PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT5455899

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ZACHARY J. REITMAN	03/30/2019
PATRICK J. KILLELA	03/30/2019

RECEIVING PARTY DATA

Name:	DUKE UNIVERSITY	
Street Address:	2812 ERWIN ROAD	
Internal Address:	SUITE 306	
City:	DURHAM	
State/Country:	NORTH CAROLINA	
Postal Code:	27705	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14765692

CORRESPONDENCE DATA

Fax Number: (202)824-3001

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: (202) 824-3000

Email: bwptopat@bannerwitcoff.com, jhazzard@bannerwitcoff.com

BANNER & WITCOFF, LTD. **Correspondent Name:**

Address Line 1: 1100 13TH ST. NW

Address Line 2: STE 1200

Address Line 4: WASHINGTON, D.C. 20005

ATTORNEY DOCKET NUMBER:	000250.00219
NAME OF SUBMITTER:	SARAH A. KAGAN
SIGNATURE:	/Sarah A. Kagan/
DATE SIGNED:	04/03/2019

Total Attachments: 3

source=Executed Duke Assignment (REITMAN and KILLELA) for non-provisional and provisional app#page1.tif source=Executed Duke Assignment (REITMAN and KILLELA) for non-provisional and provisional app#page2.tif source=Executed Duke Assignment (REITMAN and KILLELA) for non-provisional and provisional app#page3.tif

PATENT REEL: 048782 FRAME: 0319 505409109

BW: 000250.00219

ASSIGNMENT

WHEREAS, we,

Zachary J. REITMAN, with a mailing address at c/o Duke University, 2812 Erwin Road, Suite 306, P.O. Box 90083, Durham, North Carolina 27705; and

Patrick J. KILLELA, with a mailing address at c/o Duke University, 2812 Erwin Road, Suite 306, P.O. Box 90083, Durham, North Carolina 27705

are inventors, along with Hai YAN, Bert VOGELSTEIN, Nickolas PAPADOPOULOS, Kenneth W. KINZLER, Yuchen JIAO, Chetan BETTEGOWDA and Darell D. BIGNER, of certain new and useful inventions and improvements described in a U.S. patent application identified by having the title:

TERT PROMOTER MUTATIONS IN GLIOMAS AND A SUBSET OF TUMORS

Which application

[X] was filed on <u>August 4, 2015</u> as U.S. Application Serial Number <u>14/765,692</u>, and also filed on <u>February 18, 2014</u> as International Application No. <u>PCT/US14/16906</u>, and also filed on <u>March 4, 2013</u> as U.S. Provisional No. <u>61/772,249</u>

and WHEREAS

DUKE UNIVERSITY

2812 Erwin Road, Suite 306 P.O. Box 90083 Durham, North Carolina 27705

ASSIGNEE, desires to acquire our entire right, title and interest in and to the said application, inventions and improvements and any patents that may be granted on or as a result thereof in the United States of America (U.S.) and in any and all foreign countries;

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged,

We hereby assign, to the above named ASSIGNEE, its successors, assign and legal representatives (NOMINEES) our entire right, title and interest in and to said application, inventions and IMPROVEMENTS throughout the world and to any and all patents, petty patents and utility model patents which may be granted therefor, and all continuations, continuations-in-

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part, divisions, reissues, extensions, renewals, and any non-provisional based on a provisional thereof (LETTERS PATENT).

And we covenant that we have full right to convey our entire interest herein assigned, and that we have not executed and will not execute any agreement or do anything in conflict herewith;

And we further covenant and agree that we will without undue delay execute without further consideration all such papers as may be necessary to perfect the title to said application, inventions and improvements, and LETTERS PATENT in the ASSIGNEE or its NOMINEES, and we agree to communicate to said ASSIGNEE or its NOMINEES all known facts respecting said application, inventions, improvements, and LETTERS PATENT, to testify in any legal proceedings, to sign all lawful papers, and generally to do all things necessary to aid ASSIGNEE or its NOMINEES to obtain and enforce for their own benefit patent protection for said application, inventions and improvements in any and all countries, all at the expense, however, of the ASSIGNEE or its NOMINEES;

And we authorize the ASSIGNEE or its NOMINEES to file in our names or their own, as appropriate, application for LETTERS PATENT in any and all countries of the world, and we authorize and request the Commissioner of Patents and Trademarks of the United States, and any proper official of any country, to issue to said ASSIGNEES or its NOMINEES any and all LETTERS PATENT for said application, inventions and improvements, for their sole use, to the full end of the term for which such LETTERS PATENT may be granted;

And we hereby grant our attorneys at the law firm of Banner & Witcoff the power to insert into this document information sufficient to identify the patent application to which this assignment pertains.

Date:	3/30/2019	Inventor:	Zachary / Latin Zachary J. REITMAN
Date:		Inventor:	Patrick J. KILLELA

Joint Assignment BW: 000250.00219

part, divisions, reissues, extensions, renewals, and any non-provisional based on a provisional thereof (LETTERS PATENT).

And we covenant that we have full right to convey our entire interest herein assigned, and that we have not executed and will not execute any agreement or do anything in conflict herewith;

And we further covenant and agree that we will without undue delay execute without further consideration all such papers as may be necessary to perfect the title to said application, inventions and improvements, and LETTERS PATENT in the ASSIGNEE or its NOMINEES, and we agree to communicate to said ASSIGNEE or its NOMINEES all known facts respecting said application, inventions, improvements, and LETTERS PATENT, to testify in any legal proceedings, to sign all lawful papers, and generally to do all things necessary to aid ASSIGNEE or its NOMINEES to obtain and enforce for their own benefit patent protection for said application, inventions and improvements in any and all countries, all at the expense, however, of the ASSIGNEE or its NOMINEES;

And we authorize the ASSIGNEE or its NOMINEES to file in our names or their own, as appropriate, application for LETTERS PATENT in any and all countries of the world, and we authorize and request the Commissioner of Patents and Trademarks of the United States, and any proper official of any country, to issue to said ASSIGNEES or its NOMINEES any and all LETTERS PATENT for said application, inventions and improvements, for their sole use, to the full end of the term for which such LETTERS PATENT may be granted;

And we hereby grant our attorneys at the law firm of Banner & Witcoff the power to insert into this document information sufficient to identify the patent application to which this assignment pertains.

Date:	accompanies de la companie de la com	Inventor:	Zachary J. REITMAN
Date:	<u>3011.M2</u> 019	Inventor:	Patrick J. KILLELA

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