

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT6352420

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
SANTE GNERRE	07/14/2018
BYOUNGSOK JUNG	06/03/2018
EMRAH KOSTEM	05/15/2018
ALEX ARAVANIS	10/10/2020
ALEX S. SO	06/06/2018
XUYU CAI	05/21/2018
ZHIHONG ZHANG	05/15/2018
RECEIVING PARTY DATA	
Name:	ILLUMINA, INC.
Street Address:	5200 ILLUMINA WAY
City:	SAN DIEGO
State/Country:	CALIFORNIA
Postal Code:	92122
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	15130668
CORRESPONDENCE DATA	
Fax Number:	(858)202-4545
<i>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.</i>	
Phone:	8582024500
Email:	illuminadocket@illumina.foundationip.com, akopels@illumina.foundationip.com,
Correspondent Name:	MICHAEL P. REED
Address Line 1:	5200 ILLUMINA WAY
Address Line 4:	SAN DIEGO, CALIFORNIA 92122
ATTORNEY DOCKET NUMBER:	IP-1360-US
NAME OF SUBMITTER:	ANN KOPELS
SIGNATURE:	/Ann Kopels/
DATE SIGNED:	10/15/2020

Total Attachments: 29

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ASSIGNMENT FROM INVENTORS

Docket No.: IP-1360-US

Page 1 of 5

Title: ERROR SUPPRESSION IN SEQUENCED DNA FRAGMENTS USING REDUNDANT READS WITH UNIQUE MOLECULAR INDICES (UMIS)

U.S. Application No.: 15/130,668

Filing Date: April 15, 2016

Inventors: Sante Gnerre, Byoungsok Jung, Emrah Kostem, Alex Aravanis, Alex S. So, Xuyu Cai, Zhihong Zhang

WHEREAS, above-identified inventors (collectively "the Assignors") have made certain new and useful inventions, discoveries, and improvements (the "Inventions"), for which the Assignors filed the application listed above and now desire to convey all right, title, and interest in:

- the Inventions,
- the application listed above, and any other applications for patent, design, utility model, certificate of invention, trademark, or trade dress, in any country or under any international or regional authority (e.g. WIPO/PCT, EPO, ARIPO, EAPO, OAPI), to the extent some or all of its subject matter is disclosed and entitled to the benefit of priority in the application listed above, including provisional, continuation, divisional, continuation-in-part, reissue, and reexamination applications (collectively "the Applications"),
- the benefit of earlier filing date and right to claim priority to the Inventions and Applications under applicable law and treaties, including the Paris Convention for the Protection of Industrial Property as revised and amended and 35 U.S.C. §§ 119, 120,
- any rights accrued by the publication of the Applications, such as 35 U.S.C. § 154(d), Art. 67(1) EPC,
- any Letters Patents or Certificates of Invention that may be issued or granted from the Applications, including reissued patents, reexamination certificates, renewals, and any rights resulting from an extension or adjustment of patent term, and
- any rights arising from the Invention under laws and conventions protecting copyright, trademark, trade dress, or other industrial property,

(collectively, "the IP Rights"), and

WHEREAS, ILLUMINA, INC., a Delaware corporation having a place of business at 5200 Illumina Way, San Diego, California 92122 USA, is desirous of acquiring the entire right, title, and interest for itself, its successors, and its assigns (collectively "the Assignee") in the IP Rights by an instrument in writing, 35 U.S.C. § 261;

NOW, THEREFORE, to all whom it may concern, be it known that, for good and valuable consideration, the receipt and sufficiency of which hereby acknowledge and hereby waive the right to any additional compensation concerning the IP Rights:

ASSIGNMENT FROM INVENTORS

Docket No.: IP-1360-US

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Title: ERROR SUPPRESSION IN SEQUENCED DNA FRAGMENTS USING REDUNDANT READS WITH UNIQUE MOLECULAR INDICES (UMIS)

U.S. Application No.: 15/130,668

Filing Date: April 15, 2016

Inventors: Sante Gnerre, Byoungsok Jung, Emrah Kostem, Alex Aravanis, Alex S. So, Xuyu Cai, Zhihong Zhang

I warrant and represent to the Assignee that have the full right to convey my right, title, and interest in the IP Rights without encumbrance, and that have not made any earlier assignment, license, grant, or mortgage to another, or made any agreement with another, that would affect my right, title, and interest in the IP Rights;

By this Assignment and by virtue of any earlier agreements to assign, hereby assign, transfer, convey, and sell my entire right, title, and interest in the IP Rights to the Assignee, including any claims or causes of action for damages or other remedies arising out of any earlier violation of the IP Rights, for and to inure to the Assignee's full benefit of the IP Rights as fully as they would have been held by me if this Assignment had not been made;

I authorize the Assignee and its legal representatives to:

- (a) insert into this Assignment any supplemental information to make the identification more complete for any of the Applications or Letters Patents already listed above,
- (b) prosecute the Applications, file new applications for the Inventions, and do all acts permitted by law to protect and enforce the IP Rights,
- (c) request that Letters Patents and Certificates of Invention be issued and granted to and in the name of the Assignee by the issuing or granting authority, such as the U.S. Commissioner for Patents, 37 C.F.R. § 3.81; and

I agree with the Assignee that and my legal representatives, heirs, and executors will perform all acts deemed necessary or desirable by the Assignee to permit and assist it to secure the entire right, title, and interest in the IP Rights so that the Assignee may benefit from this Assignment, including:

- (a) communicating to the Assignee all facts known to me that relate to the history and extent of my individual contribution to the IP Rights, including the circumstances of the conception of the invention and its development and reduction to practice, and furnishing supporting documents or items in my control,
- (b) assisting in the preparation of the Applications and their prosecution by the Assignee, 37 C.F.R. § 3.71, and in the enforcement of the IP Rights, including making, executing, and delivering to the Assignee any other necessary documents, such as further application papers, declarations, affidavits, disclaimers, petitions, or assignments, and

ASSIGNMENT FROM INVENTORS

Docket No.: IP-1360-US

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Title: ERROR SUPPRESSION IN SEQUENCED DNA FRAGMENTS USING REDUNDANT READS WITH UNIQUE MOLECULAR INDICES (UMIS)

U.S. Application No.: 15/130,668

Filing Date: April 15, 2016

Inventors: Sante Gnerre, Byoungsok Jung, Emrah Kostem, Alex Aravanis, Alex S. So, Xuyu Cai, Zhihong Zhang

- (c) assisting and cooperating in administrative and legal proceedings, including giving written and oral testimony,

so that these will be performed without further consideration, except for reasonable actual expenses to be reimbursed by the Assignee.

I further agree with the Assignee that will not perform any future act, execute any subsequent document, or make any subsequent agreement with another person or party that conflicts with this Assignment, that purports to transfer any right, title, or interest in the IP Rights that are the subject of this Assignment, unless agreed to in writing by the Assignee or that prevents the Assignee from receiving the full benefit of the bargain under this Assignment.

If any provision of this Assignment is held invalid or unenforceable, that provision shall be enforced to the maximum extent permissible in order to put into effect the intent of the Assignors and the Assignee, and the remainder of this Assignment shall not be affected, but continue in full force and effect.

This document shall be executable by each Assignor in parts, and the Assignment will be effective and recordable for each Assignor as of the date of that Assignor's signature.

Legal Name of Inventor: Sante Gnerre

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 14 day of July, 2018.

Signature: Sante Gnerre

Legal Name of Inventor: Byoungsok Jung

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20 ____.

Signature: _____

Legal Name of Inventor: Emrah Kostem

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20 ____.

Signature: _____

ASSIGNMENT FROM INVENTORS

Docket No.: IP-1360-US

Page 4 of 5

Title: ERROR SUPPRESSION IN SEQUENCED DNA FRAGMENTS USING REDUNDANT READS WITH UNIQUE MOLECULAR INDICES (UMIS)

U.S. Application No.: 15/130,668

Filing Date: April 15, 2016

Inventors: Sante Gnerre, Byoungsok Jung, Emrah Kostem, Alex Aravanis, Alex S. So, Xuyu Cai, Zhihong Zhang

Legal Name of Inventor: **Alex Aravanis**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: **Alex S. So**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: **Xuyu Cai**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: **Zhihong Zhang**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

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U.S. Application No.: 15/130,668

Filing Date: April 15, 2016

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- the Inventions,
- the application listed above, and any other applications for patent, design, utility model, certificate of invention, trademark, or trade dress, in any country or under any international or regional authority (e.g. WIPO/PCT, EPO, ARIPO, EAPO, OAPI), to the extent some or all of its subject matter is disclosed and entitled to the benefit of priority in the application listed above, including provisional, continuation, divisional, continuation-in-part, reissue, and reexamination applications (collectively "the Applications"),
- the benefit of earlier filing date and right to claim priority to the Inventions and Applications under applicable law and treaties, including the Paris Convention for the Protection of Industrial Property as revised and amended and 35 U.S.C. §§ 119, 120,
- any rights accrued by the publication of the Applications, such as 35 U.S.C. § 154(d), Art. 67(1) EPC,
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- any rights arising from the Invention under laws and conventions protecting copyright, trademark, trade dress, or other industrial property,

(collectively, "the IP Rights"), and

WHEREAS, ILLUMINA, INC., a Delaware corporation having a place of business at 5200 Illumina Way, San Diego, California 92122 USA, is desirous of acquiring the entire right, title, and interest for itself, its successors, and its assigns (collectively "the Assignee") in the IP Rights by an instrument in writing, 35 U.S.C. § 261;

NOW, THEREFORE, to all whom it may concern, be it known that, for good and valuable consideration, the receipt and sufficiency of which hereby acknowledge and hereby waive the right to any additional compensation concerning the IP Rights:

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Title: ERROR SUPPRESSION IN SEQUENCED DNA FRAGMENTS USING REDUNDANT READS WITH UNIQUE MOLECULAR INDICES (UMIS)

U.S. Application No.: 15/130,668

Filing Date: April 15, 2016

Inventors: Sante Gnerre, Byoungsok Jung, Emrah Kostem, Alex Aravanis, Alex S. So, Xuyu Cai, Zhihong Zhang

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By this Assignment and by virtue of any earlier agreements to assign, hereby assign, transfer, convey, and sell my entire right, title, and interest in the IP Rights to the Assignee, including any claims or causes of action for damages or other remedies arising out of any earlier violation of the IP Rights, for and to inure to the Assignee's full benefit of the IP Rights as fully as they would have been held by me if this Assignment had not been made;

I authorize the Assignee and its legal representatives to:

- (a) insert into this Assignment any supplemental information to make the identification more complete for any of the Applications or Letters Patents already listed above,
- (b) prosecute the Applications, file new applications for the Inventions, and do all acts permitted by law to protect and enforce the IP Rights,
- (c) request that Letters Patents and Certificates of Invention be issued and granted to and in the name of the Assignee by the issuing or granting authority, such as the U.S. Commissioner for Patents, 37 C.F.R. § 3.81; and

I agree with the Assignee that and my legal representatives, heirs, and executors will perform all acts deemed necessary or desirable by the Assignee to permit and assist it to secure the entire right, title, and interest in the IP Rights so that the Assignee may benefit from this Assignment, including:

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Legal Name of Inventor: Sante Gnerre

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: Byoungsok Jung

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 3 day of June, 2018.

Signature:  _____

Legal Name of Inventor: Emrah Kostem

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

ASSIGNMENT FROM INVENTORS

Docket No.: IP-1360-US

Page 4 of 5

Title: ERROR SUPPRESSION IN SEQUENCED DNA FRAGMENTS USING REDUNDANT READS WITH UNIQUE MOLECULAR INDICES (UMIS)

U.S. Application No.: 15/130,668

Filing Date: April 15, 2016

Inventors: Sante Gnerre, Byoungsok Jung, Emrah Kostem, Alex Aravanis, Alex S. So, Xuyu Cai, Zhihong Zhang

Legal Name of Inventor: Alex Aravanis

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: Alex S. So

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Signature: _____

Legal Name of Inventor: Xuyu Cai

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Legal Name of Inventor: **Sante Gnerre**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: **Byoungsok Jung**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: **Emrah Kostem**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 15 day of MAY, 2018.

Signature:  _____

ASSIGNMENT FROM INVENTORS

Docket No.: IP-1360-US

Page 4 of 5

Title: ERROR SUPPRESSION IN SEQUENCED DNA FRAGMENTS USING REDUNDANT READS WITH UNIQUE MOLECULAR INDICES (UMIS)

U.S. Application No.: 15/130,668

Filing Date: April 15, 2016

Inventors: Sante Gnerre, Byoungsok Jung, Emrah Kostem, Alex Aravanis, Alex S. So, Xuyu Cai, Zhihong Zhang

Legal Name of Inventor: **Alex Aravanis**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: **Alex S. So**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: **Xuyu Cai**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: **Zhihong Zhang**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

ASSIGNMENT FROM INVENTORS

Docket No.: IP-1360-US

Page 1 of 5

Title: ERROR SUPPRESSION IN SEQUENCED DNA FRAGMENTS USING REDUNDANT READS WITH UNIQUE MOLECULAR INDICES (UMI5)

U.S. Application No.: 15/130,668

Filing Date: April 15, 2016

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- any rights arising from the Invention under laws and conventions protecting copyright, trademark, trade dress, or other industrial property,

(collectively, "the IP Rights"), and

WHEREAS, ILLUMINA, INC., a Delaware corporation having a place of business at 5200 Illumina Way, San Diego, California 92122 USA, is desirous of acquiring the entire right, title, and interest for itself, its successors, and its assigns (collectively "the Assignee") in the IP Rights by an instrument in writing, 35 U.S.C. § 261;

NOW, THEREFORE, to all whom it may concern, be it known that, for good and valuable consideration, the receipt and sufficiency of which hereby acknowledge and hereby waive the right to any additional compensation concerning the IP Rights:

ASSIGNMENT FROM INVENTORS

Docket No.: IP-1360-US

Page 2 of 5

Title: ERROR SUPPRESSION IN SEQUENCED DNA FRAGMENTS USING REDUNDANT READS WITH UNIQUE MOLECULAR INDICES (UMIS)

U.S. Application No.: 15/130,668

Filing Date: April 15, 2016

Inventors: Sante Gnerre, Byoungsok Jung, Emrah Kostem, Alex Aravanis, Alex S. So, Xuyu Cai, Zhihong Zhang

I warrant and represent to the Assignee that have the full right to convey my right, title, and interest in the IP Rights without encumbrance, and that have not made any earlier assignment, license, grant, or mortgage to another, or made any agreement with another, that would affect my right, title, and interest in the IP Rights;

By this Assignment and by virtue of any earlier agreements to assign, hereby assign, transfer, convey, and sell my entire right, title, and interest in the IP Rights to the Assignee, including any claims or causes of action for damages or other remedies arising out of any earlier violation of the IP Rights, for and to inure to the Assignee's full benefit of the IP Rights as fully as they would have been held by me if this Assignment had not been made;

I authorize the Assignee and its legal representatives to:

- (a) insert into this Assignment any supplemental information to make the identification more complete for any of the Applications or Letters Patents already listed above,
- (b) prosecute the Applications, file new applications for the Inventions, and do all acts permitted by law to protect and enforce the IP Rights,
- (c) request that Letters Patents and Certificates of Invention be issued and granted to and in the name of the Assignee by the issuing or granting authority, such as the U.S. Commissioner for Patents, 37 C.F.R. § 3.81; and

I agree with the Assignee that and my legal representatives, heirs, and executors will perform all acts deemed necessary or desirable by the Assignee to permit and assist it to secure the entire right, title, and interest in the IP Rights so that the Assignee may benefit from this Assignment, including:

- (a) communicating to the Assignee all facts known to me that relate to the history and extent of my individual contribution to the IP Rights, including the circumstances of the conception of the invention and its development and reduction to practice, and furnishing supporting documents or items in my control,
- (b) assisting in the preparation of the Applications and their prosecution by the Assignee, 37 C.F.R. § 3.71, and in the enforcement of the IP Rights, including making, executing, and delivering to the Assignee any other necessary documents, such as further application papers, declarations, affidavits, disclaimers, petitions, or assignments, and

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Legal Name of Inventor: **Sante Gnerre**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: **Byoungsok Jung**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: **Emrah Kostem**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

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Title: ERROR SUPPRESSION IN SEQUENCED DNA FRAGMENTS USING REDUNDANT READS WITH UNIQUE MOLECULAR INDICES (UMIS)

U.S. Application No.: 15/130,668

Filing Date: April 15, 2016

Inventors: Sante Gnerre, Byoungsok Jung, Emrah Kostem, Alex Aravanis, Alex S. So, Xuyu Cai, Zhihong Zhang

Legal Name of Inventor: **Alex Aravanis**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 10 day of October, 2020.

Signature: 

Legal Name of Inventor: **Alex S. So**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: **Xuyu Cai**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: **Zhihong Zhang**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

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Docket No.: IP-1360-US

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U.S. Application No.: 15/130,668

Filing Date: April 15, 2016

Inventors: Sante Gnerre, Byoungsok Jung, Emrah Kostem, Alex Aravanis, Alex S. So, Xuyu Cai, Zhihong Zhang

WHEREAS, above-identified inventors (collectively "the Assignors") have made certain new and useful inventions, discoveries, and improvements (the "Inventions"), for which the Assignors filed the application listed above and now desire to convey all right, title, and interest in:

- the Inventions,
- the application listed above, and any other applications for patent, design, utility model, certificate of invention, trademark, or trade dress, in any country or under any international or regional authority (e.g. WIPO/PCT, EPO, ARIPO, EAPO, OAPI), to the extent some or all of its subject matter is disclosed and entitled to the benefit of priority in the application listed above, including provisional, continuation, divisional, continuation-in-part, reissue, and reexamination applications (collectively "the Applications"),
- the benefit of earlier filing date and right to claim priority to the Inventions and Applications under applicable law and treaties, including the Paris Convention for the Protection of Industrial Property as revised and amended and 35 U.S.C. §§ 119, 120,
- any rights accrued by the publication of the Applications, such as 35 U.S.C. § 154(d), Art. 67(1) EPC,
- any Letters Patents or Certificates of Invention that may be issued or granted from the Applications, including reissued patents, reexamination certificates, renewals, and any rights resulting from an extension or adjustment of patent term, and
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IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: **Byoungsok Jung**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: **Emrah Kostem**

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Filing Date: April 15, 2016

Inventors: Sante Gnerre, Byoungsok Jung, Emrah Kostem, Alex Aravanis, Alex S. So, Xuyu Cai, Zhihong Zhang

Legal Name of Inventor: **Alex Aravanis**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this _____ day of _____, 20_____.

Signature: _____

Legal Name of Inventor: **Alex S. So**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 6th day of June, 2018.

Signature: Alex S.

Legal Name of Inventor: **Xuyu Cai**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this _____ day of _____, 20_____.

Signature: _____

Legal Name of Inventor: **Zhihong Zhang**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this _____ day of _____, 20_____.

Signature: _____

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Signature: _____

Legal Name of Inventor: **Byoungsok Jung**

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Signature: _____

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ASSIGNMENT FROM INVENTORS

Docket No.: IP-1360-US

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U.S. Application No.: 15/130,668

Filing Date: April 15, 2016

Inventors: Sante Gnerre, Byoungsok Jung, Emrah Kostem, Alex Aravanis, Alex S. So, Xuyu Cai, Zhihong Zhang

Legal Name of Inventor: **Alex Aravanis**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: **Alex S. So**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: **Xuyu Cai**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 21 day of May, 2018.

Signature:  _____

Legal Name of Inventor: **Zhihong Zhang**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

PATENT

REEL: 054383 FRAME: 0355

ASSIGNMENT FROM INVENTORS

Docket No.: IP-1360-US

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Title: ERROR SUPPRESSION IN SEQUENCED DNA FRAGMENTS USING REDUNDANT READS WITH UNIQUE MOLECULAR INDICES (UMIS)

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Legal Name of Inventor: **Sante Gnerre**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: **Byoungsok Jung**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: **Emrah Kostem**

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

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Legal Name of Inventor: Alex Aravanis

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Signature: _____

Legal Name of Inventor: Alex S. So

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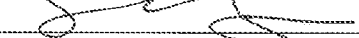
Legal Name of Inventor: Xuyu Cai

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this ____ day of _____, 20____.

Signature: _____

Legal Name of Inventor: Zhihong Zhang

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 15th day of May, 2018.

Signature:  _____

ASSIGNMENT FROM INVENTORS

Docket No.: IP-1360-US

Page 5 of 5

Title: ERROR SUPPRESSION IN SEQUENCED DNA FRAGMENTS USING REDUNDANT READS WITH UNIQUE MOLECULAR INDICES (UMIS)

U.S. Application No.: 15/130,668

Filing Date: April 15, 2016

Inventors: Sante Gnerre, Byoungsok Jung, Emrah Kostem, Alex Aravanis, Alex S. So, Xuyu Cai, Zhihong Zhang

RECEIVED AND HEREBY ACCEPTED BY ILLUMINA, INC., a Delaware Corporation

Date: October 15, 2020

R. Schwillinski

Name: Roland Schwillinski

Title: Vice President, Global IP and Litigation