

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
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EPAS ID: PAT5691525

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
PREMIUM GENETICS (UK) LIMITED	04/30/2019
RECEIVING PARTY DATA	
Name:	ABS GLOBAL, INC.
Street Address:	1525 RIVER ROAD
City:	DEFOREST
State/Country:	WISCONSIN
Postal Code:	53532
PROPERTY NUMBERS Total: 23	
Property Type	Number
Patent Number:	7150834
Patent Number:	7355696
Patent Number:	7402131
Patent Number:	7482577
Patent Number:	7545491
Patent Number:	7699767
Patent Number:	7704395
Patent Number:	8158927
Patent Number:	8653442
Patent Number:	8933395
Patent Number:	8961904
Patent Number:	9000357
Patent Number:	9140690
Patent Number:	9335295
Patent Number:	9453849
Patent Number:	9588100
Patent Number:	9977401
Patent Number:	10069027
Patent Number:	10216144
Patent Number:	RE46992

PATENT

Property Type	Number
Application Number:	15702452
Application Number:	14579441
Application Number:	15476509

CORRESPONDENCE DATA

Fax Number:

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: 608-316-0541

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Correspondent Name: DANIEL M LORENTZEN

Address Line 1: 1525 RIVER ROAD

Address Line 4: DEFOREST, WISCONSIN 53532

NAME OF SUBMITTER:	DANIEL M. LORENTZEN
SIGNATURE:	/Daniel M. Lorentzen/
DATE SIGNED:	08/28/2019

Total Attachments: 11

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Exhibit A

ASSIGNMENT OF PATENTS

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, [Premium Genetics (UK) Limited, a United Kingdom private limited company ("**Seller**"), hereby sells, assigns, transfers, and conveys to ABS Global, Inc., a Delaware business corporation ("**Buyer**"), pursuant to the Patent Acquisition Agreement dated as of 30 April, 2019 by and between Seller and Buyer, all right, title, and interest in and to the patents and patent applications set forth on Schedule 1, attached hereto and incorporated by this reference herein, together with all claims and causes of action with respect to any of the foregoing, including without limitation all rights to and claims for damages, restitution, and injunctive and other legal and equitable relief for past, present, and future infringement, misappropriation, violation, breach, or default, and all other rights, privileges, and protections of any kind whatsoever of Seller accruing under any of the foregoing provided by any applicable law, treaty, or other international convention.

Seller hereby authorizes the Commissioner for Patents in the United States Patent and Trademark Office and the officials of corresponding entities or agencies in any applicable jurisdictions to record and register this Assignment of Patents upon request by Buyer.

IN WITNESS WHEREOF, the undersigned has caused this Assignment of Patents to be executed on this 30 day of April, 2019 by its duly authorized officer.

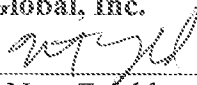
Premium Genetics (UK) Limited

By: _____

Name: Denis Noonan

Title: Director

ABS Global, Inc.

By:  _____

Name: Nate Zwald

Title: Chief Operating Officer

Exhibit A

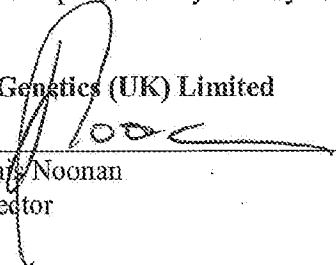
ASSIGNMENT OF PATENTS

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, [Premium Genetics (UK) Limited, a United Kingdom private limited company ("**Seller**"), hereby sells, assigns, transfers, and conveys to ABS Global, Inc., a Delaware business corporation ("**Buyer**"), pursuant to the Patent Acquisition Agreement dated as of 30 April, 2019 by and between Seller and Buyer, all right, title, and interest in and to the patents and patent applications set forth on Schedule I, attached hereto and incorporated by this reference herein, together with all claims and causes of action with respect to any of the foregoing, including without limitation all rights to and claims for damages, restitution, and injunctive and other legal and equitable relief for past, present, and future infringement, misappropriation, violation, breach, or default, and all other rights, privileges, and protections of any kind whatsoever of Seller accruing under any of the foregoing provided by any applicable law, treaty, or other international convention.

Seller hereby authorizes the Commissioner for Patents in the United States Patent and Trademark Office and the officials of corresponding entities or agencies in any applicable jurisdictions to record and register this Assignment of Patents upon request by Buyer.

IN WITNESS WHEREOF, the undersigned has caused this Assignment of Patents to be executed on this 30 day of April, 2019 by its duly authorized officer.

Premium Genetics (UK) Limited

By: 
Name: Denis Noonan
Title: Director

ABS Global, Inc.

By: _____
Name: Nate Zwald
Title: Chief Operating Officer

Schedule 1
Assigned Patents

Patents

Title	Jurisdiction	Patent Number	Issue Date
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	United States - (US)	7118676	10/10/2006
MULTIPLE LAMINAR FLOW-BASED RATE ZONAL OR ISOPYCNIC SEPARATION WITH HOLOGRAPHIC OPTICAL TRAPPING OF BLOOD CELLS AND OTHER STATIC COMPONENTS	United States - (US)	7,150,834	12/19/2006
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	United States - (US)	7241988	7/10/2007
METHOD AND APPARATUS FOR SORTING CELLS	United States - (US)	7355696	4/8/2008
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	United States - (US)	7402131	7/22/2008
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	United States - (US)	7482577	1/27/2009
METHOD AND APPARATUS FOR SORTING CELLS	United States - (US)	7545491	6/9/2009
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	United States - (US)	7699767	4/20/2010
MULTIPLE LAMINAR FLOW-BASED RATE ZONAL OR ISOPYCNIC SEPARATION WITH HOLOGRAPHIC OPTICAL TRAPPING OF BLOOD CELLS AND OTHER STATIC COMPONENTS	United States - (US)	7704395	4/27/2010
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	United States - (US)	8158927	4/17/2012
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	United States - (US)	8653442	2/18/2014
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR IDENTIFICATION	United States - (US)	8933395	1/13/2015
MICROFLUIDIC CHIP	United States - (US)	8961904	2/24/2015
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR IDENTIFICATION	United States - (US)	9000357	4/7/2015
METHOD OF IDENTIFYING COMPONENTS IN A FLUID MIXTURE	United States - (US)	9140690	9/22/2015
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	United States - (US)	9335295	5/10/2016
Methods for staining cells for identification and sorting	United States - (US)	9,453,849	9/27/2016
MICROFLUIDIC SYSTEM AND METHOD WITH FOCUSED ENERGY APPARATUS	United States - (US)	9,588,100	3/7/2017
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	United States - (US)	9,977,401	5/22/2018
CYTOMETER SPERM SEX SENSING APPARATUS WITH AN AVALANCHE PHOTODIODE	United States - (US)	10,069,027	9/4/2018

MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	United States - (US)	10216144	2/26/2019
METHOD AND APPARATUS FOR SORTING CELLS	United States - (US)	RE46992	8/14/2018
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Turkey - (TR)	1573641	6/26/2013
System and method of sorting materials using holographic laser steering	Turkey - (TR)	2270816	1/5/2011
System and method of sorting materials using holographic laser steering	Turkey - (TR)	2287858	2/23/2011
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	Switzerland - (CH)	1663460	7/8/2015
METHOD AND APPARATUS FOR SORTING CELLS	Switzerland - (CH)	1846748	10/24/2007
METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Switzerland - (CH)	2911158	12/6/2017
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Spain - (ES)	1573641	6/26/2013
METHOD AND APPARATUS FOR SORTING CELLS	Spain - (ES)	1846748	10/24/2007
Method and apparatus for sorting cells	Spain - (ES)	2166340	8/2/2017
System and method of sorting materials using holographic laser steering	Spain - (ES)	2270816	1/5/2011
System and method of sorting materials using holographic laser steering	Spain - (ES)	2270817	1/5/2011
System and method of sorting materials using holographic laser steering	Spain - (ES)	2287858	2/23/2011
System and method of sorting materials using holographic laser steering	Spain - (ES)	2889879	9/6/2017
METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Spain - (ES)	2911158	12/6/2017
Methods for sexing non-human mammals	New Zealand - (NZ)	529937	1/12/2006
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Netherlands - (NL)	1573641	6/26/2013
Method and apparatus for sorting cells	Netherlands - (NL)	2166340	8/2/2017
System and method of sorting materials using holographic laser steering	Netherlands - (NL)	2270816	1/5/2011
System and method of sorting materials using holographic laser steering	Netherlands - (NL)	2270817	1/5/2011
System and method of sorting materials using holographic laser steering	Netherlands - (NL)	2287858	2/23/2011
System and method of sorting materials using holographic laser steering	Netherlands - (NL)	2889879	9/6/2017
METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Netherlands - (NL)	2911158	12/6/2017
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	Liechtenstein - (LI)	1663460	7/8/2015
SYSTEM AND METHOD OF SORTING MATERIALS USING	Japan - (JP)	4666348	4/6/2011

HOLOGRAPHIC LASER STEERING			
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	Japan - (JP)	5046645	10/10/2012
Method and apparatus for sorting cells	Japan - (JP)	5086101	11/28/2012
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	Japan - (JP)	5160622	3/13/2013
APPARATUS AND METHOD FOR PURIFYING/SEPARATING PARTICLE	Japan - (JP)	5250674	4/19/2013
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	Japan - (JP)	5789178	8/7/2015
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	Netherlands - (NL)	6154425	6/9/2017
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Italy - (IT)	1573641	6/26/2013
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	Italy - (IT)	1663460	7/8/2015
METHOD AND APPARATUS FOR SORTING CELLS	Italy - (IT)	1846748	10/24/2007
Method and apparatus for sorting cells	Italy - (IT)	2166340	8/2/2017
System and method of sorting materials using holographic laser steering	Italy - (IT)	2270816	1/5/2011
System and method of sorting materials using holographic laser steering	Italy - (IT)	2270817	1/5/2011
System and method of sorting materials using holographic laser steering	Italy - (IT)	2287858	2/23/2011
System and method of sorting materials using holographic laser steering	Italy - (IT)	2889879	9/6/2017
METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Italy - (IT)	502018000001371	12/6/2017
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Ireland - (IE)	1573641	6/26/2013
Method and apparatus for sorting cells	Ireland - (IE)	2166340	8/2/2017
System and method of sorting materials using holographic laser steering	Ireland - (IE)	2270816	1/5/2011
System and method of sorting materials using holographic laser steering	Ireland - (IE)	2270817	1/5/2011
System and method of sorting materials using holographic laser steering	Ireland - (IE)	2287858	2/23/2011
System and method of sorting materials using holographic laser steering	Ireland - (IE)	2889879	9/6/2017
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Hong Kong - (HK)	1090701	6/29/2012
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	Hong Kong - (HK)	1092409	5/27/2016
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	Hong Kong - (HK)	1098980	7/8/2009

METHOD AND APPARATUS FOR SORTING CELLS	Hong Kong - (HK)	1112288	10/12/2012
METHOD AND APPARATUS FOR SORTING CELLS	Hong Kong - (HK)	1160222	4/11/2014
Method and apparatus for sorting cells	Hong Kong - (HK)	1163152	1/23/2015
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Hong Kong - (HK)	1169712	3/3/2017
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Great Britain - (GB)	1573641	6/26/2013
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	Great Britain - (GB)	1663460	7/8/2015
METHOD AND APPARATUS FOR SORTING CELLS	Great Britain - (GB)	1846748	10/24/2007
Method and apparatus for sorting cells	Great Britain - (GB)	2166340	8/2/2017
System and method of sorting materials using holographic laser steering	Great Britain - (GB)	2270816	1/5/2011
System and method of sorting materials using holographic laser steering	Great Britain - (GB)	2270817	1/5/2011
System and method of sorting materials using holographic laser steering	Great Britain - (GB)	2287858	2/23/2011
System and method of sorting materials using holographic laser steering	Great Britain - (GB)	2889879	9/6/2017
METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Great Britain - (GB)	2911158	12/6/2017
METHOD AND APPARATUS FOR SORTING CELLS	Germany - (DE)	06720022.0	10/24/2007
Method and apparatus for sorting cells	Germany - (DE)	09176836.6	8/2/2017
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Germany - (DE)	60344373.7	6/26/2013
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Germany - (DE)	10185539.3	1/15/2014
System and method of sorting materials using holographic laser steering	Germany - (DE)	60346371.1	6/18/2014
System and method of sorting materials using holographic laser steering	Germany - (DE)	60347667.8	5/27/2015
System and method of sorting materials using holographic laser steering	Germany - (DE)	60350601.1	9/6/2017
METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Germany - (DE)	60350838.3	12/6/2017
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	Germany - (DE)	04783338.9	7/8/2015
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	France - (FR)	3772098.4	6/26/2013
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	France - (FR)	04783338.9	7/8/2015
METHOD AND APPARATUS FOR SORTING CELLS	France - (FR)	06720022.0	10/24/2007
Method and apparatus for sorting cells	France - (FR)	09176836.6	8/2/2017
System and method of sorting materials using holographic	France - (FR)	10182006.6	1/5/2011

laser steering			
System and method of sorting materials using holographic laser steering	France - (FR)	10182979.4	1/5/2011
System and method of sorting materials using holographic laser steering	France - (FR)	10185539.3	2/23/2011
System and method of sorting materials using holographic laser steering	France - (FR)	14192362.3	9/6/2017
METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	France - (FR)	15160613.4	12/6/2017
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	European Patent Convention - (EP)	3772098.4	6/26/2013
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	European Patent Convention - (EP)	04783338.9	7/8/2015
METHOD AND APPARATUS FOR SORTING CELLS	European Patent Convention - (EP)	06720022.0	10/24/2007
Method and apparatus for sorting cells	European Patent Convention - (EP)	09176836.6	8/2/2017
System and method of sorting materials using holographic laser steering	European Patent Convention - (EP)	10182006.6	1/5/2011
System and method of sorting materials using holographic laser steering	European Patent Convention - (EP)	10182979.4	1/5/2011
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	European Patent Convention - (EP)	10185539.3	1/15/2014
System and method of sorting materials using holographic laser steering	European Patent Convention - (EP)	14192362.3	9/6/2017
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Denmark - (DK)	1573641	6/26/2013
Method and apparatus for sorting cells	Denmark - (DK)	2166340	8/2/2017
System and method of sorting materials using holographic laser steering	Denmark - (DK)	2270816	1/5/2011
System and method of sorting materials using holographic laser steering	Denmark - (DK)	2270817	1/5/2011
System and method of sorting materials using holographic laser steering	Denmark - (DK)	2287858	2/23/2011
System and method of sorting materials using holographic laser steering	Denmark - (DK)	2889879	9/6/2017
System and method of sorting materials using holographic laser steering	China P.R. - (CN)	1774623	2/1/2012
Multiple laminar flow-based particle and cellular separation with laser steering	China P.R. - (CN)	100475317	4/8/2009
Method and apparatus for sorting cells	China P.R. - (CN)	101189504	5/30/2012
Method and apparatus for sorting cells	China P.R. - (CN)	102128778	12/18/2013
Method and apparatus for sorting cells	China P.R. - (CN)	102212457	9/10/2014
System and method of sorting materials using holographic laser steering	China P.R. - (CN)	102539303	6/15/2016
Method and apparatus for sorting cells	Brazil - (BR)	PI0607095-7	11/21/2017

METHOD AND APPARATUS FOR SORTING CELLS	Belgium - (BE)	1846748	10/24/2007
METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Belgium - (BE)	2911158	12/6/2017
METHOD AND APPARATUS FOR SORTING CELLS	Austria - (AT)	1846748	10/24/2007

Patent Applications

Title	Jurisdiction	Application/ Publication Number	Filing Date
FOCUSED ENERGY DEVICE FOR ENRICHMENT OF SELECTED COMPONENTS IN FLOW STREAM OF MICROFLUIDIC CHIP	United States - (US)	61/897743	10/30/2013
MICROFLUIDIC SYSTEM AND METHOD WITH FOCUSED ENERGY APPARATUS	United States - (US)	15/033001	6/18/2014
Passive fluidic sorter	United States - (US)	60/499957	9/4/2003
Method and Apparatus for Sorting Cells	United States - (US)	15/182582	6/14/2016
Methods for staining cells for identification and sorting	United States - (US)	11/048101	2/1/2005
MICROFLUIDIC CHIP	United States - (US)	14/579441	12/22/2014
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	United States - (US)	60/435541	12/20/2002
Passive fluidic sorter	United States - (US)	60/511458	10/15/2003
System and method for cell sorting using holographic optical trapping	United States - (US)	60/399386	7/31/2002
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	United States - (US)	15/191223	6/23/2016
System and method of sorting blood cells using holographic laser steering	United States - (US)	60/571141	5/14/2004
MICROFLUIDIC SYSTEM AND METHOD WITH FOCUSED ENERGY APPARATUS	United States - (US)	15/387034	12/21/2016
METHODS FOR STAINING CELLS FOR IDENTIFICATION AND SORTING	United States - (US)	15/276747	9/26/2016
METHODS FOR STAINING CELLS FOR IDENTIFICATION AND SORTING	United States - (US)	15/476509	3/31/2017
METHODS AND SYSTEMS FOR ASSESSING AND/OR QUANTIFYING SPERM CELL SUBPOPULATIONS BEARING A SPECIFIC GENETIC SIGNATURE	United States - (US)	62/553771	9/1/2017
HYDROPHOBIC COATING FOR MICROFLUIDIC CHIPS	United States - (US)	62/393624	9/12/2016
METHOD AND SYSTEM FOR HYDROPHOBIC COATING OF MICROFLUIDIC CHIPS	United States - (US)	15/702452	9/12/2017
CYTOMETER FLUORESCENCE SENSING CIRCUITRY USING AVALANCHE PHOTODIODE	United States - (US)	62/559336	9/15/2017
COMPOSITIONS AND METHODS FOR IMPROVED GAMETE VIABILITY AND FUNCTION	United States - (US)	62/578959	10/30/2017
AUTOGATE	United States - (US)	62/584423	11/10/2017
SYSTEMS AND METHODS FOR PARTICLE FOCUSING IN MICROCHANNELS	United States - (US)	62/675512	5/23/2018

APPARATUS AND METHOD FOR CELL KILL CONFIRMATION	United States - (US)	62/685,614	6/15/2018
CYTOMETER SPERM SEX SENSING APPARATUS WITH AN AVALANCHE PHOTODIODE	United States - (US)	16/056003	8/6/2018
METHODS AND SYSTEMS FOR ASSESSING AND/OR QUANTIFYING SPERM CELL SUBPOPULATIONS BEARING A SPECIFIC GENETIC SIGNATURE	United States - (US)	16/121077	9/4/2018
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	United States - (US)	16/239297	1/3/2019
MICROFLUIDIC SYSTEM AND METHOD WITH FOCUSED ENERGY APPARATUS	United States - (US)	16/279430	2/19/2019
METHOD AND SYSTEM FOR HYDROPHOBIC COATING OF MICROFLUIDIC CHIPS	Singapore - (SG)	11201902125U	9/12/2017
MICROFLUIDIC SYSTEM AND METHOD WITH FOCUSED ENERGY APPARATUS	Patent Cooperation Treaty - (WO)	PCT/IB2014/001425	6/18/2014
METHOD AND APPARATUS FOR SORTING CELLS	Patent Cooperation Treaty - (WO)	PCT/US2006/003462	2/1/2006
METHODS FOR SEXING NON-HUMAN MAMMALS	Patent Cooperation Treaty - (WO)	PCT/GB2000/004223	11/3/2000
MICROFLUIDIC CHIP	Patent Cooperation Treaty - (WO)	PCT/US2013/050669	7/16/2013
TIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	Patent Cooperation Treaty - (WO)	PCT/US2004/029053	9/3/2004
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Patent Cooperation Treaty - (WO)	PCT/US2003/023822	7/31/2002
METHOD AND SYSTEM FOR HYDROPHOBIC COATING OF MICROFLUIDIC CHIPS	Patent Cooperation Treaty - (WO)	PCT/IB2017/001289	9/12/2017
METHODS AND SYSTEMS FOR ASSESSING AND/OR QUANTIFYING SEX SKEWED SPERM CELL POPULATIONS	Patent Cooperation Treaty - (WO)	PCT/IB2018/056710	9/3/2018
CYTOMETER SPERM SEX SENSING APPARATUS WITH AN AVALANCHE PHOTODIODE	Patent Cooperation Treaty - (WO)	PCT/GB2018/052633	9/14/2018
COMPOSITIONS AND METHODS FOR IMPROVED GAMETE VIABILITY AND FUNCTION	Patent Cooperation Treaty - (WO)	PCT/IB2018/001403	10/30/2018
SYSTEM AND METHODS FOR SUB-POPULATION IDENTIFICATION	Patent Cooperation Treaty - (WO)	PCT/US2018/067374	12/21/2018
FOCUSED ENERGY DEVICE FOR ENRICHMENT OF SELECTED COMPONENTS IN FLOW STREAM OF MICROFLUIDIC CHIP	New Zealand - (NZ)	720575	6/18/2014
FOCUSED ENERGY DEVICE FOR ENRICHMENT OF SELECTED COMPONENTS IN FLOW STREAM OF MICROFLUIDIC CHIP	New Zealand - (NZ)	735496	6/18/2014
Method and apparatus for sorting cells	Japan - (JP)	2011-226095	10/13/2011
MICROFLUIDIC SYSTEM AND METHOD WITH FOCUSED ENERGY APPARATUS	Japan - (JP)	2016-551082	6/18/2014
MICROFLUIDIC CHIP	Japan - (JP)	2016-527978	7/16/2013
MULTIPLE LAMINAR FLOW-BASED PARTICLE AND CELLULAR SEPARATION WITH LASER STEERING	Japan - (JP)	2016-185743	4/28/2015
MICROFLUIDIC CHIP DESIGN	Japan - (JP)	2017-168904	7/16/2013

METHOD AND SYSTEM FOR HYDROPHOBIC COATING OF MICROFLUIDIC CHIPS	Japan - (JP)	TBD	9/12/2017
MICROFLUIDIC SYSTEM AND METHOD WITH FOCUSED ENERGY APPARATUS	Israel - (IL)	245431	6/18/2014
MICROFLUIDIC CHIP	Israel - (IL)	243630	7/16/2013
MICROFLUIDIC SYSTEM AND METHOD WITH FOCUSED ENERGY APPARATUS	India - (IN)	3425/DELNP/2015	4/23/2015
MICROFLUIDIC CHIP	India - (IN)	3429/DELNP/2015	7/16/2013
METHOD AND SYSTEM FOR HYDROPHOBIC COATING OF MICROFLUIDIC CHIPS	India - (IN)	201917009874	9/12/2017
METHOD AND APPARATUS FOR SORTING CELLS	Hong Kong - (HK)	15104224.3	2/1/2006
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Hong Kong - (HK)	15112599.3	7/31/2003
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Hong Kong - (HK)	14100382.0	7/31/2003
MICROFLUIDIC CHIP	Hong Kong - (HK)	16112846.3	7/16/2013
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	Hong Kong - (HK)	18104720.9	7/31/2003
MICROFLUIDIC SYSTEM AND METHOD WITH FOCUSED ENERGY APPARATUS	Hong Kong - (HK)	17100364.9	6/18/2014
METHOD AND APPARATUS FOR SORTING CELLS	Hong Kong - (HK)	17100008.1	2/1/2006
METHODS FOR SEXING NON-HUMAN MAMMALS	Great Britain - (GB)	9926161.2	11/4/1999
MICROFLUIDIC SYSTEM AND METHOD WITH FOCUSED ENERGY APPARATUS	European Patent Convention - (EP)	14766801.6	6/18/2014
Multiple laminar flow-based particle and cellular separation with laser steering	European Patent Convention - (EP)	11193936.9	9/3/2004
Method and apparatus for sorting cells	European Patent Convention - (EP)	11185768.6	2/1/2006
Method and apparatus for sorting cells	European Patent Convention - (EP)	14172013.6	2/1/2006
MICROFLUIDIC CHIP	European Patent Convention - (EP)	13889551.1	7/16/2013
System and method of sorting materials using holographic laser steering	European Patent Convention - (EP)	14168200.5	7/31/2003
SYSTEM AND METHOD OF SORTING MATERIALS USING HOLOGRAPHIC LASER STEERING	European Patent Convention - (EP)	17172322.4	7/31/2003
METHOD AND APPARATUS FOR SORTING CELLS	European Patent Convention - (EP)	16182851.2	2/1/2006
METHOD AND SYSTEM FOR HYDROPHOBIC COATING OF MICROFLUIDIC CHIPS	European Patent Convention - (EP)	17808998.3	9/12/2017
MICROFLUIDIC SYSTEM AND METHOD WITH FOCUSED ENERGY APPARATUS	China P.R. - (CN)	201480071952.0	6/18/2014
Microfluidic chip	China P.R. - (CN)	201380079634.4	7/16/2013

Systems and method of sorting materials using holographic laser	China P.R. - (CN)	201310236687.4	7/31/2003
METHOD AND SYSTEM FOR HYDROPHOBIC COATING OF MICROFLUIDIC CHIPS	China P.R. - (CN)	PCT/IB2017/001289	9/12/2017
MICROFLUIDIC SYSTEM AND METHOD WITH FOCUSED ENERGY APPARATUS	Canada - (CA)	2929275	6/18/2014
METHOD AND SYSTEM FOR HYDROPHOBIC COATING OF MICROFLUIDIC CHIPS	Canada - (CA)	3034007	9/12/2017
MICROFLUIDIC SYSTEM AND METHOD WITH FOCUSED ENERGY APPARATUS	Brazil - (BR)	BR112016009768-8	6/18/2014
Method and apparatus for sorting cells	Brazil - (BR)	BR122017014567-3	2/1/2006
MICROFLUIDIC SYSTEM AND METHOD WITH FOCUSED ENERGY APPARATUS	Brazil - (BR)	BR122017012966-0	6/18/2014
Microfluidic system and method with focused energy apparatus	Australia - (AU)	2014343391	6/18/2014