505600271 07/31/2019 PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:		NEW ASSIGNMENT	
NATURE OF CONVEYANCE:		ASSIGNMENT	
CONVEYING PARTY	DATA		
		Name	Execution Date
HUA YU			06/15/2016
THEO NIKIFOROV			08/15/2016
ABRAHAM ROSENBA	VUM		06/15/2016
RECEIVING PARTY D	ΑΤΑ		
Name:	LIFE TECHNOLOGIES CORPORATION		
Street Address:	5823 NE	5823 NEWTON DRIVE	
City:	CARLSI	CARLSBAD	
State/Country:	CALIFO	CALIFORNIA	
Postal Code:	92008		
Property Type		Number	
Property Type Application Number:		Number 16308803	
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ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency, and adequacy of which are hereby acknowledged, we:

- Hua YU, a citizen of P.R. China; having a mailing address of Life Technologies Corporation, 5823 Newton Drive, Carlsbad, California 92008 and a resident of Guilford, CT.
- 2. Theo NIKIFOROV, a citizen of **US**; having a mailing address of

and a resident of Carlsbad, CA.

 Abraham ROSENBAUM, a citizen of US; having a mailing address of Life Technologies Corporation, 5823 Newton Drive, Carlsbad, California 92008 and a resident of Waterbury, CT.

do hereby SELL, ASSIGN, AND TRANSFER to **LIFE TECHNOLOGIES CORPORATION**, (the "Assignee", a corporation of the State of Delaware) having a place of business at 5823 Newton Drive, Carlsbad, California 92008, USA the entire right, title, and interest for the United States and all foreign countries in and to

(1) any and all inventions, improvements, know-how, and other subject matter described, disclosed, or contained (whether claimed or not) in (a) **United States Provisional Patent Application Serial No. 62/348,402 filed June 10, 2016 entitled METHODS AND COMPOSITIONS FOR NUCLEIC ACID AMPLIFICATION,** (b) all divisional, continuing, design, utility model, substitute, renewal, reissue, reexamination, and all other applications for patent which have been or shall be filed in the United States and all foreign countries that claim priority to or through, any of the foregoing applications; and (c) all original, reissued and reexamined patents which have been or shall be issued in the United States or any foreign country on or resulting from any of the applications referenced in (a) or (b);

(2) any and all inventions, improvements, know-how, and other subject matter described, disclosed, or contained (whether claimed or not) in any of the foregoing applications and patents;

(3) the right to file foreign applications under the provisions of any convention or treaty and claim priority based on any of the foregoing applications in the United States or any other country; and

(4) the copyright in any and all material described, disclosed, or contained in the foregoing applications and patents;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned; and

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will (1) execute any and all papers and documents (including without limitation oaths, declarations, assignments, and powers of attorney) and perform any and all acts reasonably necessary in connection with the filing, prosecution, and issuance of each of the patent applications and patents referenced herein; (2) communicate to the Assignee all facts known to the undersigned relating to each of the patent applications, patents, and improvements referenced herein, and the history thereof; and (3) generally do everything possible that the Assignee shall reasonably consider desirable to vest title in Assignee in and to each of the patent applications, patents, and improvements referenced herein applications, patents, and improvements referenced herein and for securing, maintaining, and enforcing proper patent protections for inventions, improvements, know-how, and other subject matter referenced herein.

TO BE BINDING on the heirs, assigns, representatives, and successors of the undersigned and extend to the successors, assigns, and nominees of the Assignee.

SEVERABILITY. If a provision of this Assignment is or becomes illegal, invalid, or unenforceable in any jurisdiction, that shall not affect (a) the validity or enforceability in that jurisdiction of any other provision of this Assignment, or (b) the validity or enforceability in other jurisdictions of that or any other provision of this Assignment.

lua Signature: Name (1) Hua YU

Date: 6/15/2016

Signature: _____ Name (2) Theo NIKIFOROV Date:

Signature:

Name (3) Abraham ROSENBAUM

Date: 61 15/16

ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency, and adequacy of which are hereby acknowledged, we:

- 1. Hua YU, a citizen of **P.R. China**; having a mailing address of Life Technologies Corporation, 5823 Newton Drive, Carlsbad, California 92008 and a resident of **Guilford, CT**.
- 2. Theo NIKIFOROV, a citizen of US; having a mailing address of 2267 Galena Avenne, Carlsbad, CA 92009 and a resident of Carlsbad, CA.
- 3. Abraham ROSENBAUM, a citizen of **US**; having a mailing address of Life Technologies Corporation, 5823 Newton Drive, Carlsbad, California 92008 and a resident of **Waterbury, CT**.

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(1) any and all inventions, improvements, know-how, and other subject matter described, disclosed, or contained (whether claimed or not) in (a) **United States Provisional Patent Application Serial No. 62/348,402 filed June 10, 2016 entitled METHODS AND COMPOSITIONS FOR NUCLEIC ACID AMPLIFICATION**, (b) all divisional, continuing, design, utility model, substitute, renewal, reissue, reexamination, and all other applications for patent which have been or shall be filed in the United States and all foreign countries that claim priority to or through, any of the foregoing applications; and (c) all original, reissued and reexamined patents which have been or shall be issued in the United States or any foreign country on or resulting from any of the applications referenced in (a) or (b);

(2) any and all inventions, improvements, know-how, and other subject matter described, disclosed, or contained (whether claimed or not) in any of the foregoing applications and patents;

(3) the right to file foreign applications under the provisions of any convention or treaty and claim priority based on any of the foregoing applications in the United States or any other country; and

(4) the copyright in any and all material described, disclosed, or contained in the foregoing applications and patents;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned; and

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will (1) execute any and all papers and documents (including without limitation oaths, declarations, assignments, and powers of attorney) and perform any and all acts reasonably necessary in connection with the filing, prosecution, and issuance of each of the patent applications and patents referenced herein; (2) communicate to the Assignee all facts known to the undersigned relating to each of the patent applications, patents, and improvements referenced herein, and the history thereof; and (3) generally do everything possible that the Assignee shall reasonably consider desirable to vest title in Assignee in and to each of the patent applications, patents, and improvements referenced herein applications, patents, and improvements referenced herein and for securing, maintaining, and enforcing proper patent protections for inventions, improvements, know-how, and other subject matter referenced herein.

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Signature:_____ Name (1) Hua YU Date:_____

Date:______8/15/2016

Signature:_____ Name (3) Abraham ROSENBAUM Date:_____