504849058 04/02/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JAMES M. SCHUPP	02/23/2018
REBECCA COLMAN	03/29/2018
DAVID ENGELTHALER	02/15/2018
JOHN GILLECE	02/15/2018
NATHAN HICKS	02/26/2018

RECEIVING PARTY DATA

Name:	THE TRANSLATIONAL GENOMICS RESEARCH INSTITUTE
Street Address:	445 N. FIFTH STREET
Internal Address:	SUITE 600
City:	PHOENIX
State/Country:	ARIZONA
Postal Code:	85004

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15034544

CORRESPONDENCE DATA

Fax Number: (480)830-2717

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Correspondent Name: RODNEY J. FULLER, BOOTH UDALL FULLER PLC

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ATTORNEY DOCKET NUMBER:	91482.184
NAME OF SUBMITTER:	RODNEY J. FULLER
SIGNATURE:	/Rodney J. Fuller/
DATE SIGNED:	04/02/2018

PATENT 504849058 REEL: 045414 FRAME: 0933

Total Attachments: 2

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PATENT REEL: 045414 FRAME: 0934

ASSIGNMENT

This Assignment is made and executed by James "Jim" Schupp, Rebecca Colman, David Engelthaler, John Gillece, Nathan Hicks (hereinafter "Assignors"), to and in favor of THE TRANSLATIONAL GENOMICS RESEARCH INSTITUTE, having a business address of 445 N. Fifth Street, Suite 600, Phoenix, AZ 85004 (hereinafter "Assignee").

Whereas each of the Assignors desires to assign his entire right, title and interest in and to the invention(s) described in the U.S. Patent Application Serial No. 15/034,544 filed on May 4, 2016 and titled "Systems and Methods for Universal Tail-Based Indexing Strategies for Amplicon Sequencing" (hereinafter the "Patent Application") and all patents, patent applications and the like on the invention to Assignee for valuable consideration; and

Whereas Assignee has provided such valuable consideration to each of the Assignors;

Accordingly, each of the Assignors warrants, covenants and agrees as follows:

- 1. Each of the Assignors hereby sells, assigns and conveys to Assignee such Assignor's entire right, title and interest in and to the invention(s) described in the Patent Application, including the Patent Application itself and all substitute, non-provisional, continuation, continuation-in-part and divisional applications based in whole or in part on the Patent Application, and including all patents resulting therefrom and all reissues and extensions thereof, and including any and all rights of priority resulting from the filing of any such applications within the United States.
- 2. Each of the Assignors hereby sells, assigns and conveys to Assignee such Assignor's entire right, title and interest in all counterparts to the Patent Application that have been or may be filed outside the United States or under the Patent Cooperation Treaty, whether pursued as a patent, an inventor's certificate, a utility model or the like, including all rights of priority based on the Patent Application, further including all continuation, continuation-in-part and divisional applications based in whole or in part on the non-U.S. counterparts, and still further including all patents, inventor's certificates, utility models, reissues and extensions resulting from any of the non-U.S. counterparts.
- 3. Each of the Assignors hereby grants to Assignee the sole and exclusive right to prosecute the Patent Application and all related applications as described in Paragraphs 1 and 2 above, as well as any opposition proceedings, reissue applications, reexaminations, and nullity or invalidity proceedings. Each of the Assignors authorizes all governmental bodies having the power to issue patents, inventor's certificates or utility models to issue a patent, inventor's certificate or utility model based on the Patent Application or any related applications as described in Paragraphs 1 and 2 above in the name of Assignee.
- 4. Each of the Assignors agrees upon request and without further consideration, but at Assignee's expense: (a) to assist Assignee in prosecuting the Patent Application and all related applications as described in Paragraphs 1 and 2 above, as well as opposition proceedings, reissue applications, reexaminations, and nullity or invalidity proceedings; (b) to provide Assignee with information concerning the Patent Application and the related applications described in

PATENT REEL: 045414 FRAME: 0935 Paragraphs 1 and 2 above to enable Assignee to obtain, secure and protect all of the rights, title and interest sold, assigned, conveyed and granted under this Assignment (the "Assigned Assets"); (c) to sign papers, take oaths and testify in legal proceedings to enable Assignee to obtain, secure and protect the Assigned Assets; and (d) to perform all acts reasonably necessary to enable Assignee to obtain, secure and protect the Assigned Assets, including assistance in any proceedings pertaining to the Patent Application and the related applications described in Paragraphs 1 and 2 above or to their enforcement.

- 5. Each of the Assignors warrants and covenants that such Assignor has the full right to sell, assign and convey the Assigned Assets, that all of the Assigned Assets are free and clear of all mortgages, liens, security interests, charges, claims, royalty obligations and encumbrances of any nature whatsoever and that the Assignor has not executed and will not execute any agreement in conflict with this Assignment.
- 6. Assignee may assign the Assigned Assets in whole or in part. All references herein to Assignee include any successors or assigns of Assignee.
- 7. Each of the Assignors acknowledges that Assignee has paid valuable consideration for the Assigned Assets.

2/23/2018	James M Schupp
Date	James "Jim" Schupp
3/29/2018	Rebecca Colman
Date	Rebecca Colman
2/15/2018	David Engelthaler
Date	David Engelthaler
2/15/2018	John Hillece
Date	John Gillece
2/26/2018	Mathan Hicks
Date	Nathan Hicks

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