PATENT ASSIGNMENT COVER SHEET

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Stylesheet Version v1.2

SUBMISSION TYPE:NEW ASSIGNMENTNATURE OF CONVEYANCE:ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
STEVEN W. SMITH	10/11/2013
NATHAN D. LAKEY	10/11/2013
ROB MARTIENSSEN	03/02/2014
JARED ORDWAY	10/11/2013
MICHAEL HOGAN	10/21/2013

RECEIVING PARTY DATA

Name:	ORION GENOMICS
Street Address:	4041 FOREST PARK AVE.
City:	ST. LOUIS
State/Country:	MISSOURI
Postal Code:	63108

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15264344

CORRESPONDENCE DATA

Fax Number: (415)576-0300

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Address Line 4: SAN FRANCISCO, CALIFORNIA 94111

ATTORNEY DOCKET NUMBER:	096380-1022544-000120US	
NAME OF SUBMITTER:	SHELLEY SMITH	
SIGNATURE:	/Shelley Smith/	
DATE SIGNED:	05/11/2018	

Total Attachments: 5

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PATENT REEL: 045778 FRAME: 0101

EPAS ID: PAT4957331

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Attorney Docket No.: 96380-868283 (000110US)

ASSIGNMENT OF PATENT APPLICATION

JOINT

WHEREAS, Steven W. Smith of Fitchburg, WI, Nathan D. Lakey of Chesterfield, MO, Rob Martienssen of Cold Spring Harbor, NY, Jared Ordway of St. Louis, MO, and Michael Hogan of Ballwin, MO hereinafter referred to as "Assignors," are the inventors of the invention described and set forth in the below-identified patent application:

Title of Invention:

GENE CONTROLLING SHELL PHENOTYPE IN

PALM

Filing Date:

March 13, 2013

Application No.:

13/800,652; and

WHEREAS, **Orion Genomics** located at 4041 Forest Park Ave, St Louis, MO 63108, hereinafter referred to as "ASSIGNEE," is desirous of acquiring an interest in the invention and application and in any U.S. Letters Patent and Registrations which may be granted on any patent application claiming priority from the same;

For good and valuable consideration, receipt of which is hereby acknowledged by Assignor, Assignor has assigned, and by these presents does assign to Assignee all right, title and interest in and to the invention and application and to all foreign counterparts (including patent, utility model and industrial designs), and in and to any Letters Patent and Registrations which may hereafter be granted on any patent application claiming priority from the same in the United States and all countries throughout the world, and to claim the priority from the application as provided by the Paris Convention. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been held and enjoyed by Assignor had this Assignment not been made, for the full term of any Letters Patent and Registrations which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignor further agrees that Assignor will, without charge to Assignor, but at Assignee's expense, (a) cooperate with Assignee in the prosecution of U.S. Patent applications and foreign counterparts on the invention and any improvements, (b) execute, verify, acknowledge and deliver all such further papers, including applications and instruments of transfer, and (c) perform such other acts as Assignee lawfully may request to obtain or maintain Letters Patent and Registrations for the invention and improvements in any and all countries, and to vest title thereto in Assignee, or Assignee's successors and assign

Assignment Attorney Docket No.: 96380-868283 (000110US) Page 2 of 2

IN TESTIMONY WHEREO	F, Assignor has signed his/her name on the date
indicated.	
Dated: <u>1(0c† 2013</u>	
	Steven W. Smith
SIGNATURE WITNESSED BY:	years, sain
	100 D 0
Dated: <u>21001/3</u>	Oy/the Jay
	/ Signature of Witness
_	Cynta Paul Printed Name
	Printed Name
Dated: <u>21 0년 2013</u>	Maha Va Sinke
Z S S S S S S S S S S S S S S S S S S S	Signature of Witness
	Marla Van Sickle
	Printed Name
Dated: 11 Octobril 2013	AHA/
The state of the s	Nathan D. Lakey
GYONI APPENNING MATNINGOPIN DAV.	and the state of t
SIGNATURE WITNESSED BY:	A A 11 C 1 A
Dated: 11 October 2013	May Wick
	Signature of Witness
	Marla Van Sickle Printed Name
	Printed Name
Dated: <u> 0t 2013 </u>	Onlie Kerbal
• •	Signature of Witness
	Julie Kirbach
-	Printed Name

Assignment Attorney Docket No.: 96380-868283 (000110US) Page 3 of 3	
Dated: 2nd Much 2014	P.A. Mulierson
SIGNATURE WITNESSED BY:	Rob Martienssen
Dated: 2nd March 2014	A
	Signature of Witness COLOT Andoine Printed Name
Dated: 2rd Nach Joly	
The Angelows and	Signature of Witness Vence Colo Printed Name
Dated:	Jared Ordway
SIGNATURE WITNESSED BY:	outed ordinary
Dated:	
	Signature of Witness
	Printed Name
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	Signature of Witness
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Assignment Attorney Docket No.: 96380-868283 (000110US) Page 3 of 3	
Dated:	
SIGNATURE WITNESSED BY:	Rob Martienssen
Dated:	2.34.30.00
	Signature of Witness
	Printed Name
Dated:	
	Signature of Witness
	Printed Name
Dated: 11 OCT 2013	Soul Or Ly
	Jared Ordway
SIGNATURE WITNESSED BY:	
Dated: 11 OCT 2013	hite Kuha L
Duck 11 VC (SAV.)	Signature of Witness
	Julie Kirbach
سور	Printed Name
Dated: Moch 3	ango 20
	Signature of Witness
÷	CYNTHIA FAC
	Printed Name

Assignment

Attorney Docket No.: 96380-868283 (000110US)

Page 4 of 4

Dated: <u>21-0ctoby-20</u>3

Michael Hogan

SIGNATURE WITNESSED BY:

Dated: 2/0073

Signature of Witness

YNTHA PAUL Printed Name

Dated: 210+2013

Signature of Witness

Printed Name

65506274V.1

PATENT REEL: 045778 FRAME: 0107

RECORDED: 05/11/2018