# 505659921 09/06/2019 PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:		NEW ASSIGNMENT		
NATURE OF CONVEYAN	CE:	ASSIGNMENT		
CONVEYING PARTY DA	ТА			
		Name	Execution Dat	
QINGRONG JACKIE WU			07/08/2019	
TAORAN LI			07/18/2019	
FANG-FANG YIN			07/08/2019	
YANG SHENG			07/08/2019	
RECEIVING PARTY DAT	 [ <b>A</b>			
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Internal Address:	SUITE	306		
City:	DURHA	M		
State/Country:	NORTH	I CAROLINA		
Postal Code:	27705			
PROPERTY NUMBERS		Number		
Application Number:		15776145		
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CORRESPONDENCE DA	A <b>T A</b>			
Fax Number:				
Fax Number: <i>Correspondence will be</i>	sent to	the e-mail address first; if that is ; if that is unsuccessful, it will be		
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Fax Number: <i>Correspondence will be using a fax number, if p</i> Phone: Email:	sent to rovided	<i>; if that is unsuccessful, it will be</i> 9193423264		
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Total Attachments: 8

#### <u>ASSIGNMENT</u>

THIS ASSIGNMENT, effective on the 21<sup>ST</sup> day of May, 2018, by Qingrong Jackie Wu, 2812 Erwin Road, Suite 306, Durham, North Carolina, 27705, United States; Taoran Li, 2812 Erwin Road, Suite 306, Durham, North Carolina, 27705, United States; Fang-Fang Yin, 2812 Erwin Road, Suite 306, Durham, North Carolina, 27705, United States; and Yang Sheng, 2812 Erwin Road, Suite 306, Durham, North Carolina, 27705, United States; United States (hereinafter referred to as Assignor[s]);

WHEREAS, Assignors have invented certain new and useful improvements in SYSTEMS AND METHODS FOR AUTOMATIC, CUSTOMIZED RADIATION TREATMENT PLAN GENERATION FOR CANCER, for which a Patent Application was made on May 15, 2018 in the United States as application no. 15/776,145, which claims priority to PCT International Patent Application No. PCT/US2016/063204, filed November 21, 2016, and which claims the benefit of U.S. Provisional Patent Application Number 62/257,911, filed November 20, 2015 and U.S. Provisional Patent Application Number 62/267,340, filed December 15, 2015; and

WHEREAS, Duke University, a College organized under and pursuant to the laws of North Carolina having its principal place of business at 2812 Erwin Rd., Ste 306, Durham, North Carolina 27705 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said invention and said Application for Letters Patent of the United States and all foreign countries, and in and to any Letters Patent of the United States and all foreign countries to be obtained therefore and thereon.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, Assignor shave assigned, transferred and set over, and by these presents do assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the abovementioned invention and applications for Letters Patent, and in and to any and all divisionals, continuations and continuations-in-part of said applications, and any and all

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Letters Patent in the United States and all foreign countries which may be granted therefore and thereon, and reissues, reexaminations and extensions of said Letters Patent, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee, for its own use and benefit and the use and benefit of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent may be granted and/or extended, as fully and entirely as the same would have been held and enjoyed by Assignors, had this assignment not been made. The assignment of the right to claim entitlement and/or priority is executed *nunc pro tunc* and is considered effective as of the filing date of the earliest application to which priority and/or entitlement is claimed.

This Assignment is based on our employment relationship with Duke University to assign the foregoing invention, and any patent applications therefore, in exchange for Assignee payment of patent prosecution costs and other valuable consideration, the receipt and sufficiency of which is hereby expressly acknowledged by the inventors.

AND, for the same consideration, Assignors hereby represent and warrant to Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already been transferred to Assignee, Assignors are the sole and lawful owners of the entire right, title, and interest in and to the said inventions and applications for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to assign and convey the same in the manner herein set forth.

AND, for the same consideration, Assignors hereby covenant and agree, and likewise binds his heirs, legal representatives and assigns, to and with Assignee, its successors, legal representatives and assigns, that Assignors will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said invention, whenever counsel of Assignee, or

counsel of its successors, legal representatives and assigns, shall advise: that any proceeding in connection with said invention, or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said invention in any country, including but not limited to derivative or postgrant proceedings, is lawful and desirable; or that any division, continuation or continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable.

AND Assignors hereby request the U.S. Commissioner of Patent and Trademarks and the Patent and Trademark Offices of all foreign countries respectively, to issue said Letters Patent of the United States and all foreign countries to Assignee, as Assignee of said invention and the Letters Patent to be issued thereon, for the sole use and benefit of Assignee, its successors, legal representatives and assigns.

AND Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

<< Signature Page Follows >>

ASSIGNEE

Executed this 29 day of 31, 2019 Assignce Signature: 📃 🔍

Eric F. Wagner

Title: Associate Director - Legal

Address: Duke University 2812 Erwin Rd, Ste. Mail Box 90083 Durham, NC 27708

Witnessed by:

Katsuni Hollund Name Debarah Hando Date

Date

Name

Atty Docket No.: 210-79-UTIL Duke Ref.: DU4766US	
ASSIGNORS	
Executed this <u>Sigh</u> day of <u>July</u> , 2019	
Inventor Signature:	
Qingrong Jackie Wu	
Witnessed by: <u>Name</u> Date Date	
Name Date Date Date Name Many 101 101 7/8/2079. Date	•

PATENT REEL: 050299 FRAME: 0157

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ASSIGNORS

Executed this 18 + 100 g = 100 g = 2019

Inventor Signature: Taoran Li

Witnessed by: Yuju Yu 18/009 Name Date 18/19 11 Brian Currie Date Name

## ASSIGNORS

Executed this <u></u>day of \_\_\_\_ J 2019

Inventor Signature:

**Fang-Fang Yin** 

Witnessed by:

07(08/2019 1

Name

Date

Kong 0/ Name Date

#### ASSIGNORS

Executed this S day of Tuly, 2019 Inventor Signature:

Yang Sheng

Witnessed by:

07/08/2019 Date Name 

<u>7-8-207</u> Date Ver/ M/h Namé

PATENT **REEL: 050299 FRAME: 0160** 

**RECORDED: 09/06/2019**