

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5360116

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
XYPHOS BIOSCIENCES INC.	12/05/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	PYLUM BIOSCIENCES, INC.
<b>Street Address:</b>	HARVARD BUSINESS SERVICES, INC., 16192 COASTAL HIGHWAY
<b>Internal Address:</b>	COUNTY OF SUSSEX
<b>City:</b>	LEWES
<b>State/Country:</b>	DELAWARE
<b>Postal Code:</b>	19958
<b>PROPERTY NUMBERS Total: 13</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	14934762
Application Number:	11748432
Application Number:	11929867
Application Number:	12701431
Application Number:	12941717
Application Number:	13797833
Application Number:	13117467
Application Number:	13829725
Application Number:	62076691
Application Number:	61349145
Application Number:	60747299
Application Number:	62245493
Application Number:	11748437
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(202)293-7860
<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>	202-293-7060
<b>Email:</b>	ATHOMAS@SUGHRUE.COM, SUGHRUE@SUGHRUE.COM

**Correspondent Name:** SUGHRUE MION, PLLC  
**Address Line 1:** 2100 PENNSYLVANIA AVENUE, N.W.  
**Address Line 2:** SUITE 800  
**Address Line 4:** WASHINGTON, D.C. 20037

<b>ATTORNEY DOCKET NUMBER:</b>	A223161
<b>NAME OF SUBMITTER:</b>	ANDREW THOMAS, SECRETARY
<b>SIGNATURE:</b>	/ANDREW THOMAS/
<b>DATE SIGNED:</b>	02/05/2019

**Total Attachments: 10**

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## CONTRIBUTION AGREEMENT

This Contribution Agreement (this "*Agreement*") is entered into as of December 5, 2017, by and between Xyphos Biosciences Inc., a Delaware corporation ("*Transferor*"), and Pylum Biosciences, Inc., a Delaware corporation ("*Transferee*").

**WHEREAS**, Transferor desires to reorganize its business, including its corporate structure;

**WHEREAS**, in connection with the reorganization of its business, Transferor desires to spin out its anti-bacterial business and assets based on its proprietary engineered bacteriocin technology (the "*Spin-Out*"); and

**WHEREAS**, in connection with the Spin-Out, Transferor and Transferee desire to enter into this Agreement pursuant to which Transferor will convey the Contributed Assets (as defined below) to Transferee in exchange for Transferee's issuance to Transferor of 5,951,444 shares of common stock, (ii) 1,584,679 shares of the Series A Preferred Stock, (iii) 843,344 shares of the Series B Preferred Stock, (iv) 759,153 shares of the Series C Preferred Stock, (v) 988,924 shares of the Series D Preferred Stock, (vi) 1,308,872 shares of the Series E Preferred Stock (together, the "*Shares*"), of Transferee (the "*Contribution*");

**NOW, THEREFORE**, in consideration of the foregoing, of the mutual promises set forth herein, and other good and valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged, the parties hereto agree as follows:

1. **Recitals.** The foregoing recitals are hereby incorporated herein by this reference.
2. **Contribution; Issuance of Shares.** Transferor hereby grants, assigns, transfers, delivers, contributes and conveys to Transferee, free and clear of any liens, claims or encumbrances, and Transferee hereby acquires and accepts from Transferor, all of Transferor's right, title and interest in, to and under the assets set forth on Schedule A (the "*Contributed Assets*"). Transferee hereby agrees and acknowledges that immediately upon the delivery of the Contributed Assets to Transferee, Transferee shall issue and deliver the Shares to Transferor, free and clear of any liens, claims and encumbrances and shall take any and all action to cause the records of Transferee to reflect such issuance.
3. **Assumed Liabilities; Acceptance of Contribution.** Subject to the terms of this Agreement, the Transferor hereby grants, sells, conveys, transfers, sets over, delivers and assigns unto the Transferee, all of Transferor's legal and equitable rights, privileges, interest and duties in and to the obligations, commitments and liabilities exclusively or primarily resulting from, relating to or arising out of the Contributed Assets and listed on Schedule B (collectively, the "*Assumed Liabilities*"). Transferee hereby accepts the foregoing contribution, transfer, assignment, conveyance and delivery, and assumes and agrees to pay, discharge and perform, as and when due, the Assumed Liabilities. Nothing contained herein shall prevent Transferee or its affiliates from contesting in good faith any of the Assumed Liabilities with any third-party obligee.

4. **Further Assurances.** Transferor and Transferee mutually agree to cooperate at all times from and after the date hereof with respect to any of the matters described herein, and to execute such other deeds, bills of sale, assignments, releases, assumptions, notifications, or other documents as may be reasonably requested in order to vest in Transferee all right, title and interest in and to the Contributed Assets and the Assumed Liabilities, and otherwise in order to carry out the purpose and intent of this Agreement and for the purpose of giving effect to, evidencing, or giving notice of the transactions evidenced by this Agreement.

5. **Power of Attorney.** Transferor hereby appoints, effective as of the date hereof, Transferee and its successors and permitted assigns as the true and lawful attorney-in-fact of Transferor, and any successor of Transferor, with full power of substitution in the name of Transferor, to take any and all steps necessary or appropriate in connection with the transfer of the Contributed Assets pursuant to the Spin-Out and to execute and deliver all documents and other instruments, and to do and accomplish all other acts or things necessary or appropriate in connection with the transfer of the Contributed Assets pursuant to the Spin-Out.

6. **Representations and Warranties of Transferee.** Transferee represents and warrants to Transferor and the stockholders of Transferor that:

a) Transferee is duly organized, validly existing and in good standing under the laws of Delaware;

b) upon issuance, the Shares shall be fully paid, validly issued and non-assessable, and shall represent 100% of the issued and outstanding capital stock of Transferee;

c) Transferee has all necessary power and capacity and is otherwise legally entitled to enter into this Agreement and to issue the Shares to the stockholders of Transferor, on the terms and conditions set out in this Agreement;

d) the execution, delivery and performance by Transferee of this Agreement and the consummation of the transactions contemplated hereby have been duly authorized by all requisite action of Transferee; and

e) Transferee has duly executed and delivered this Agreement and this Agreement is a legal, valid and binding obligation of Transferee, enforceable against Transferee in accordance with its terms.

7. **Representations and Warranties of Transferor.** Transferor represents and warrants to Transferee that:

a) Transferor is duly organized, validly existing and in good standing under the laws of Delaware;

b) Transferor has all necessary power and capacity and is otherwise legally entitled to enter into this Agreement and to consummate the Contribution, on the terms and conditions set out in this Agreement;

c) the execution, delivery and performance by Transferor of this Agreement and the consummation of the transactions contemplated hereby have been duly authorized by Transferor;

d) Transferor owns and has good title to all of the Contributed Assets free and clear of all liens, claims and encumbrances; and

e) Transferor has duly executed and delivered this Agreement and this Agreement is a legal, valid and binding obligation of Transferor, enforceable against Transferor in accordance with its terms.

8. **Construction.** This Agreement (a) shall be binding upon and inure to the benefit of the parties hereto and their respective successors, heirs, legal representatives and assigns, (b) shall not be altered, amended, modified, terminated or discharged orally and no revisions hereof shall be effective except by an instrument in writing signed by each of Transferee and Transferor, (c) may be executed in counterparts, each of which shall constitute an original and all of which taken together shall constitute one and the same document, and (d) is intended to be solely for the benefit of the parties hereto and their successors and permitted assigns and is not intended to and shall not confer any rights or benefits on any other third party not a signatory hereto, except as explicitly provided with respect to the stockholders of Transferor, and (e) may be executed by facsimile, and shall be binding upon any party who or which so executes.

9. **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to its rules regarding conflicts of law.

[signatures appear on following page]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

**TRANSFEROR:**

**Xyphos Biosciences Inc.**

By: 

Name: James L. Knighton

Title: President

**TRANSFeree:**

**Pylum Biosciences, Inc.**

By: 

Name: James L. Knighton

Title: President







Sequence No.	Country	Application Type	Status	Application No.	Application Date	Registration No.	Registration Date	Title
022137	United States	Provisional	Granted	08/27/209	12-May-06			MODIFIED BACTERIOIDS AND METHODS FOR THEIR USE
F220989	Austria	EPC National Stage	Registered/Granted	11154099.6	14-May-07	2071942	23-Jun-15	MODIFIED BACTERIOIDS AND METHODS FOR THEIR USE
F220990	Belgium	EPC National Stage	Registered/Granted	11154099.6	14-May-07	2071942	23-Jun-15	MODIFIED BACTERIOIDS AND METHODS FOR THEIR USE
F220992	Denmark	EPC National Stage	Registered/Granted	11154099.6	14-May-07	2071942	23-Jun-15	MODIFIED BACTERIOIDS AND METHODS FOR THEIR USE
F220993	Poland	EPC National Stage	Registered/Granted	11154099.6	14-May-07	2071942	23-Jun-15	MODIFIED BACTERIOIDS AND METHODS FOR THEIR USE
F220994	France	EPC National Stage	Registered/Granted	11154099.6	14-May-07	2071942	23-Jun-15	MODIFIED BACTERIOIDS AND METHODS FOR THEIR USE
F220995	Germany	EPC National Stage	Registered/Granted	11154099.6	14-May-07	600 2007 042 302.3	23-Jun-15	MODIFIED BACTERIOIDS AND METHODS FOR THEIR USE
F220996	Ireland	EPC National Stage	Registered/Granted	11154099.6	14-May-07	2071942	23-Jun-15	MODIFIED BACTERIOIDS AND METHODS FOR THEIR USE
F220997	Italy	EPC National Stage	Registered/Granted	11154099.6	14-May-07	2071942	23-Jun-15	MODIFIED BACTERIOIDS AND METHODS FOR THEIR USE
F220998	Luxembourg	EPC National Stage	Closed	11154099.6	14-May-07	2071942	23-Jun-15	MODIFIED BACTERIOIDS AND METHODS FOR THEIR USE
F220999	Netherlands	EPC National Stage	Registered/Granted	11154099.6	14-May-07	2071942	23-Jun-15	MODIFIED BACTERIOIDS AND METHODS FOR THEIR USE
F221000	Spain	EPC National Stage	Registered/Granted	11154099.6	14-May-07	2071942	23-Jun-15	MODIFIED BACTERIOIDS AND METHODS FOR THEIR USE
F221005	Sweden	EPC National Stage	Registered/Granted	11154099.6	14-May-07	2071942	23-Jun-15	MODIFIED BACTERIOIDS AND METHODS FOR THEIR USE
F221006	Switzerland	Divisional	Registered/Granted	11154099.6	14-May-07	2071942	23-Jun-15	MODIFIED BACTERIOIDS AND METHODS FOR THEIR USE
F221007	United Kingdom	EPC National Stage	Registered/Granted	11154099.6	14-May-07	2071942	23-Jun-15	MODIFIED BACTERIOIDS AND METHODS FOR THEIR USE
F221034	Australia	EPC National Stage	Pending	2014230277	13-Mar-14			DEFICINS AND METHODS OF USE THEREOF
F221035	China	EPC National Stage	Published	20140027203.4	13-Mar-14			DEFICINS AND METHODS OF USE THEREOF
F221036	European Union	EPC National Stage	Published	14723414.1	12-Mar-14			DEFICINS AND METHODS OF USE THEREOF
F221037	Republic of Korea	EPC National Stage	Pending	2013-7020954	12-Mar-14			DEFICINS AND METHODS OF USE THEREOF
F221038	Canada	EPC National Stage	Pending	2863468	12-Mar-14			DEFICINS AND METHODS OF USE THEREOF
F221039	Spain	EPC National Stage	Pending	113015427197.2	12-Mar-14			DEFICINS AND METHODS OF USE THEREOF
F221040	Japan	EPC National Stage	Published		12-Mar-14			DEFICINS AND METHODS OF USE THEREOF
F221055	EPC Application	Web Property	Granted	PC/TA/US/01505194469	6-Nov-15			DEFICINS AND METHODS OF USE THEREOF

Supp/seq Ref	Country	Application Type	Status	Application No.	Application Date	Registration No.	Registration Date	Title
P-223178	United States	Professional	Granted	807245 493	29-Oct-15			WORKING AND METHODS OF USE
EA1784	United States	Non-Profit	Abandoned	117845 407	14-Aug-07			IMPROVEMENT OF V. FERREA TESTS
P-232285	Austria	EPC National Stage	Registered/Granted	11784896 0	7-Nov-11	2638150	12-Apr-17	RECOMBINANT P4 BACTERIOPHAGE AND METHODS FOR THEIR USE
P-232286	France	EPC National Stage	Registered/Granted	11784896 0	7-Nov-11	2638150	12-Apr-17	RECOMBINANT P4 BACTERIOPHAGE AND METHODS FOR THEIR USE
P-232287	Germany	EPC National Stage	Registered/Granted	11784896 0	7-Nov-11	2638150	12-Apr-17	RECOMBINANT P4 BACTERIOPHAGE AND METHODS FOR THEIR USE
P-232288	Italy	EPC National Stage	Registered/Granted	11784896 0	7-Nov-11	2638150	12-Apr-17	RECOMBINANT P4 BACTERIOPHAGE AND METHODS FOR THEIR USE
P-232289	Netherlands	EPC National Stage	Registered/Granted	11784896 0	7-Nov-11	2638150	12-Apr-17	RECOMBINANT P4 BACTERIOPHAGE AND METHODS FOR THEIR USE
P-232290	Norway	EPC National Stage	Registered/Granted	11784896 0	7-Nov-11	2638150	12-Apr-17	RECOMBINANT P4 BACTERIOPHAGE AND METHODS FOR THEIR USE
P-232291	Switzerland	EPC National Stage	Registered/Granted	11784896 0	7-Nov-11	2638150	12-Apr-17	RECOMBINANT P4 BACTERIOPHAGE AND METHODS FOR THEIR USE
P-232292	United Kingdom	EPC National Stage	Registered/Granted	11784896 0	7-Nov-11	2638150	12-Apr-17	RECOMBINANT P4 BACTERIOPHAGE AND METHODS FOR THEIR USE
P-232293	Norway	EPC National Stage	Registered/Granted	11784896 0	7-Nov-11	2638150	12-Apr-17	RECOMBINANT P4 BACTERIOPHAGE AND METHODS FOR THEIR USE
P-232294	Norway	EPC National Stage	Registered/Granted	11784896 0	7-Nov-11	2638150	12-Apr-17	RECOMBINANT P4 BACTERIOPHAGE AND METHODS FOR THEIR USE
P-232295	Canada	PCT National Appl w/Priority	Pending	2015242937	11-Feb-13			WORKING AND METHODS OF USE
P-232296	Canada	PCT National Appl w/Priority	Pending	20044639	14-Feb-05			WORKING AND METHODS OF USE
P-232574	European Patent Application	PCT National Appl w/Priority	Pending	157988866 8	1-Nov-15			WORKING AND METHODS OF USE

**B. Material Agreements**

Company or entity: EMD Millipore Date of agreement: 2/15/2017

**Collaboration Agreements**

Company or entity: Zoetis - evaluation and license option agreement Date of agreement: 8/16/2013  
 Zoetis - first amendment Date of agreement: 8/6/2015  
 Zoetis - second amendment Date of agreement: 3/9/2016

Zoetis - third amendment

1/28/2017

**Grants**

<b>Company or entity</b>	<b>Date of agreement</b>
Cleveland VA - CRADA	3/26/2014
NIAMD - R21	11/25/2015

**Non-disclosure agreements**

<b>Company or entity</b>	<b>Date of agreement</b>
Assembly Biosciences, Inc.	1/17/2017
BioVectra Inc.	7/12/2016
Cargill, Incorporated	2/3/2017
EMD Millipore Corporation	11/7/2016
KBI Biopharma, Inc.	7/7/2016
The Microsoft Research – University of Trento Centre for Computational and Systems Biology scari	11/18/2016
Professor Glenn Gulak	9/8/2017
Seventure Partners	3/21/2017
Xellia Ltd.	2/1/2017

**Schedule B**

**Assumed Liabilities**

1. Liabilities of any kind, character or nature whatsoever (whether known or unknown, express or implied, primary or secondary, direct or indirect, accrued, fixed, absolute, liquidated, contingent, determined, determinable, matured, unmatured or otherwise, and whether arising or to be performed prior to, on or after the Closing Date) relating to the Contracts listed on Schedule A to this Agreement (other than liabilities of Transferor relating to breaches or violations).