10202010599T		May 14, 2015
Alpha (1,2) Fucosyltransferase Syngenes For Use in the Production of Fucosylated Oligosaccharides	South Africa	2016/07471		May 14, 2015
Sialyltransferases for Production of Human Milk Oligosaccharides	United States of America	62/599,481		Dec 15, 2017
Sialyltransferases and Uses Therof	United States of America	16/221,193		Dec 14, 2018
Sialyltransferases and Uses Therof	PCT	PCT/US18/65656		Dec 14, 2018
Sialyltransferases and Uses Therof	Australia	2018386217		Jun 16, 2020
Sialyltransferases and Uses Therof	Canada	3085931		Jun 15, 2020

TITLE	COUNTRY	APPLICATION #	PATENT NUMBER	DATE FILED
Sialyltransferases and Uses Therof	European Patent Office	18887571		Jul 15, 2020
Sialyltransferases and Uses Therof	Japan	2020-551785		Jun 12, 2020
Compositions And Methods For Engineering Cationic Antimicrobial peptides	United States of America	63/049,492		Jul 8, 2020
Use of 2'-FL For Treatment of Symptoms Associated with Spectrum Disorder	United States of America	63/049,503		Jul 8, 2020
Use of 2'-FL For Treatment of Symptoms Associated with Spectrum Disorder	PCT	PCT/US21/40915		Jul 8, 2020
2'-FL AND OTHER HUMAN MILK OLIGOSACCHARIDES TO PROMOTE GUT HEALTH AFTER ANTIBIOTIC USE	United States of America	63/134,315		Jan 6, 2021
COMBINATIONS OF OLIGOSACCHARIDES AS PREBIOTICS	United States of America	63/134,320		Jan 6, 2021
Fucosylated Oligosaccharides for Prevention of Coronavirus Infection	United States of America	63/024,464		May 13, 2020
Fucosylated Oligosaccharides for Prevention of Coronavirus Infection	PCT	PCT/US2021/032283		May 13, 2020
2'-Fucosyllactose for the Prevention and Treatment of Coronavirus-Induced Inflammation	United States of America	63/024,473		May 13, 2020

TITLE	COUNTRY	APPLICATION #	PATENT NUMBER	DATE FILED
2'-Fucosyllactose for the Prevention and Treatment of Coronavirus-Induced Inflammation	PCT	PCT/US2021/032282		May 13, 2020
Alpha (1,3) fucosyltransferases for use in the production of fucosylated oligosaccharides	Australia	AU2021204736A		8/5/2021
(alpha) (1, 3) fucosyl transferase for using it in production of a fucosylated oligosaccharide	Australia	JP2021173561A		2/7/2022
Use of purified 2'-fucosyllactoce, 3-fucosyllactose, and lactodifucotetraose as prebiotics	Japan	JP2021191144A		2/1/2022
2'-fucosyllactose for the prevention and treatment of coronavirus-induced inflammation	United States of America	US17/320003		11/18/2021
Fucosylated oligosaccharides for prevention of coronavirus infection	United States of America	US17/320152		11/18/2021
Alpha (1,2) fucosyltransferase syngenes for use in the production of fucosylated oligosaccharides	United States of America	US17/354819		2/24/2022

EXHIBIT C

Trademarks

None.

EXHIBIT D

Mask Works

None.