

## PATENT ASSIGNMENT COVER SHEET

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<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	Gregory J. Riggins	02/21/2012
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	Application Number:	16132928
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<b>DATE SIGNED:</b>	02/20/2020	
<b>Total Attachments: 4</b>		
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source=44807-0107006_Assignment_JHU-Riggins#page4.tif		

ASSIGNMENT

WHEREAS, we,

Bert VOGELSTEIN, a citizen of the United States of America, with mailing address at 3700 Breton Way, Baltimore, Maryland 21208 (US) and

Kenneth W. KINZLER, a citizen of the United States of America, with mailing address at 1403 Halkirk Way, Baltimore, Maryland 21015 (US) and

D. Williams PARSONS, a citizen of the United States of America, with mailing address at 4553 Hemlock Cone Way, Ellicott City, Maryland 21042 (US) and

Xiaosong ZHANG, a citizen of China, with mailing address at 8309 Nunley Drive, Apt E, Baltimore, Maryland 21234 (US) and

Jimmy Chang-Ho LIN, a citizen of the United States of America, with mailing address at 820 N. Broadway, Baltimore, Maryland 21205 (US) and

Rebecca J. LEARY, a citizen of the United States of America, with mailing address at 218 N. Charles Street, Apt. 807, Baltimore, Maryland 21201 (US) and

Philipp ANGENENDT, a citizen of Germany, with mailing address at 6 Sunny Meadow Court, Apt. 301, Baltimore, Maryland 21209 (US) and

Nickolas PAPADOPOULOS, a citizen of the United States of America, with mailing address at 606 Horncrest Rd., Towson, Maryland 21204 (US) and

Victor VELCULESCU, a citizen of the United States of America, with mailing address at 14064 Big Branch Drive, Dayton, Maryland 21036 (US) and

Giovanni PARMIGIANI, a citizen of the United States of America, with mailing address at 337 Warren Avenue, Baltimore, Maryland 21230 (US) and

Rachel KARCHIN, a citizen of the United States of America, with mailing address at 1208 Brookside Lane, Towson, Maryland 21204 (US) and

Sian JONES, a citizen of Great Britain, with mailing address at 111 W. Centre Street, Apt. 305, Baltimore, Maryland 21201 (US) and

Gregory RIGGINS, a citizen of the United States of America, with a mailing address at 1117 Bernoudy Road, White Hall, Maryland 21161 (US)

along with,

Hai YAN, a citizen of the United States of America, with mailing address at 101 River Birch Lane, Chapel Hill, North Carolina 27514 (US) and

Darrell BIGNER, a citizen of the United States of America, with mailing address at 513 Corbett Ridge Road, Mebane, North Carolina 27302 (US) and

Chien-Tsun KUAN, a citizen of the United States of America, with mailing address at 202 Hardenbrook Court, Cary, North Carolina, 27519 (US)

are the inventors of certain inventions and improvements described in a U.S. patent application identified by having the title:

**GENETIC ALTERATIONS IN ISOCITRATE DEHYDROGENASE AND OTHER GENES IN MALIGNANT GLIOMA**

which application

[X] was filed as PCT International Application Number PCT/US2009/055803, filed on September 3, 2009 and as U.S. Application Serial Number 13/061,191

and WHEREAS

**THE JOHNS HOPKINS UNIVERSITY  
3400 N. Charles Street  
Baltimore, Maryland 21218  
United States of America**

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-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 ASSIGNEE 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: \_\_\_\_\_ Inventor: \_\_\_\_\_  
Bert VOGELSTEIN

Date: \_\_\_\_\_ Inventor: \_\_\_\_\_  
Kenneth K. KINZLER

Date: \_\_\_\_\_ Inventor: \_\_\_\_\_  
D. Williams PARSONS

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Date: \_\_\_\_\_ Inventor: \_\_\_\_\_  
Giovanni PARMIGIANI

Date: \_\_\_\_\_ Inventor: \_\_\_\_\_  
Rachel KARCHIN

Date: \_\_\_\_\_ Inventor: \_\_\_\_\_  
Sian JONES

Date: 2/21/2012 Inventor: \_\_\_\_\_  
Gregory RIGGINS

Note: No legalization or other witness required.

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