## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4444999

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
GNUBIO INC	05/08/2017

### **RECEIVING PARTY DATA**

Name:	BIO-RAD LABORATORIES, INC
Street Address:	1000 ALFRED NOBEL DRIVE
City:	HERCULES
State/Country:	CALIFORNIA
Postal Code:	94547

## **PROPERTY NUMBERS Total: 3**

Property Type	Number
Application Number:	14008998
Application Number:	13992187
Application Number:	14008964

### **CORRESPONDENCE DATA**

**Fax Number:** (510)741-4048

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.

**Phone:** 5107416332

Email: JESSIE KELLY@BIO-RAD.COM

Correspondent Name: NAISHADH DESAI, PH.D.

Address Line 1: BIO-RAD LABORATORIES INC

Address Line 2: 1000 ALFRED NOBEL DRIVE

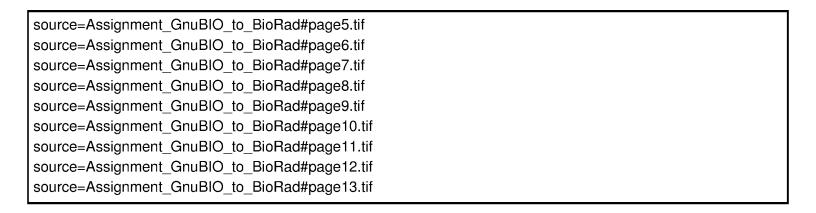
Address Line 4: HERCULES, CALIFORNIA 94547

NAME OF SUBMITTER:	NAISHADH N. DESAI
SIGNATURE:	/Naishadh N. Desai/
DATE SIGNED:	06/05/2017

#### **Total Attachments: 13**

source=Assignment\_GnuBIO\_to\_BioRad#page1.tif source=Assignment\_GnuBIO\_to\_BioRad#page2.tif source=Assignment\_GnuBIO\_to\_BioRad#page3.tif source=Assignment\_GnuBIO\_to\_BioRad#page4.tif

PATENT 504398302 REEL: 042602 FRAME: 0647



### ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, **GnuBIO** Inc. ("ASSIGNOR") has sold, assigned, and transferred and does hereby sell, assign, and transfer to **Bio-Rad Laboratories**, Inc., a Delaware corporation, having a place of business at 1000 Alfred Nobel Drive, Hercules, California 94547 ("ASSIGNEE"), for itself and its successors, transferees, and assignees, the following:

- 1. The entire worldwide right, title, and interest in and to:
  (a) the patents and applications identified on the attached Schedule 1 ("the PATENTS"); (b) all applications claiming priority from the PATENTS; (c) all provisional, utility, divisional, continuation, substitute, renewal, reissue, and other applications related thereto that have been or may be filed in the United States or elsewhere in the world; (d) all patents (including reissues and re-examinations) that may be granted on the applications set forth in (a), (b), and (c) above; and (e) all right of priority in the PATENTS and in any underlying provisional or foreign application, together with all rights to recover damages for infringement, including damages for provisional rights; and
- 2. The entire worldwide right, title, and interest in all inventions and improvements ("the SUBJECT MATTER") that are disclosed in the PATENTS, including all provisional and non-provisional applications filed under 35 U.S.C. § 111, design applications filed under 35 § 171, international applications filed under the Patent Cooperation Treaty (PCT), and U.S. national phase applications filed under 35 U.S.C. § 371 ("the APPLICATIONS").

ASSIGNOR agrees that ASSIGNEE may apply for and receive patents in ASSIGNEE's own name.

ASSIGNOR agrees to do the following, when requested, and without further consideration, in order to carry out the intent of this Assignment: (1) execute all oaths, assignments, powers of attorney, applications, and other papers necessary or desirable to fully secure to ASSIGNEE the rights, titles and interests herein conveyed; (2) communicate to ASSIGNEE all known facts relating to the SUBJECT MATTER; and (3) generally do all lawful acts that ASSIGNEE shall consider desirable for securing, maintaining, and enforcing worldwide patent protection relating to the SUBJECT MATTER, the APPLICATIONS and the PATENTS and for vesting in ASSIGNEE the rights, titles, and interests herein conveyed. ASSIGNOR further agrees to provide any successor, assign, or legal representative of ASSIGNEE with the benefits and assistance provided to ASSIGNEE hereunder.

ASSIGNOR represents that ASSIGNOR has the rights, titles, and interests to convey as set forth herein, and covenants with ASSIGNEE that the ASSIGNOR has not made and will not hereafter make any assignment, grant, mortgage, license, or other agreement affecting the rights, titles, and interests herein conveyed.

ASSIGNOR grants the attorney of record the power to insert on this Assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office or other authority for recordation of this document.

This Assignment may be executed in one or more counterparts, each of which shall be deemed an original and all of which may be taken together as one and the same Assignment.

**ASSIGNOR** 

John J. Cassingham

GnuBIO Inc.

Vice President, Treasurer and Secretary

**Date of Signature** 

May 8, 2017

Assignee hereby accepts this Assignment

Name: Timothy S. Ernst

EVP, General Counsel and Secretary

Bio-Rad Laboratories, Inc.

Dated: May 8, 2017

# SCHEDULE 1

# ASSIGNED PATENTS AND PATENT APPLICATIONS

TITLE	COUNTRY	APPLICATION NUMBER	E <u>FILING.</u> DATE	PATENT NUMBER	ISSUE DATE
A METHOD FOR BLOCKING POLYMERASE EXTENSION OF 3 PRIME DNA ENDS BY STEM-LOOP STRUCTURE	United States of America	61/816,431	Apr 26, 2013	· All Andrews	. ISSUE PATE
A METHOD FOR BLOCKING POLYMERASE EXTENSION OF 3 PRIME DNA ENDS BY STEM-LOOP STRUCTURE	China	201480023706.8	Apr 28, 2014		
A METHOD FOR BLOCKING POLYMERASE EXTENSION OF 3 PRIME DNA ENDS BY STEM-LOOP STRUCTURE	European Patent Office	14787882.1	Apr 28, 2014		
A METHOD FOR BLOCKING POLYMERASE EXTENSION OF 3 PRIME DNA ENDS BY STEM-LOOP STRUCTURE	United States of America	14/786,365	Apr 28, 2014		
A METHOD FOR BLOCKING POLYMERASE EXTENSION OF 3 PRIME DNA ENDS BY STEM-LOOP STRUCTURE	PCT	PCT/US2014/035730	Apr 28, 2014		
CASCADED ADDITION OF TARGET SPECIFIC UNIVERSAL ADAPTERS TO NUCLEIC ACIDS	United States of America	14/377,964	Feb 8, 2013		
CASCADED ADDITION OF TARGET SPECIFIC UNIVERSAL ADAPTERS TO NUCLEIC ACIDS	United States of America	61/598,442	Feb 14, 2012		
CASCADED ADDITION OF TARGET SPECIFIC UNIVERSAL ADAPTERS TO NUCLEIC ACIDS	PCT	PCT/US2013/025274	Feb 8, 2013		

		<u>APPLICATION</u>	<u>FILING</u>	<u>PATENT</u>	
THE	COUNTRY	<u>NUMBER</u>	<u>DATE</u>	NUMBER	ISSUE DATE
DROPLET VELOCITY	United	62/076,316	Nov 6,		
DETECTION	States of America		2014	l	
DROPLET VELOCITY	United	14/932,537	Nov 4,		
DETECTION	States of	111702,007	2015		
	America				
DROPLET VELOCITY	PCT	PCT/US2015/059071	Nov 4,		
DETECTION			2015		
FLOATING THERMAL	PCT	PCT/US2015/038525	Jun 30,		
CONTACT ENABLED PCR			2015		
FLOATING THERMAL	United	14/755,941	Jun 30,		
CONTACT ENABLED PCR	States of		2015		
FLOATING THERMAL	America United	62/018,893	Jun 30,		
CONTACT ENABLED PCR	States of	02/010,093	2014		
CONTACT ENABLED TER	America		2014		
FLOATING THERMAL	China	201580036116	June 30,		
CONTACT ENABLED PCR			2015		
FLOATING THERMAL	European	158151175	June 30,	12/8/2016	
CONTACT ENABLED PCR	Patent		2015		
	Office			<u></u>	
FORCED DROPLET	United	61/909,543	Nov 27,		
PACKING IN LARGE	States of		2013		
MICROFLUIDIC CHANNELS	America	001003/713	74 20		
INJECTION OF MULTIPLE VOLUMES INTO OR OUT	Australia	2012236713	Mar 28, 2012		
OF DROPLETS			2012		
INJECTION OF MULTIPLE	Canada	2,841,430	Mar 28,		
VOLUMES INTO OR OUT		_,=,=,=,=	2012		
OF DROPLETS					
INJECTION OF MULTIPLE	China	2012800257560	Mar 28,		
VOLUMES INTO OR OUT			2012		
OF DROPLETS					
INJECTION OF MULTIPLE	European	12762825.3	Mar 28,		
VOLUMES INTO OR OUT	Patent		2012		
OF DROPLETS INJECTION OF MULTIPLE	Office	2014-502727	Man 29		
VOLUMES INTO OR OUT	Japan	2014-302727	Mar 28, 2012		
OF DROPLETS			2012		
INJECTION OF MULTIPLE	Singapore	2013068812	Mar 28,	193436	Apr 18, 2016
VOLUMES INTO OR OUT			2012		
OF DROPLETS					
Multiple picoinjection	United	61/469,528	Mar 30,		
**	States of		2011		
	America				

		APPLICATION	FILING	PATENT
TITLE	COUNTRY	<u>NUMBER</u>	DATE	NUMBER I ISSUE DATE
INJECTION OF MULTIPLE	United	14/008,998	Mar 28,	
VOLUMES INTO OR OUT	States of		2012	
OF DROPLETS	America			
INJECTION OF MULTIPLE	PCT	PCT/US2012/030811	Mar 28,	
VOLUMES INTO OR OUT			2012	
OF DROPLETS				
INTEGRATED	China	201380058284.3	Sep 12,	
MICROFLUIDIC SYSTEM,			2013	
METHOD AND KIT FOR			i	
PERFORMING ASSAYS				
INTEGRATED	European	13837228.9	Sep 12,	
MICROFLUIDIC SYSTEM,	Patent		2013	
METHOD AND KIT FOR	Office			
PERFORMING ASSAYS				
INTEGRATED	United	14/427,404	Sep 12,	
MICROFLUIDIC SYSTEM,	States of		2013	
METHOD AND KIT FOR	America			
PERFORMING ASSAYS			ļ	
INTEGRATED	United	61/700,099	Sep 12,	
MICROFLUIDIC SYSTEM,	States of		2012	
METHOD AND KIT FOR	America			
PERFORMING ASSAYS				
INTEGRATED	PCT	PCT/US2013/059517	Sep 12,	
MICROFLUIDIC SYSTEM,			2013	
METHOD AND KIT FOR				,
PERFORMING ASSAYS				
LOW COST OPTICAL HIGH	United	61/828,597	May 29,	
SPEED DISCRETE	States of	,	2013	
MEASUREMENT SYSTEM	America			
LOW COST OPTICAL HIGH	China	201480030968.7	May 29,	
SPEED DISCRETE			2014	
MEASUREMENT SYSTEM			·	
LOW COST OPTICAL HIGH	European	14804738.4	May 29,	
SPEED DISCRETE	Patent		2014	
MEASUREMENT SYSTEM	Office			
LOW COST OPTICAL HIGH	Hong Kong	16107083.5	May 29,	
SPEED DISCRETE			2014	
MEASUREMENT SYSTEM				
LOW COST OPTICAL HIGH	United	14/289,982	May 29,	
SPEED DISCRETE	States of		2014	
MEASUREMENT SYSTEM	America			
LOW COST OPTICAL HIGH	PCT	PCT/US2014/039942	May 29,	
SPEED DISCRETE			2014	
MEASUREMENT SYSTEM				
The second secon	1	L		

		APPLICATION	FILING	PATENT	
TITLE	COUNTRY	NUMBER	DATE	NUMBER	ISSUE DATE
MANAGING VARIATION IN SPECTROSCOPIC INTENSITY	United States of America	61/469,900	Mar 31, 2011	- 91884	***************************************
MEASUREMENTS THROUGH THE USE OF A REFERENCE COMPONENT					
MANAGING VARIATION IN SPECTROSCOPIC INTENSITY MEASUREMENTS THROUGH THE USE OF A REFERENCE COMPONENT	Germany	12764041,5	Mar 28, 2012	602012014172.7	Jan 20, 2016
MANAGING VARIATION IN SPECTROSCOPIC INTENSITY MEASUREMENTS THROUGH THE USE OF A REFERENCE COMPONENT	European Patent Office	12764041.5	Mar 28, 2012	2691540	Jan 20, 2016
MANAGING VARIATION IN SPECTROSCOPIC INTENSITY MEASUREMENTS THROUGH THE USE OF A REFERENCE COMPONENT	France	12764041.5	Mar 28, 2012	2691540	Jan 20, 2016
MANAGING VARIATION IN SPECTROSCOPIC INTENSITY MEASUREMENTS THROUGH THE USE OF A REFERENCE COMPONENT	United Kingdom	12764041.5	Mar 28, 2012	2691540	Jan 20, 2016
MANAGING VARIATION IN SPECTROSCOPIC INTENSITY MEASUREMENTS THROUGH THE USE OF A REFERENCE COMPONENT	United States of America	14/008,990	Mar 28, 2012		
MANAGING VARIATION IN SPECTROSCOPIC INTENSITY MEASUREMENTS THROUGH THE USE OF A REFERENCE COMPONENT	PCT	PCT/US2012/030909	Mar 28, 2012		

TITLE	COUNTRY	APPLICATION NUMBER	FILING S	<u>PATENT</u> NUMBER	TOOLE DATE
MANAGING VARIATION IN SPECTROSCOPIC INTENSITY MEASUREMENTS THROUGH THE USE OF A REFERENCE COMPONENT	European Patent Office	16151499.7	Mar 28, 2012	NUMBER	ISSUE DATE
METHOD FOR MAINTAINING HETEROGENEOUS CONCENTRATIONS OF MOLECULES IN EMULSION DROPLETS	United States of America	61/737,625	Dec 14, 2012		
METHOD FOR MAINTAINING HETEROGENEOUS CONCENTRATIONS OF MOLECULES IN EMULSION DROPLETS	PCT	PCT/US2013/075461	Dec 16, 2013		
METHOD FOR MAINTAINING HETEROGENEOUS CONCENTRATIONS OF MOLECULES IN EMULSION DROPLETS	China	201380065124,1	Dec 16, 2013		
METHOD FOR MAINTAINING HETEROGENEOUS CONCENTRATIONS OF MOLECULES IN EMULSION DROPLETS	European Patent, Office	13862508.2	Dec 16, 2013		
METHOD FOR MAINTAINING HETEROGENEOUS CONCENTRATIONS OF MOLECULES IN EMULSION DROPLETS	United States of America	14/652,094	Dec 16, 2013		
SYSTEM, METHOD, AND KIT FOR SELECTIVELY PREVENTING AND ALLOWING FLOW IN A MICROFLUIDIC DEVICE	United States of America	61/884,432	Sep 30, 2013		
MICROFLUIDIC CARTRIDGE DEVICE AND METHODS OF USE AND ASSEMBLY	China	201480053755.6	Sep 30, 2014		

		APPLICATION	· FILING	PATENT
TITLE	COUNTRY	NUMBER	DATE	NUMBER ISSUE DATE
MICROFLUIDIC	European	14848694.7	Sep 30,	
CARTRIDGE DEVICE AND	Patent		2014	
METHODS OF USE AND	Office			
ASSEMBLY				
MICROFLUIDIC	United	14/502,948	Sep 30,	
CARTRIDGE DEVICES AND	States of		2014	
METHODS OF USE AND	America			
ASSEMBLY				
MICROFLUIDIC	United	15/376,366	Dec 12,	
CARTRIDGE DEVICES AND	States of		2016	
METHODS OF USE AND	America			
ASSEMBLY				
MICROFLUIDIC	PCT	PCT/US2014/058445	Sep 30,	
CARTRIDGE DEVICES AND			2014	
METHODS OF USE AND	·			
ASSEMBLY				
SYSTEM, METHOD AND	United	61/870,336	Aug 27,	
KIT FOR PERFORMING A	States of		2013	
CONTROLLED CHANGE IN	America			
THE CONTINUOUS PHASE				
VOLUME FRACTION FROM				
AN EMULSION IN A				i
MICROFLUIDIC DEVICE				
EVEN DISTRIBUTION OF	United	61/875,312	Sep 09,	
DROPLETS IN CHANNELS	States of		2013	
FOR PARALLEL OPTICAL	America			
DETECTION				
SYSTEM, METHOD, AND	United	61/881,040	Sep 23,	
KIT FOR FILTERING DROPS	States of		2013	
AT HIGH FLOW RATES	America			
INTERDIGITATION OF	United	61/896,766	Oct 29,	
REINJECTED EMULSION	States of		2013	
LIBRARY DROPS	America			
OIL AND DROP	United	61/905,914	Nov 19,	
SEPARATOR TO MINIMIZE	States of		2013	
DROP INTERDIGITATION	America			
HIGH SPEED SPACING	United	61/905,927	Nov 19,	
	States of		2013	
	America			
SYSTEM AND METHOD	United	61/934,889	Feb 03,	
FOR SPACING SETS OF	States of		2014	
DROPS WITHIN A	America		ļ	
MICROFLUIDIC CHANNEL				
MICROFLUIDIC DEVICES	China	201480047519.3	Aug 27,	
AND METHODS OF THEIR			2014	
USE				

		APPLICATION	FILING	PATENT	
TITLE A	COUNTRY	<u>NUMBER</u>	DATE	。 · · · · · · · · · · · · · · · · · · ·	<u>ISSUE DATE</u>
MICROFLUIDIC DEVICES	European	14840221.7	Aug 27,		
AND METHODS OF THEIR	Patent		2014		
USE	Office		1		
MICROFLUIDIC DEVICES	.United	14/470,860	Aug 27,		
AND METHODS OF THEIR USE	States of		2014		
MICROFLUIDIC DEVICES	America PCT	PCT/US2014/052995	Aug 27,		
AND METHODS OF THEIR	FCI	FC1/U32014/032993	Aug 27, 2014		
USE			2014		
MICROFLUIDIC DEVICES	Hong Kong	161127874	8/27/2014		
AND METHODS OF THEIR			5.21,221		
USE					
MICROFLUIDIC DROPLET	China	201480064728.9	Nov 25,		
PACKING			2014		
MICROFLUIDIC DROPLET	European	14865870.1	Nov 25,		
PACKING	Patent		2014		
	Office				
MICROFLUIDIC DROPLET	United	61/934,190	Jan 31,		
PACKING	States of		2014		
MICROFLUIDIC DROPLET	America United	15/039,637	Nov 25,		
PACKING	States of	13/039,037	2014		
Tressive	America		2014		
MICROFLUIDIC DROPLET	PCT	PCT/US2014/067417	Nov 25,	1	
PACKING			2014		
MONOLITHIC	United	62/237,229	Oct 5,		
MICROFLUIDIC DEVICE	States of		2015		:
FOR PARALLELIZING AND	America				
SCALING OF FUNCTION				· · · · · · · · · · · · · · · · · · ·	
MONOLITHIC	United	62/059,641	Oct 3,		
MICROFLUIDIC DEVICE	States of		2014		
FOR PARALLELIZING AND SCALING OF FUNCTION	America				
MONOLITHIC	States of	61/881,081	Sep 23,		
MICROFLUIDIC DEVICE	America	01/661,061	2013		
FOR PARALLELIZING AND	1111101104		2013		
SCALING OF FUNCTION					,
MULTIPLE EXCITATION	United	62/235,284	Sep 30,		
FOR LIQUID LABELING IN	States of	,	2015		
DROPS	America				
NUCLEIC ACID TARGET	United	61/420,747	Dec 07,		
DETECTION USING A	States of		2010		
DETECTOR, A TARGET	America				
PROBE, AND AN			1		
INHIBITOR					

	m or a second se	<u>APPLICATION</u>	FILING	PATENT	
NUCLEIC ACID TARGET DETECTION USING A DETECTOR, A PROBE AND AN INHIBITOR	<u>COUNTRY</u> Australia	NUMBER 2011338502	DATE Dec 7, 2011	<u>NUMBER</u>	ISSUE DATE
NUCLEIC ACID TARGET DETECTION USING A DETECTOR, A PROBE AND AN INHIBITOR	Canada	2,820,094	Dec 7, 2011		
NUCLEIC ACID TARGET DETECTION USING A DETECTOR, A PROBE AND AN INHIBITOR	China	201180058333.4	Dec 7, 2011	ZL 2011800583334	Jan 20, 2016
NUCLEIC ACID TARGET DETECTION USING A DETECTOR, A PROBE AND AN INHIBITOR	European Patent Office	11846231.6	Dec 7, 2011		
NUCLEIC ACID TARGET DETECTION USING A DETECTOR, A PROBE AND AN INHIBITOR	Japan	2013-543299	Dec 7, 2011		
NUCLEIC ACID TARGET DETECTION USING A DETECTOR, A PROBE AND AN INHIBITOR	Singapore	2013043880	Dec 7, 2011	191725	Aug 24, 2015
NUCLEIC ACID TARGET DETECTION USING A DETECTOR, A PROBE AND AN INHIBITOR	United States of America	13/992,187	Dec 7, 2011	9,581,549	Feb 28, 2017
NUCLEIC ACID TARGET DETECTION USING A DETECTOR, A PROBE AND AN INHIBITOR	PCT	PCT/US2011/063654	Dec 7, 2011		
NUCLEIC ACID TARGET DETECTION USING A DETECTOR, A PROBE AND AN INHIBITOR	United States of America	15/408,191	Jan 17, 2017		
NUCLEIC ACID TARGET DETECTION USING A DETECTOR, A PROBE AND AN INHIBITOR	China	2016100458521	Dec 7, 2011		
REAL-TIME PCR SYSTEM USING A MICROFLUIDIC DEVICE	United States of America	62/216,116	Sep 9, 2015		

		APPLICATION	FILING	PATENT	
TITLE	COUNTRY	<u>NUMBER</u>	DATE	<u>NUMBER</u>	ISSUE DATE
REAL-TIME PCR SYSTEM	United	62/047,387	Sep 8,		
USING A MICROFLUIDIC	States of		2014		
DEVICE	America	614460.000	3.5 0.1		
SCALABLE	United	61/469,889	Mar 31,		
SPECTROSCOPIC   DETECTION AND	States of America		2011		
MEASUREMENT	America				
SCALABLE	PCT	PCT/US2012/030716	Mar 27,		
SPECTROSCOPIC		101/032012/030/10	2012		
DETECTION AND			2012		
MEASUREMENT					
SCALABLE	Australia	2012236748	Mar 27,	2012236748	Mar 10, 2016
SPECTROSCOPIC			2012		· · · · · · · · · · · · · · · · · · ·
DETECTION AND					
MEASUREMENT					
SCALABLE	Canada	2,841,425	Mar 27,		
SPECTROSCOPIC			2012		•
DETECTION AND					
MEASUREMENT		2012000010222			
SCALABLE	China	201280018232.9	Mar 27,	ZL	Aug 10, 2016
SPECTROSCOPIC DETECTION AND			2012	2012800182329	
DETECTION AND MEASUREMENT					
SCALABLE	European	12765764.1	Mar 27,		
SPECTROSCOPIC	Patent	12703704.1	2012		i
DETECTION AND	Office		2012		
MEASUREMENT			!		
SCALABLE	Japan	2014-502715	Mar 27,		
SPECTROSCOPIC	*		2012		
DETECTION AND					
MEASUREMENT					
SCALABLE	Singapore	2013068820	Mar 27,	193437	May 26, 2016
SPECTROSCOPIC			2012		
DETECTION AND	!				
MEASUREMENT	mm to a	14/0000064		000000	
SCALABLE	United	14/008,964	Mar 27,	9228898	Jan 5, 2016
SPECTROSCOPIC DETECTION AND	States of		2012		
DETECTION AND MEASUREMENT	America				
SIZE ALTERNATING	United	62/012,516	Jun 16,		
INJECTION INTO DROPS TO	States of	04/014,310	2014		
FACILITATE SORTING	America		2014		!
SIZE ALTERNATING	United	15/316,128	Dec 2,		
INJECTION INTO DROPS TO	States of		2016		
FACILITATE SORTING	America				

		APPLICATION	FILING	PATENT	
TIME	COUNTRY	NUMBER	DATE		SUE DATE
SIZE ALTERNATING	PCT	PCT/US2015/036080	Jun 16,	Mana Mana Mana	100
INJECTION INTO DROPS TO			2015		
FACILITATE SORTING					
SIZE ALTERNATING	China	2015800322845	6/16/2015		
INJECTION INTO DROPS TO			<u> </u>		
FACILITATE SORTING			l		j
SIZE ALTERNATING	European	158097188	6/16/2015		
INJECTION INTO DROPS TO	Patent				
FACILITATE SORTING	Office				
SPARSE IDENTITY SPACES	United	62/258,370	Nov 20,		
IN DROPLET SEQUENCING	States of		2015		
	America				
SPARSE IDENTITY SPACES	United	15/353,625	Nov 16,		
IN DROPLET SEQUENCING	States of		2016		
	America				
SPARSE IDENTITY SPACES	PCT	PCT/US2016/062333	Nov 16,		
IN DROPLET SEQUENCING			2016		
SYSTEM AND METHOD	China	201480006226.0	Jan 27,		
FOR PERFORMING			2014		1
DROPLET INFLATION					
SYSTEM AND METHOD	European	14743656.2	Jan 27,		
FOR PERFORMING	Patent		2014		
DROPLET INFLATION	Office				
SYSTEM AND METHOD	Hong Kong	16106251,3	Jan 27,		
FOR PERFORMING			2014		
DROPLET INFLATION					
SYSTEM AND METHOD	United	61/756,598	Jan 25,		ľ
FOR PERFORMING	States of		2013	ļi I	
DROPLET INFLATION	America				
SYSTEM AND METHOD	United	14/762,617	Jan 27,		
FOR PERFORMING	States of		2014		
DROPLET INFLATION	America				
SYSTEM AND METHOD	United	15/410,913	Jan 20,		
FOR PERFORMING	States of		2017		
DROPLET INFLATION	America				
SYSTEM AND METHOD	PCT	PCT/US2014/013198	Jan 27,		
FOR PERFORMING			2014		
DROPLET INFLATION	at !	004 40000000777	7		
SYSTEMS AND METHODS	China	201480038087.X	May 29,		
FOR SEQUENCING IN			2014		
EMULSION BASED					ľ
MICROFLUIDICS	TT '4 1	(1/000 500	15.00		
SYSTEMS AND METHODS	United	61/828,582	May 29,		
FOR SEQUENCING IN	States of		2013		
EMULSION BASED	America				
MICROFLUIDICS					

TITLE	COUNTRY	APPLICATION NUMBER	EILING DATE	PATENT NUMBER	ISSUE DATE
SYSTEMS AND METHODS	European	14804752.5	May 29,	TOWNS AND ASSESSMENT	<u> </u>
FOR SEQUENCING IN	Patent		2014		
EMULSION BASED	Office				
MICROFLUIDICS					
SYSTEMS AND METHODS	Hong Kong	16107351.0	May 29,	***	
FOR SEQUENCING IN			2014		
EMULSION BASED					
MICROFLUIDICS					
SYSTEMS AND METHODS	United	14/290,867	May 29,		
FOR SEQUENCING IN	States of		2014		
EMULSION BASED	America				
MICROFLUIDICS					
SYSTEMS AND METHODS	WO	PCT/US2014/040082	May 29,		,
FOR SEQUENCING IN	1		2014		
EMULSION BASED					
MICROFLUIDICS					
SYSTEM, METHOD, AND	United	62/017,955	Jun 27,		
KIT FOR LABELING	States of		2014		
ALTERNATING DROPS IN A	America				
MICROFLUIDIC DEVICE					_

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