PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	MERGER
EFFECTIVE DATE:	11/19/2020

CONVEYING PARTY DATA

Name	Execution Date
EPICENTRE TECHNOLOGIES CORPORATION	11/19/2020

RECEIVING PARTY DATA

Name:	ILLUMINA, INC.
Street Address:	5200 ILLUMINA WAY
City:	SAN DIEGO
State/Country:	CALIFORNIA
Postal Code:	92122

PROPERTY NUMBERS Total: 85

Property Type	Number
Application Number:	07382242
Patent Number:	5268289
Patent Number:	5470706
Patent Number:	5459055
Patent Number:	5500370
Patent Number:	6190865
Patent Number:	5849546
Patent Number:	6030814
Patent Number:	6048696
Patent Number:	6107037
Application Number:	09643189
Application Number:	09885689
Patent Number:	6562575
Patent Number:	6596494
Application Number:	09979518
Application Number:	10251667
Patent Number:	6818425
Patent Number:	7291487
Patent Number:	7413857

PATENT REEL: 054585 FRAME: 0512

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Property Type	Number
Patent Number:	8137911
Application Number:	10719913
Application Number:	10744815
Patent Number:	7794971
Patent Number:	7303901
Patent Number:	7727744
Application Number:	11142975
Application Number:	11235911
Application Number:	11352172
Application Number:	11810309
Application Number:	11859059
Patent Number:	7659072
Patent Number:	9080211
Patent Number:	8163491
Application Number:	12837466
Application Number:	12856066
Patent Number:	8574864
Application Number:	13027162
Patent Number:	9115396
Patent Number:	8309335
Patent Number:	9085801
Patent Number:	9963735
Patent Number:	9790540
Patent Number:	9040256
Patent Number:	9745570
Patent Number:	10184122
Application Number:	15524780
Patent Number:	10640809
Patent Number:	10435683
Application Number:	16210284
Application Number:	16721468
Application Number:	16830544
Application Number:	60135437
Application Number:	60214100
Application Number:	60292845
Application Number:	60412461
Application Number:	60420009
Application Number:	60428013

Property Type	Number
Application Number:	60436062
Application Number:	60483955
Application Number:	60521313
Application Number:	60572446
Application Number:	60579635
Application Number:	60613462
Application Number:	60651409
Application Number:	60685367
Application Number:	60810421
Application Number:	60956536
Application Number:	61020057
Application Number:	61050046
Application Number:	61108321
Application Number:	61108326
Application Number:	61108329
Application Number:	61152868
Application Number:	61155431
Application Number:	61184530
Application Number:	61234044
Application Number:	61258559
Application Number:	61410671
Application Number:	61437451
Application Number:	61506777
Application Number:	62049284
Application Number:	62081193
Application Number:	62168281
Application Number:	62783869

CORRESPONDENCE DATA

Fax Number: (949)760-9502

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.

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Correspondent Name: KNOBBE, MARTENS, OLSON & BEAR LLP

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Address Line 4: IRVINE, CALIFORNIA 92614

ATTORNEY DOCKET NUMBER: | ILLINC.000GEN

NAME OF SUBMITTER:	MICHAEL L FULLER			
SIGNATURE:	/Michael L Fuller/			
DATE SIGNED:	12/03/2020			
Total Attachments: 17				
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Delaware The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF

DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT

COPY OF THE CERTIFICATE OF OWNERSHIP, WHICH MERGES:

"EPICENTRE TECHNOLOGIES CORPORATION", A WISCONSIN CORPORATION,

WITH AND INTO "ILLUMINA, INC." UNDER THE NAME OF "ILLUMINA, INC.", A CORPORATION ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF DELAWARE, AS RECEIVED AND FILED IN THIS OFFICE ON THE NINETEENTH DAY OF NOVEMBER, A.D. 2020, AT 11:16 O'CLOCK A.M.

3228889 8100M SR# 20208445013

You may verify this certificate online at corp.delaware.gov/authver.shtml

\(\sum_{\text{solver}}\)

Authentication: 204123846

Date: 11-19-20

State of Belaware
Secretary of State
Division of Corporations
Delivered 11:16 AM 11/19/2020
FILED 11:16 AM 11/19/2020
SR 20208445013 - File Number 3228889

CERTIFICATE OF OWNERSHIP AND MERGER MERGING

EPICENTRE TECHNOLOGIES CORPORATION

(a Wisconsin corporation)

into

ILLUMINA, INC.

(a Delaware corporation)

Pursuant to Section 253 of the General Corporation Law of Delaware

Illumina, Inc., a corporation organized and existing under the laws of the State of Delaware (the "Corporation"), hereby certifies that:

FIRST: The Corporation is a corporation duly organized and existing under the laws of the State of Delaware pursuant to the Delaware General Corporation Law (the "DGCL").

SECOND: The Corporation is the owner of one hundred percent (100%) of the outstanding shares of each class of stock of EpiCentre Technologies Corporation, a corporation duly organized and existing in the State of Wisconsin (the "Subsidiary").

THIRD: The Corporation, by the following resolutions of its Board of Directors duly adopted on November 5, 2020, resolved to merge the Subsidiary with and into itself on the conditions set forth in such resolutions:

RESOLVED, that, pursuant to Section 253 of the General Corporation Law of the state of Delaware ("DGCL"), and in accordance with Section 180.1104 of the Wisconsin Business Corporation Law, the Corporation shall merge EpiCentre with and into itself (the "EpiCentre Merger"), so that the separate existence of EpiCentre shall cease upon the effectiveness of the EpiCentre Merger, with the Corporation being the surviving corporation and assuming all of the liabilities and obligations of EpiCentre;

RESOLVED, that the EpiCentre Merger shall become effective on the filing with the Delaware Secretary of State of a Certificate of Ownership and Merger prepared and executed by an officer of the Corporation in the form required by Section 253 of the DGCL; and

RESOLVED, that the officers of the Corporation are, and each of them hereby is, authorized and directed, in the name and on behalf of the Corporation, to execute such documents and take any and all other actions as such officers shall deem necessary or advisable to carry out the full intent and purposes of the foregoing resolutions.

FOURTH: The Merger shall become effective as of November 19, 2020.

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Ownership and Merger to be signed as of November 19, 2020.

ILLUMINA, INC.

Ву:

Name: Francis deSouza

Title:

President & Chief Executive Officer

Francis de Souza

REVIEWED BY LEGAL Initials: <u>RJM</u>

Date: _11/12/2020

ILLUMINA

Cty	Application #	Patent #	Title:	Date Filed (MM/DD/YYYY)
AT	141710772	2787565	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
AT	14181813.8	2816111	METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-DEPLETED SAMPLES OR ISOLATING RRNA FROM SAMPLES	8/13/2010
AT	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
AU	2003260945		METHODS OF USE FOR THERMOSTABLE RNA LIGASES	9/19/2003
AU	2009 242484 A1	2009242484	SELECTIVE 5' LIGATION TAGGING OF RNA	5/4/2009
AU	2010213510	2010213510	TEMPLATE-INDEPENDENT LIGATION OF SINGLE-STRANDED DNA	2/16/2010
AU	2012211081	2012211081	OLIGONUCLEOTIDE REPLACEMENT FOR DI- TAGGED AND DIRECTIONAL LIBRARIES	1/30/2012
AU	38938/99	760430	METHOD OF IDENTIFYING NUCLEIC ACID MOLECULES	5/10/1999
AU	50361/00	AU 765313	REVERSE TRANSCRIPTION ACTIVITY FROM BACILLUS STEAROTHEROPHILUS DNA POLYMERASE IN	5/19/2000
AU	71423/98	743907	REVERSE TRANSCRIPTION METHOD	4/15/1998
AU	AU 71183/96	AU 704625	METHOD FOR CHARACTERIZING NUCLEIC ACID MOLECULES	9/25/1996
BE	141710772	2787565	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
BE	14181813.8	2816111	METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-DEPLETED SAMPLES OR ISOLATING RRNA FROM SAMPLES	8/13/2010
BE	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
BE	17171687.1	3272879	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
CA	2,291,855	2291855	REVERSE TRANSCRIPTION METHOD	4/15/1998
CA	2,374,494	2374494	REVERSE TRANSCRIPTION ACTIVITY FROM BACILLUS STEAROTHEROPHILUS DNA POLYMERASE IN	5/19/2000
CA	2,506,805		METHODS FOR USING PRIMERS THAT ENCODE ONE STRAND OF A DOUBLE-STRANDED PROMOTER	11/21/2003
CA	2,723,265	2723265	SELECTIVE 5' LIGATION TAGGING OF RNA	5/4/2009
CA	2,750,054	2750054	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	7/18/2011
CA	2,751,470	2751470	TEMPLATE-INDEPENDENT LIGATION OF SINGLE-STRANDED DNA	2/16/2010
CA	2,821,559	2821559	OLIGONUCLEOTIDE REPLACEMENT FOR DI- TAGGED AND DIRECTIONAL LIBRARIES	1/30/2012
CA	CA 2233079	CA2233079	METHOD FOR CHARACTERIZING NUCLEIC ACID MOLECULES	9/25/1996

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Schedule A

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Cty	Application #	Patent #	Title:	Date Filed (MM/DD/YYYY)
СН	03789924.2		METHODS FOR USING RIBOPRIMERS FOR STRAND DISPLACEMENT REPLICATION OF TARGET SEQUENCES	11/21/2003
CH	098228315	2376517	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
СН	10808806.3	2464729	METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-DEPLETED SAMPLES OR ISOLATING RRNA FROM SAMPLES	8/13/2010
СН	12175461.8	2508529	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
СН	131551368	2610352	TEMPLATE-INDEPENDENT LIGATION OF SINGLE-STRANDED DNA	2/16/2010
СН	13180374.4	2664678	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
СН	14181813.8	2816111	METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-DEPLETED SAMPLES OR ISOLATING RRNA FROM SAMPLES	8/13/2010
СН	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
СН	16732376.5	3303584	METHODS OF ANALYZING NUCLEIC ACIDS	5/27/2016
СН	17171687.1	3272879	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
CN	200380108984.5		METHODS FOR USING PRIMERS THAT ENCODE ONE STRAND OF A DOUBLE-STRANDED PROMOTER	11/21/2003
CN	200980125379.6		SELECTIVE 5' LIGATION TAGGING OF RNA	5/4/2009
CN	200980152461.8	ZL200980152461.8	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
CN	201080007788.9	ZL201080007788.9	TEMPLATE-INDEPENDENT LIGATION OF SINGLE-STRANDED DNA	2/16/2010
CN	201080045994.9	ZL 201080045994.9	METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-DEPLETED SAMPLES OR ISOLATING RRNA FROM SAMPLES	8/13/2010
CN	201110204394.9		METHODS FOR USING PRIMERS THAT ENCODE ONE STRAND OF A DOUBLE-STRANDED PROMOTER	11/21/2003
CN	201510404762.2	ZL20150404762.2	KIT FOR MODIFICATION OF NUCLEIC ACIDS	10/24/2009
CZ	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
DE	IP-0570-DE Abandoned – no info		SELECTIVE TERMINAL TAGGING OF NUCLEIC ACIDS	11/30/2005
DE	03789924.2	1576188	METHODS FOR USING RIBOPRIMERS FOR STRAND DISPLACEMENT REPLICATION OF TARGET SEQUENCES	11/21/2003
DE	09740014.7	602009041942.0	SELECTIVE 5' LIGATION TAGGING OF RNA	5/4/2009
DE	098228315	602009012913.9	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
DE	10808806.3	602010019296.2	METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-DEPLETED SAMPLES OR ISOLATING RRNA FROM SAMPLES	8/13/2010

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Schedule A

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Cty	Application #	Patent #	Title:	Date Filed (MM/DD/YYYY)
DE	12175461.8	602009018472.5	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
DE	131551368	602010019500.7	TEMPLATE-INDEPENDENT LIGATION OF SINGLE-STRANDED DNA	2/16/2010
DE	14171077.2	602009033766.1	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
DE	15179339.5	602009046300.4	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
DE	16732376.5	602016022118.7	METHODS OF ANALYZING NUCLEIC ACIDS	5/27/2016
DE	17171687.1	602009059426.5	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
DE	20130180374	602009027157.1	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
DE	20140181813	602010032364.1	METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-DEPLETED SAMPLES OR ISOLATING RRNA FROM SAMPLES	8/13/2010
DE	602010006806.4	602010006806.4	TEMPLATE-INDEPENDENT LIGATION OF SINGLE-STRANDED DNA	2/16/2010
DE	602010031123.6	602010031123.6	METHODS AND KITS FOR 3'-END-TAGGING OF RNA	11/3/2010
DE	98918516.0	69836076.1	REVERSE TRANSCRIPTION METHOD	4/15/1998
DE	DE20036017693T	1546355	METHODS OF USE FOR THERMOSTABLE RNA LIGASES	9/19/2003
DK	098228315	2376517	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
DK	10741881.6	2396430	TEMPLATE-INDEPENDENT LIGATION OF SINGLE-STRANDED DNA	2/16/2010
DK	10808806.3	2464729	METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-DEPLETED SAMPLES OR ISOLATING RRNA FROM SAMPLES	8/13/2010
DK	141710772	DK/EP 2787565 T3	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
DK	14181813.8	2816111	METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-DEPLETED SAMPLES OR ISOLATING RRNA FROM SAMPLES	8/13/2010
DK	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
DK	17171687.1	3272879	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
EP	02737107.9		N4 VIRION SINGLE-STRANDED DNA DEPENDENT RNA POLYMERASE	5/22/2002
EP	03789931.7		PREPARATION AND USE OF SINGLE-STRANDED TRANSCRIPTION SUBSTRATES FOR SYNTHESIS OF TRANSCRIPTION PRODUCTS CORRESPONDING TO TARGET SEQUENCES	11/21/2003
EP	03797505.9	1546355	METHODS OF USE FOR THERMOSTABLE RNA LIGASES	9/19/2003
EP	03797506.7	1546313	THERMOSTABLE RNA LIGASE FROM THERMUS PHAGE	9/19/2003

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Schedule A

Cty	Application #	Patent #	Title:	Date Filed (MM/DD/YYYY)
EP	03812040.8		METHODS FOR USING PRIMERS THAT ENCODE ONE STRAND OF A DOUBLE-STRANDED	11/21/2003
EP	09740014.7	2283132	PROMOTER SELECTIVE 5' LIGATION TAGGING OF RNA	5/4/2009
			TRANSPOSON END COMPOSITIONS AND	
EP	09822831.5	2376517	METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
EP	10741881.6	2396430	TEMPLATE-INDEPENDENT LIGATION OF SINGLE-STRANDED DNA	2/16/2010
EP	10808806.3	2464729	METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-DEPLETED SAMPLES OR ISOLATING RRNA FROM SAMPLES	8/13/2010
EP	10829022.2	2464755	METHODS AND KITS FOR 3'-END-TAGGING OF RNA	11/3/2010
EP	12175461.8	2508529	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
EP	13155136.8	2610352	TEMPLATE-INDEPENDENT LIGATION OF SINGLE-STRANDED DNA	2/16/2010
EP	13180374.4	2664678	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
EP	14171077.2	2787565	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
EP	14181813.8	2816111	METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-DEPLETED SAMPLES OR ISOLATING RRNA FROM SAMPLES	8/13/2010
EP	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
EP	16195473.0		SELECTIVE 5' LIGATION TAGGING OF RNA	5/4/2009
EP	16732376.5	3303584	METHODS OF ANALYZING NUCLEIC ACIDS	5/27/2016
EP	17171687.1	3272879	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
EP	1999921828	EP1078102A1	METHOD OF IDENTIFYING NUCLEIC ACID MOLECULES	5/10/1999
EP	2000932671		REVERSE TRANSCRIPTION ACTIVITY FROM BACILLUS STEAROTHEROPHILUS DNA POLYMERASE IN	5/19/2000
EP	2003814301		TARGET-DEPENDENT TRANSCRIPTION	12/23/2003
EP	89201895.3	EP 0353812	PROCESS FOR THE RESCUE OF DNA AND FOR DETECTING MUTATIONS IN MARKER GENES	7/18/1989
EP	96932336.9		METHOD FOR CHARACTERIZING NUCLEIC ACID MOLECULES	9/25/1996
EP	98918516.0	EP977891B1	REVERSE TRANSCRIPTION METHOD	4/15/1998
ES	098228315	2376517	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
ES	13180374.4	2664678	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
ES	141710772	2787565	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
ES	14181813.8	2816111	METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-DEPLETED SAMPLES OR ISOLATING RRNA FROM SAMPLES	8/13/2010

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Schedule A

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Cty	Application #	Patent #	Title:	Date Filed (MM/DD/YYYY)
ES	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
ES	17171687.1	3272879	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
FI	131551368	2610352	TEMPLATE-INDEPENDENT LIGATION OF SINGLE-STRANDED DNA	2/16/2010
FI	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
FR	03789924.2	EP1576188B1	METHODS FOR USING RIBOPRIMERS FOR STRAND DISPLACEMENT REPLICATION OF TARGET SEQUENCES	11/21/2003
FR	09740014.7	2283132	SELECTIVE 5' LIGATION TAGGING OF RNA	5/4/2009
FR	098228315	2376517	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
FR	107418816	2396430	TEMPLATE-INDEPENDENT LIGATION OF SINGLE-STRANDED DNA	2/16/2010
FR	10808806.3	2464729	METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-DEPLETED SAMPLES OR ISOLATING RRNA FROM SAMPLES	8/13/2010
FR	10829022.2	2464755	METHODS AND KITS FOR 3'-END-TAGGING OF RNA	11/3/2010
FR	12175461.8	2508529	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
FR	131551368	2610352	TEMPLATE-INDEPENDENT LIGATION OF SINGLE-STRANDED DNA	2/16/2010
FR	13180374.4	2664678	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
FR	141710772	2787565	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
FR	14181813.8	2816111	METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-DEPLETED SAMPLES OR ISOLATING RRNA FROM SAMPLES	8/13/2010
FR	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
FR	16732376.5	3303584	METHODS OF ANALYZING NUCLEIC ACIDS	5/27/2016
FR	17171687.1	3272879	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
FR	98918516.0	0977891	REVERSE TRANSCRIPTION METHOD	4/15/1998
GB		EP 546 313	THERMOSTABLE RNA LIGASE FROM THERMUS PHAGE	9/19/2003
GB	03789924.2	EP1576188B1	METHODS FOR USING RIBOPRIMERS FOR STRAND DISPLACEMENT REPLICATION OF TARGET SEQUENCES	11/21/2003
GB	03797505.9	1546355	METHODS OF USE FOR THERMOSTABLE RNA LIGASES	9/19/2003
GB	09740014.7	2283132	SELECTIVE 5' LIGATION TAGGING OF RNA	5/4/2009
GB	098228315	2376517	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
GB	10741881.6	2396430	TEMPLATE-INDEPENDENT LIGATION OF SINGLE-STRANDED DNA	2/16/2010

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Schedule A

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Cty	Application #	Patent #	Title:	Date Filed (MM/DD/YYYY)
GB	10808806.3	2464729	METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-DEPLETED SAMPLES OR ISOLATING RRNA FROM SAMPLES	8/13/2010
GB	10829022.2	2464755	METHODS AND KITS FOR 3'-END-TAGGING OF RNA	11/3/2010
GB	12175461.8	2508529	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
GB	131551368	2610352	TEMPLATE-INDEPENDENT LIGATION OF SINGLE-STRANDED DNA	2/16/2010
GB	13180374.4	2664678	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
GB	14171077.2	2787565	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
GB	14181813.8	2816111	METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-DEPLETED SAMPLES OR ISOLATING RRNA FROM SAMPLES	8/13/2010
GB	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
GB	16732376.5	3303584	METHODS OF ANALYZING NUCLEIC ACIDS	5/27/2016
GB	17171687.1	3272879	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
GB	98918516.0	0977891	REVERSE TRANSCRIPTION METHOD	4/15/1998
GR	15179339.5	3093322	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
НК	12103051.6	HK1163107	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	3/28/2012
НК	12110399.2	1169659	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/18/2012
НК	12112519.3	1171785	METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-DEPLETED SAMPLES OR ISOLATING RRNA FROM SAMPLES	12/5/2012
НК	13113613.5	1186214	TEMPLATE-INDEPENDENT LIGATION OF SINGLE-STRANDED DNA	3/20/2013
НК	14110396.3	1197498	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
НК	15105752.0	HK1205190	METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-DEPLETED SAMPLES OR ISOLATING RRNA FROM SAMPLES	6/17/2015
НК	16105045.6	1217032	KITS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
НК	16107659.9	1219806	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
НК	18108684.4		TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
HU	141710772	2787565	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
HU	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
IE		EP1 546 313	THERMOSTABLE RNA LIGASE FROM THERMUS PHAGE	9/19/2003

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Cty	Application #	Patent #	Title:	Date Filed (MM/DD/YYYY)
IE	03797505.9	1546355	METHODS OF USE FOR THERMOSTABLE RNA LIGASES	9/19/2003
IE	141710772	2787565	TRANSPOSON END COMPOSITIONS AND	10/24/2009
IL.	141/10//2	2707303	METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2003
IE	14181813.8	2816111	METHODS, COMPOSITIONS, AND KITS FOR	8/13/2010
'-	11101013.0	2010111	GENERATING RRNA-DEPLETED SAMPLES OR	0,13,2010
			ISOLATING RRNA FROM SAMPLES	
IE	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND	10/24/2009
			METHODS FOR MODIFYING NUCLEIC ACIDS	' '
IS	141710772	2787565	TRANSPOSON END COMPOSITIONS AND	10/24/2009
			METHODS FOR MODIFYING NUCLEIC ACIDS	' '
IS	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND	10/24/2009
			METHODS FOR MODIFYING NUCLEIC ACIDS	
IT	098228315	502013902145319	TRANSPOSON END COMPOSITIONS AND	10/24/2009
			METHODS FOR MODIFYING NUCLEIC ACIDS	
IT	13180374.4	502014000003639	TRANSPOSON END COMPOSITIONS AND	10/24/2009
			METHODS FOR MODIFYING NUCLEIC ACIDS	
IT	141710772	2787565	TRANSPOSON END COMPOSITIONS AND	10/24/2009
			METHODS FOR MODIFYING NUCLEIC ACIDS	
IT	14181813.8	502016000071675	METHODS, COMPOSITIONS, AND KITS FOR	8/13/2010
			GENERATING RRNA-DEPLETED SAMPLES OR	
			ISOLATING RRNA FROM SAMPLES	
IT	15179339.5	502017000093858	TRANSPOSON END COMPOSITIONS AND	10/24/2009
			METHODS FOR MODIFYING NUCLEIC ACIDS	
IT	17171687.1	502019000067251	TRANSPOSON END COMPOSITIONS AND	10/24/2009
			METHODS FOR MODIFYING NUCLEIC ACIDS	
JP	1989-187193		PROCESS FOR THE RESCUE OF DNA AND FOR	7/18/1989
			DETECTING MUTATIONS IN MARKER GENES	
JP	2002-592465	4338402	N4 VIRION SINGLE-STRANDED DNA	5/22/2002
			DEPENDENT RNA POLYMERASE	
JP	2004-555631	4651386	METHODS FOR USING PRIMERS THAT ENCODE	11/21/2003
			ONE STRAND OF A DOUBLE-STRANDED	
			PROMOTER	
JP	2009-513594	3561523	METHOD FOR CHARACTERIZING NUCLEIC ACID	9/25/1996
			MOLECULES	
JP	2010-546266		REVERSE TRANSCRIPTION METHOD	4/15/1998
JP	2011-507711	5774474	SELECTIVE 5' LIGATION TAGGING OF RNA	5/4/2009
JP	2011-533401	5794572	TRANSPOSON END COMPOSITIONS AND	10/24/2009
			METHODS FOR MODIFYING NUCLEIC ACIDS	
JP	2011-550314		TEMPLATE-INDEPENDENT LIGATION OF	2/16/2010
			SINGLE-STRANDED DNA	
JP	2015-157469	6108494	TEMPLATE-INDEPENDENT LIGATION OF	2/16/2010
			SINGLE-STRANDED DNA	
LT	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND	10/24/2009
			METHODS FOR MODIFYING NUCLEIC ACIDS	
LU	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND	10/24/2009
			METHODS FOR MODIFYING NUCLEIC ACIDS	
LV	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND	10/24/2009
			METHODS FOR MODIFYING NUCLEIC ACIDS	

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Cty Application # Patent # Title: Date Filed (MyRophrym) NL 03789924.2 EP157618881 MFTHODS FOR USING RIBOPRIMERS FOR STRAND DISPLACEMENT REPLICATION OF TARGET SEQUENCES 11/21/2003 NL 098228315 2376517 TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYINS NUCLEIC ACIDS 10/24/2009 NL 10741881.6 2396430 TEMPILATE-INDEPENDENT LIGATION OF SINGLE-STRANDED DNA 2/16/2010 NL 10808806.3 2464729 METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-PEPLETED SAMPLES OR SIOLATING R	uge o	age 5 0/14						
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	PCT	PCT/US2003/040912		TARGET-DEPENDENT TRANSCRIPTION	12/23/2003			
METHODS FOR MODIFYING NUCLEIC ACIDS	PCT	PCT/US2009/061983			10/24/2009			
				METHODS FOR MODIFYING NUCLEIC ACIDS				

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Cty	Application #	Patent #	Title:	Date Filed (MM/DD/YYYY)
PCT	PCT/US2010/045437		METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-DEPLETED SAMPLES OR ISOLATING RRNA FROM SAMPLES	8/13/2010
PCT	PCT/US2010/055292		METHODS AND KITS FOR 3'-END-TAGGING OF RNA	11/3/2010
PCT	PCT/US2015/049385		REDUCED REPRESENTATION BISULFITE SEQUENCING USING URACIL N-GLYCOSYLASE (UNG) AND ENDONUCLEASE IV	9/10/2015
PCT	PCT/US2019/067582		NUCLEASE-BASED RNA DEPLETION	12/19/2019
PCT	PCT/US2002/016295		N4 VIRION SINGLE-STRANDED DNA DEPENDENT RNA POLYMERASE	5/22/2002
PCT	PCT/US2003/037454		METHODS FOR USING PRIMERS THAT ENCODE ONE STRAND OF A DOUBLE-STRANDED PROMOTER	4/5/2009
PCT	PCT/US2003/041046		TARGET-DEPENDENT TRANSCRIPTION USING DELETION MUTANTS OF N4 RNA POLYMERASE	12/23/2003
PCT	PCT/US2005/010811		METHODS FOR OBTAINING DIRECTIONALLY TRUNCATED POLYPEPTIDES	3/30/2005
PCT	PCT/US2005/035017		METHODS FOR IDENTIFYING POLYMERASE INHIBITORS	9/27/2005
PCT	PCT/US2006/004798		COMPOSITIONS AND METHODS EMPLOYING 5' PHOSPHATE-DEPENDENT NUCLEIC ACID EXONUCLEASES	2/9/2006
PCT	PCT/US2008/073305		SELECTIVE 5' LIGATION TAGGING OF RNA	8/15/2008
PCT	PCT/US2009/042723		SELECTIVE 5' LIGATION TAGGING OF RNA	5/4/2009
PCT	PCT/US2010/024319		TEMPLATE-INDEPENDENT LIGATION OF SINGLE-STRANDED DNA	2/16/2010
PCT	PCT/US2015/060296		METHODS AND COMPOSITIONS FOR DETECTING PATHOGENIC ORGANISMS	11/12/2015
PCT	PCT/US2016/034809		METHODS OF ANALYZING NUCLEIC ACIDS	5/27/2016
PCT			METHOD FOR CHARACTERIZING NUCLEIC ACID MOLECULES	9/25/1996
PCT	PCT/US1998/007997		REVERSE TRANSCRIPTION METHOD	4/21/1997
PCT	PCT/US1999/010207		METHOD OF IDENTIFYING NUCLEIC ACID MOLECULES	5/10/1999
PL	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
PT	141710772	2787565	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
PT	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
SE	098228315	2376517	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009
SE	10741881.6	2396430	TEMPLATE-INDEPENDENT LIGATION OF SINGLE-STRANDED DNA	2/16/2010
SE	10808806.3	2464729	METHODS, COMPOSITIONS, AND KITS FOR GENERATING RRNA-DEPLETED SAMPLES OR ISOLATING RRNA FROM SAMPLES	8/13/2010
SE	141710772	2787565	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	10/24/2009

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Cty	Application #	l atent #	Title.	(MM/DD/YYYY)
SE	14181813.8	2816111	METHODS, COMPOSITIONS, AND KITS FOR	8/13/2010
			GENERATING RRNA-DEPLETED SAMPLES OR	
			ISOLATING RRNA FROM SAMPLES	
SE	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND	10/24/2009
			METHODS FOR MODIFYING NUCLEIC ACIDS	
SG	201102883-4	170557	TRANSPOSON END COMPOSITIONS AND	10/24/2009
			METHODS FOR MODIFYING NUCLEIC ACIDS	
SG	201105309-7	173105	TEMPLATE-INDEPENDENT LIGATION OF	2/16/2010
			SINGLE-STRANDED DNA	
SI	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND	10/24/2009
			METHODS FOR MODIFYING NUCLEIC ACIDS	
TR	15179339.5	2963709	TRANSPOSON END COMPOSITIONS AND	10/24/2009
			METHODS FOR MODIFYING NUCLEIC ACIDS	
US	07/382,242		PROCESS FOR THE RESCUE OF DNA AND FOR	7/19/1989
			DETECTING MUTATIONS IN MARKER GENES	
US	07/815,095	5268289	THERMOSTABLE RIBONUCLEASE H AND	12/27/1991
			GENETIC CONSTRUCTS THEREFORE	
US	08/013,198	5470706	PROCESS FOR THE RESCUE OF DNA AND FOR	1/29/1993
			DETECTING MUTATIONS IN MARKER GENES	
US	08/163,181	5459055	THERMOSTABLE RIBONUCLEASE H AND	12/6/1993
			GENETIC CONSTRUCTS THEREFORE	
US	08/465,161	US5500370	THERMOSTABLE RIBONUCLEASE H AND	6/5/1995
	, ,		GENETIC CONSTRUCTS THEREFORE	' '
US	08/534,799	6190865	METHOD FOR CHARACTERIZING NUCLEIC ACID	9/27/1995
			MOLECULES	' '
US	08/713,331	US5849546	METHODS FOR USING MUTANT RNA	9/13/1996
			POLYMERASES WTIH REDUCED	' '
			DISCRIMINATION BETWEEN NON	
US	08/840,474	6030814	REVERSE TRANSCRIPTION METHOD	4/21/1997
US	09/078,290	6048696	METHOD OF IDENTIFYING NUCLEIC ACID	5/13/1998
			MOLECULES	' '
US	09/100,803	US6107037	METHODS FOR USING MUTANT RNA	6/19/1998
			POLYMERASES WTIH REDUCED	' '
			DISCRIMINATION BETWEEN NON	
US	09/643,189		METHODS FOR USING MUTANT RNA	8/21/2000
			POLYMERASES WTIH REDUCED	' '
			DISCRIMINATION BETWEEN NON	
US	09/885,689		ANALYTE-SPECIFIC ASSAYS USING A DNA-	6/20/2001
	. ,		DEPENDENT RNA POLYMERASE	
US	09/891,661	6562575	ANALYTE-SPECIFIC ASSAYS BASED ON	6/26/2001
	, ,		FORMATION OF A REPLICASE SUBSTRATE	' '
US	09/965,346	6596494	METHODS FOR USING MUTANT RNA	9/27/2001
_	, ,		POLYMERASES WTIH REDUCED	, ,=== =
			DISCRIMINATION BETWEEN NON	
US	09/979,518		REVERSE TRANSCRIPTION ACTIVITY FROM	4/10/2002
	55,515,515		BACILLUS STEAROTHEROPHILUS DNA	., _5, _55_
			POLYMERASE IN	
US	10/251,667		METHODS OF USE FOR THERMOSTABLE RNA	9/20/2002
	10, 231,007		LIGASES	3, 20, 2002
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DISCRIMINATION BETWEEN NON	US	10/404,726	7291487				
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STRAND DISPLACEMENT REPLICATION OF TARGET SEQUENCES 11/21/2003 12/21/2003 1		40/740 460	7442057		44 /24 /2002		
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US	13/177,772	9115396	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	7/7/2011
US	13/408,851	8309335	SELECTIVE 5' LIGATION TAGGING OF RNA	2/29/2012
US	13/489,204	9085801	TRANSPOSON END COMPOSITIONS AND	6/5/2012
	25, 155,25 !	300000	METHODS FOR MODIFYING NUCLEIC ACIDS	0,0,2022
US	13/647,940	9963735	SELECTIVE 5' LIGATION TAGGING OF RNA	10/9/2012
US	14/026,239	9790540	METHODS AND KITS FOR 3'-END-TAGGING OF RNA	9/13/2013
US	14/148,463	9040256	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	1/6/2014
US	14/223,788	9745570	METHODS, COMPOSITIONS, AND KITS FOR GENERATING rRNA-DEPLETED SAMPLES OR ISOLATING rRNA FROM SAMPLES	3/24/2014
US	14/805,341	10184122	TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	7/21/2015
US	15/524,780		METHOD AND COMPOSITIONS FOR DETECTING PATHOGENIC ORGANISMS	11/12/2015
US	15/576,382	10640809	METHODS OF ANALYZING NUCLEIC ACIDS	5/27/2016
US	15/688,600	10435683	METHODS, COMPOSITIONS, AND KITS FOR GENERATING rRNA-DEPLETED SAMPLES OR ISOLATING rRNA FROM SAMPLES	8/28/2017
US	16/210,284		TRANSPOSON END COMPOSITIONS AND METHODS FOR MODIFYING NUCLEIC ACIDS	12/5/2018
US	16/721,468		NUCLEASE-BASED RNA DEPLETION	12/19/2019
US	16/830,544		METHODS OF ANALYZING NUCLEIC ACIDS	3/26/2020
US	60/135,437		REVERSE TRANSCRIPTION ACTIVITY FROM BACILLUS STEAROTHEROPHILUS DNA POLYMERASE IN	5/22/1999
US	60/214,100		ANALYTE-SPECIFIC ASSAYS BASED ON FORMATION OF A REPLICASE SUBSTRATE (CONFIRM)	6/26/2000
US	60/292,845		TARGET-DEPENDENT TRANSCRIPTION	5/22/2001
US	60/412,461		THERMOSTABLE RNA LIGASE FROM THERMUS PHAGE	9/20/2002
US	60/420,009		METHODS FOR USING DOUBLE-MUTANT RNA POLYMERASES WITH REDUCED DISCRIMINATION BETWEEN NON-CANONICAL AND CANONICAL	10/21/2002
US	60/428,013		TARGET-DEPENDENT TRANSCRIPTION	11/21/2002
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US	60/483,955		NUCLEOSIDE TRIPHOSPHATES	7/1/2003
US	60/521,313		METHODS FOR OBTAINING DIRECTIONALLY TRUNCATED POLYPEPTIDES	3/30/2004
US	60/572,446		METHODS FOR OBTAINING DIRECTIONALLY TRUNCATED POLYPEPTIDES	5/19/2004
US	60/579,635		METHODS FOR USING DOUBLE-MUTANT RNA POLYMERASES WITH REDUCED DISCRIMINATION BETWEEN NON-CANONICAL AND CANONICAL	6/15/2004

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US	60/613,462		METHODS FOR IDENTIFYING POLYMERASE	(MM/DD/YYYY)
US	60/613,462		INHIBITORS	9/27/2004
US	60/651,409		COMPOSITIONS AND METHODS EMPLOYING 5'	2/9/2005
			PHOSPHATE-DEPENDENT NUCLEIC ACID	
			EXONUCLEASES	
US	60/685,367		COMPOSITIONS AND METHODS EMPLOYING 5'	5/27/2005
			PHOSPHATE-DEPENDENT NUCLEIC ACID	
			EXONUCLEASES	
US	60/810,421		COMPOSITIONS AND METHODS FOR REMOVAL	6/2/2006
			OF DNA FROM A SAMPLE	
US	60/956,536		SELECTIVE 5' LIGATION TAGGING OF RNA	8/17/2007
US	61/020,057		COPY-INDUCIBLE PROTEIN EXPRESSION HOST	1/9/2008
US	61/050,046		SELECTIVE 5' LIGATION TAGGING OF RNA	5/2/2008
US	61/108,321		FRAGMENTING AND DI-TAGGING DNA USING	10/24/2008
			A TRANSPOSASE AND A DNA POLYMERASE	
US	61/108,326		FRAGMENTING AND TAGGING DNA USING A	10/24/2008
			TRANSPOSASE AND A LIGASE	
US	61/108,329		FRAGMENTATION, TAGGING AND	10/24/2008
			SINGLEPRIMER AMPLIFICATION OF TARGET	
			DNA	
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			TRANSP	
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			ISOLATING RRNA FROM SAMPLES	
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US	61/437,451		FRAGMENTING AND DI-TAGGING DNA USING	1/28/2011
			A TRANSPOSON WITH OLIGONUCLEOTIDE	
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			AND LIGATION	
US	61/506,777		FRAGMENTING AND DI-TAGGING DNA USING	7/12/2011
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Γ	Cty	Application #	Patent #	Title:	Date Filed
					(MM/DD/YYYY)
Γ	US	62/847,797		NUCLEASE-BASED RNA DEPLETION	5/14/2019

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