## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4328784

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

## **CONVEYING PARTY DATA**

Name	Execution Date
AGENA BIOSCIENCE, INC.	03/17/2017

## **RECEIVING PARTY DATA**

Name:	MIDCAP FINANCIAL TRUST, AS AGENT
Street Address:	7255 WOODMONT AVE., SUITE 200
Internal Address:	C/O MIDCAP FINANCIAL SERVICES, LLC, AS SERVICER
City:	BETHESDA
State/Country:	MARYLAND
Postal Code:	20814

### **PROPERTY NUMBERS Total: 52**

Property Type	Number
Patent Number:	6024925
Patent Number:	7285422
Patent Number:	7232688
Patent Number:	8821816
Patent Number:	8999266
Application Number:	14656267
Patent Number:	7917301
Patent Number:	8315805
Patent Number:	7019288
Patent Number:	7820378
Patent Number:	8003317
Patent Number:	8349566
Patent Number:	9068223
Application Number:	14720179
Application Number:	13126684
Application Number:	13551486
Application Number:	13790996
Patent Number:	9305756
Application Number:	15062778

PATENT REEL: 042050 FRAME: 0888

504282103

Property Type	Number
Patent Number:	6558623
Patent Number:	7025933
Application Number:	15136024
Application Number:	15268058
Patent Number:	RE41005
Patent Number:	RE44693
Patent Number:	6387628
Patent Number:	6207370
Patent Number:	6322970
Patent Number:	6104028
Patent Number:	6265716
Patent Number:	6090558
Patent Number:	6764822
Patent Number:	9394565
Patent Number:	7785843
Patent Number:	7867714
Patent Number:	8133701
Patent Number:	7902345
Patent Number:	8383795
Patent Number:	9051608
Patent Number:	8206927
Patent Number:	9068953
Application Number:	14516436
Application Number:	14402658
Patent Number:	6979425
Patent Number:	6360792
Patent Number:	6148878
Patent Number:	6569385
Patent Number:	9249456
Patent Number:	7888127
Patent Number:	9310378
Patent Number:	8673571
Application Number:	13932615

### **CORRESPONDENCE DATA**

**Fax Number:** (703)712-5050

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:** 703-712-5352

PATENT

**REEL: 042050 FRAME: 0889** 

**Email:** jmiller@mcguirewoods.com

Correspondent Name: JOYCE MILLER

Address Line 1: 1750 TYSONS BLVD.

Address Line 2: SUITE 1800

Address Line 4: TYSONS, VIRGINIA 22102

ATTORNEY DOCKET NUMBER:	2061695-0035
NAME OF SUBMITTER:	JOYCE MILLER
SIGNATURE:	/Joyce Miller/
DATE SIGNED:	03/21/2017

#### **Total Attachments: 16**

source=MidCap Agena Intellectual Property Security Agreement2#page1.tif source=MidCap Agena Intellectual Property Security Agreement2#page2.tif source=MidCap\_Agena\_Intellectual Property Security Agreement2#page3.tif source=MidCap Agena Intellectual Property Security Agreement2#page4.tif source=MidCap\_Agena\_Intellectual Property Security Agreement2#page5.tif source=MidCap Agena Intellectual Property Security Agreement2#page6.tif source=MidCap Agena Intellectual Property Security Agreement2#page7.tif source=MidCap Agena Intellectual Property Security Agreement2#page8.tif source=MidCap\_Agena\_Intellectual Property Security Agreement2#page9.tif source=MidCap Agena Intellectual Property Security Agreement2#page10.tif source=MidCap Agena Intellectual Property Security Agreement2#page11.tif source=MidCap\_Agena\_Intellectual Property Security Agreement2#page12.tif source=MidCap\_Agena\_Intellectual Property Security Agreement2#page13.tif source=MidCap Agena Intellectual Property Security Agreement2#page14.tif source=MidCap Agena Intellectual Property Security Agreement2#page15.tif source=MidCap Agena Intellectual Property Security Agreement2#page16.tif

#### INTELLECTUAL PROPERTY SECURITY AGREEMENT

This Intellectual Property Security Agreement is entered into as of the 17th day of March, 2017 by and among MIDCAP FINANCIAL TRUST, a Delaware statutory trust, ("Agent"), AGENA BIOSCIENCE, INC., a Delaware corporation (the "Grantor").

#### **RECITALS**

- A. The Lenders (as defined below) have agreed to make certain advances of money and to extend certain financial accommodation to Grantor (the "Credit Extensions") in the amounts and manner set forth in that certain Credit and Security Agreement by and among Agent, the financial institutions party thereto from time to time (collectively, the "Lenders"), and Grantor, dated as of March 17, 2017 (as the same may be amended, modified or supplemented from time to time, the "Credit Agreement"; capitalized terms used herein are used as defined in the Credit Agreement). The Lenders are willing to make the Credit Extensions to Grantor, but only upon the condition, among others, that Grantor shall grant to Agent, for the ratable benefit of the Lenders, a security interest in certain Copyrights, Trademarks, Patents, and Mask Works (as each term is described below) to secure the obligations of Grantor under the Credit Agreement.
- B. Pursuant to the terms of the Credit Agreement, Grantor has granted to Agent, for the ratable benefit of the Lenders, a security interest in all of Grantor's right, title and interest, whether presently existing or hereafter acquired, in, to and under all of the Collateral (as specifically defined in the Credit Agreement).
- NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, and intending to be legally bound, as collateral security for the prompt and complete payment when due of its obligations under the Credit Agreement, Grantor hereby represents, warrants, covenants and agrees as follows:

#### **AGREEMENT**

To secure its obligations under the Credit Agreement, each Grantor grants and pledges to Agent, for the ratable benefit of the Lenders, a security interest in all of such Grantor's right, title and interest in, to and under its intellectual property (all of which shall collectively be called the "Intellectual Property Collateral"), including, without limitation, the following:

- (a) Any and all copyright rights, copyright applications, copyright registrations and like protections in each work or authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret, now or hereafter existing, created, acquired or held, including without limitation those set forth on <a href="Exhibit A">Exhibit A</a> attached hereto (collectively, the "Copyrights");
- (b) Any and all trade secrets, and any and all intellectual property rights in computer software and computer software products now or hereafter existing, created, acquired or held;
- (c) Any and all design rights that may be available to such Grantor now or hereafter existing, created, acquired or held;

- (d) All patents, patent applications and like protections including, without limitation, improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same, including without limitation the patents and patent applications set forth on <u>Exhibit B</u> attached hereto (collectively, the "Patents");
- (e) Any trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of such Grantor connected with and symbolized by such trademarks, including without limitation those set forth on Exhibit C attached hereto (collectively, the "Trademarks");
- (f) All mask works or similar rights available for the protection of semiconductor chips, now owned or hereafter acquired, including, without limitation those set forth on Exhibit D attached hereto (collectively, the "Mask Works");
- (g) Any and all claims for damages by way of past, present and future infringements of any of the rights included above, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the intellectual property rights identified above;
- (h) All licenses or other rights to use any of the Copyrights, Patents, Trademarks, or Mask Works and all license fees and royalties arising from such use to the extent permitted by such license or rights;
- (i) All amendments, extensions, renewals and extensions of any of the Copyrights, Trademarks, Patents, or Mask Works; and
- (j) All proceeds and products of the foregoing, including without limitation all payments under insurance or any indemnity or warranty payable in respect of any of the foregoing.

This security interest is granted in conjunction with the security interest granted to Agent, for the ratable benefit of the Lenders, under the Credit Agreement. The rights and remedies of Agent with respect to the security interest granted hereby are in addition to those set forth in the Credit Agreement and the other Financing Documents, and those which are now or hereafter available to Agent as a matter of law or equity. Each right, power and remedy of Agent provided for herein or in the Credit Agreement or any of the Financing Documents, or now or hereafter existing at law or in equity shall be cumulative and concurrent and shall be in addition to every right, power or remedy provided for herein and the exercise by Agent of any one or more of the rights, powers or remedies provided for in this Intellectual Property Security Agreement, the Credit Agreement or any of the other Financing Documents, or now or hereafter existing at law or in equity, shall not preclude the simultaneous or later exercise by any person, including Agent, of any or all other rights, powers or remedies.

[Remainder of page intentionally blank; signature page follows.]

IN WITNESS WHEREOF, the parties have caused this Intellectual Property Security Agreement to be duly executed by its officers thereunto duly authorized as of the first date written above.

**GRANTOR:** 

Address of Grantor:

AGENA BIOSCIENCE, INC.

Agena Bioscience, Inc. 4755 Eastgate Mall San Diego, CA 92121

Attention: Terry Kinninger, CFO

E-Mail: Terry.Kinninger@agenabio.com

Terry Kanninger (SEAL)

Chief Financial Officer

#### AGENT:

## Address of Agent:

MidCap Financial Trust c/o MidCap Financial Services, LLC, as servicer 7255 Woodmont Ave, Suite 200 Bethesda, MD 20814

Attn: Account Manager for Agena transaction

Facsimile: 301-941-1450

Email: notices@midcapfinancial.com

## MIDCAP FINANCIAL TRUST

By: Apollo Capital Management, L.P., its investment manager

By: Apollo Capital Management GP, LLC, its general partner

By: (SEAL)
Name: Maurice Amsellem

Title: Authorized Signatory

# EXHIBIT A

Copyrights

NONE.

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# EXHIBIT B

**Patents** 

SEE ATTACHED.

WEST\275501982.2 87187188

Referen ce No.	PATENT OR PATENT APPLICATION TITLE	Application Type/No. Country	Patent or Publication Number	Filing Date	Status
1.	SEQ-2001	·			
2.	Systems and Methods for Preparing and Analyzing Low Volume Analyte Array Elements	СР	US6024925	1/23/97	Issued
3.	Systems and Methods for Preparing and Analyzing Low Volume Analyte Array Elements	UT2	US7285422	1/23/97	Issued
4.	Systems and Methods for Preparing and Analyzing Low Volume Analyte Array Elements	DV	US7232688	7/30/99	Issued
5.	Systems and Methods for Preparing and Analyzing Low Volume Analyte Array Elements	DV2	US6569385	10/28/99	Issued
6.	Matrix-Assisted Laser Desorption Ionization Mass Spectrometry Substrates Having Low Volume Matrix Array Elements	СТ	8821816	5/19/08	Issued
	SEQ 2046				
7.	Method and Apparatus for Delivery of Submicroliter Volumes onto a Substrate	CT2	8999266	11/21/12	Issued
	Method and Apparatus for Delivery of Submicroliter Volumes onto a Substrate	СТЗ	14656267	3/12/15	Pending
8.	SEQ 2049  Method and Device for Identifying a Biological Sample	UT	US7917301	9/19/00	Issued
9.	Method and Device for Identifying a Biological Sample	AU	AU776811B2	10/13/00	Issued
10.	Method and Device for Identifying a Biological Sample	DE	EP1350211	9/18/01	Issued
11.	Method and Device for Identifying a Biological Sample	FR	EP1350211	9/18/01	Issued
12.	Method and Device for Identifying a Biological Sample	GB	EP1350211	9/18/01	Issued
13.					
14.	Method and Device for Identifying a Biological Sample	IT	EP1350211	9/18/01	Issued
	SEQ 2050				
15.	System and Method for Testing a Biological Sample	СР	US8315805	4/22/02	Issued
16.	System and Method for Testing a Biological Sample	EP	EP1390900	4/22/02	Pending
17.	SEQ 2066  Methods of Making Substrates for Mass Spectrometry Analysis and Related Devices	UT	US7019288	9/29/04	Issued
	SEQ 2073				
18.	Fragmentation-based Methods and Systems for Sequence Variation Detection and Discovery	UT	US7820378	11/26/03	Issued
19.	Fragmentation-based Methods and Systems for Sequence Variation Detection and Discovery	AU	AU3298733B B	11/26/03	Issued
20.	Fragmentation-based Methods and Systems for Sequence Variation Detection and Discovery	CA	2507189	11/26/03	Pending
21.	Fragmentation-based Methods and Systems for Sequence Variation Detection and Discovery	CN	CN1774511B	11/26/03	Issued
22.	Fragmentation-based Methods and Systems for Sequence Variation Detection and Discovery	EP	EP1613723	11/26/03	Issued

Referen		Application Type/No.	Patent or Publication	Filing	Charles
ce No.	PATENT OR PATENT APPLICATION TITLE	Country	Number	Date	Status
23.	Fragmentation-based Methods and Systems for Sequence Variation Detection and Discovery	HK	1087436		Issued
	Sequence variation Detection and Discovery	пк	108/430		Issueu
24.					
	Fragmentation-based Methods and Systems for				
25.	Sequence Variation Detection and Discovery	JP	4786904B2	11/26/03	Issued
	SEQ 2079				
	Methods for High Level Multiplexed Polymerase				
	Chain Reactions and Homogeneous Mass Extension		EP1660680B		
26.	Reactions	EP	1	7/30/04	Issued
	Methods for High Level Multiplexed Polymerase				
	Chain Reactions and Homogeneous Mass Extension		EP1660680B		
27.	Reactions	FR	1	7/30/04	Issued
	Methods for High Level Multiplexed Polymerase				
	Chain Reactions and Homogeneous Mass Extension		EP1660680B		
28.	Reactions	DE	1	7/30/04	Issued
	Methods for High Level Multiplexed Polymerase				
	Chain Reactions and Homogeneous Mass Extension		EP1660680B		
29.	Reactions	UK	1	7/30/04	Issued
	Methods for High Level Multiplexed Polymerase				
	Chain Reactions and Homogeneous Mass Extension				
30.	Reactions	UT	US8003317	7/30/04	Issued
	Methods for High Level Multiplexed Polymerase				
	Chain Reactions and Homogeneous Mass Extension				
31.	Reactions	CT	US8349566	7/28/11	Issued
	Methods for High Level Multiplexed Polymerase				
	Chain Reactions and Homogeneous Mass Extension				
32.	Reactions	CT2	9068223	12/18/12	Issued
	Methods for High Level Multiplexed Polymerase				
	Chain Reactions and Homogeneous Mass Extension				
33.	Reactions	CT3	14720179		Pending
	Methods for High Level Multiplexed Polymerase				
	Chain Reactions and Homogeneous Mass Extension				
34.	Reactions	GB	EP2107129B	3/10/09	Issued
	Methods for High Level Multiplexed Polymerase				
	Chain Reactions and Homogeneous Mass Extension				
35.	Reactions	DE	EP2107129B	3/10/09	Issued
	Methods for High Level Multiplexed Polymerase				
	Chain Reactions and Homogeneous Mass Extension			0.42.0.40.5	
36.	Reactions	IE	EP2107129B	3/10/09	Issued
	SEQ 2080				
	Base Specific Cleavage of Methylation-specific				
	Amplification Products in Combination with Mass		AU5230936B		
37.	Analysis	AU	2	3/24/05	Issued
	Base Specific Cleavage of Methylation-specific				
	Amplification Products in Combination with Mass				
38.	Analysis	CA	CA2561381	3/24/05	Issued
	Base Specific Cleavage of Methylation-specific				
	Amplification Products in Combination with Mass		EP1727911B		
39.	Analysis	DE	1	3/24/05	Issued

Base Amplif 40. Analys 41.  Base Amplif 42. Analys Base Amplif 43. Analys Base Amplif 44. Analys Base Amplif 45. Analys  SEQ 6 Method 46. Spectro Compo 47. Spectro Compo 48. Spectro Compo 50. Spectro Compo 51. Spectro Compo 52. Spectro Compo 53. Spectro Compo 54. Spectro Compo 55. Spectro Compo 56. Spectro Compo 57. Spectro Compo Comp	ATENT OR PATENT APPLICATION TITLE	Application Type/No. Country	Patent or Publication Number	Filing Date	Status
40. Analys 41. Base Amplit 42. Analys Base Amplit 43. Analys Base Amplit 44. Analys Base Amplit 45. Analys Base Amplit 46. Spectra Compo 47. Spectra Compo 48. Spectra Compo 50. Spectra Compo 51. Spectra Compo 52. Spectra Compo 53. Spectra Compo 54. Spectra Compo 55. Spectra Compo 56. Spectra Compo 57. Spectra	se Specific Cleavage of Methylation-specific applification Products in Combination with Mass	Country	11441110	Dutt	Status
41.  Base Amplit  42. Analys Base Amplit  43. Analys Base Amplit  44. Analys Base Amplit  45. Analys  SEQ 6 Method 46. Spectra Compo 47. Spectra Compo 48. Spectra Compo 50. Spectra Compo 51. Spectra Compo 52. Spectra Compo 53. Spectra Compo 54. Spectra Compo 55. Spectra Compo 56. Spectra Compo 57. Spectra		HK	1098792B	3/24/05	Issued
Base Amplit 42. Analys Base Amplit 43. Analys Base Amplit 44. Analys Base Amplit 45. Analys  SEQ 6 Method 46. Spectro Compo 47. Spectro Compo 48. Spectro Compo 50. Spectro Compo 51. Spectro Compo 52. Spectro Compo 53. Spectro Compo 54. Spectro Compo 55. Spectro Compo 56. Spectro Compo 57. Spectro Compo Co	,				
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48. Spectro Compo 49. Spectro Compo 50. Spectro Compo 51. Spectro Compo 52. Spectro Compo 53. Spectro Compo 54. Spectro Compo 55. Spectro Compo 56. Spectro Compo 57. Spectro Compo 57. Spectro Compo	mpositions and Processes for Improved Mass	CT	0210270	1/7/11	T
48. Spectro Compo  49. Spectro Compo  50. Spectro Compo  51. Spectro Compo  52. Spectro Compo  53. Spectro Compo  54. Spectro Compo  55. Spectro Compo  56. Spectro Compo  57. Spectro Compo  58. Spectro Compo  59. Spectro Compo  50. Spectro Compo  57. Spectro C	ectrometry Analysis mpositions and Processes for Improved Mass	CT	9310378	1/7/11	Issued
49. Spectro Compo 50. Spectro Compo 51. Spectro Compo 52. Spectro Compo 53. Spectro Compo 54. Spectro Compo 55. Spectro Compo 56. Spectro Compo 57. Spectro Compo	ectrometry Analysis	AU	2009205404	1/14/09	Issued
49. Spectro Compo 50. Spectro Compo 51. Spectro Compo 52. Spectro Compo 53. Spectro Compo 54. Spectro Compo 55. Spectro Compo 56. Spectro Compo 57. Spectro Compo 57. Spectro Compo	mpositions and Processes for Improved Mass	AU	2007203404	1/14/07	Issued
50. Spectro Compo 51. Spectro Compo 52. Spectro Compo 53. Spectro Compo 54. Spectro Compo 55. Spectro Compo 56. Spectro Compo 57. Spectro Compo 57. Spectro Compo	ectrometry Analysis	AU2	2014203336	1/14/09	Pending
50. Spectro Compo 51. Spectro Compo 52. Spectro Compo 53. Spectro Compo 54. Spectro Compo 55. Spectro Compo 56. Spectro Compo 57. Spectro Compo	mpositions and Processes for Improved Mass	_			
51. Spectro Compo 52. Spectro Compo 53. Spectro Compo 54. Spectro Compo 55. Spectro Compo 56. Spectro Compo 57. Spectro Compo	ectrometry Analysis	CA	2711943	1/14/09	Pending
52. Spectro Compo 53. Spectro Compo 54. Spectro Compo 55. Spectro Compo 56. Spectro Compo 57. Spectro Compo	mpositions and Processes for Improved Mass				
52. Spectro Compo 53. Spectro Compo 54. Spectro Compo 55. Spectro Compo 56. Spectro Compo 57. Spectro Compo	ectrometry Analysis	CN	101965221	1/14/09	Pending
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53. Spectro Compo 54. Spectro Compo 55. Spectro Compo 56. Spectro Compo 57. Spectro Compo	ectrometry Analysis	CN2	27	1/14/09	Pending
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54. Spectro Compo 55. Spectro Compo 56. Spectro Compo 57. Spectro Compo Compo	ectrometry Analysis	EA	017342B1	1/14/09	Issued
55. Spectro Compo 56. Spectro Compo 57. Spectro Compo Compo	mpositions and Processes for Improved Mass ectrometry Analysis	EP	EP2242561	1/14/09	Issued
55. Spectro Compo 56. Spectro Compo 57. Spectro Compo	mpositions and Processes for Improved Mass	LIF	EF2242301	1/14/09	Issued
56. Spectro Compo 57. Spectro Compo	ectrometry Analysis	EP2	161813001		Pending
56. Spectro Compo 57. Spectro Compo	mpositions and Processes for Improved Mass		WO20090918		1 viiiiiig
57. Compo Compo	ectrometry Analysis	HK	41A2	4/20/11	Pending
Compo	mpositions and Processes for Improved Mass		WO20090918		
	ectrometry Analysis	IN	41A2	1/14/09	Pending
	mpositions and Processes for Improved Mass				
	ectrometry Analysis	JР	5400799B1	1/14/09	Issued
	mpositions and Processes for Improved Mass	IVD.	WO20090918	1/14/00	D 11
	ectrometry Analysis	KR	41A2	1/14/09	Pending
	mpositions and Processes for Improved Mass	SC	162201	1/14/00	Iggrad
	ectrometry Analysis mpositions and Processes for Improved Mass	SG	163201	1/14/09	Issued
	ectrometry Analysis	JP2	5651842	1/14/09	Issued

Referen ce No.	PATENT OR PATENT APPLICATION TITLE	Application Type/No. Country	Patent or Publication Number	Filing Date	Status
	SEQ 6020				
	Products and processes for multiplex nucleic acid				+
62.	identification	US	20120046178	10/27/09	Pending
02.	Products and processes for multiplex nucleic acid	0.5	20120010170	10/2//07	Tonding
63.	identification	CA	2742272	10/27/09	Pending
	Products and processes for multiplex nucleic acid				
64.	identification	EP	EP2356259	10/27/09	Pending
	Products and Processes for Multiplex Nucleic Acid		US20130017		
65.	Identification	CT2T	960	7/17/12	Pending
	Products and Processes for Multiplex Nucleic Acid		US20140011		
66.	Identification	CT3	195	3/8/13	Pending
<i>(</i> <b>7</b>	Products and Processes for Multiplex Nucleic Acid	EDA	ED2710144	5/10/12	D 1
67.	Identification	EP2	EP2710144	5/18/12	Pending
68.	Products and Processes for Multiplex Nucleic Acid Identification	JP	2014511601	5/18/12	Allowed
08.	Products and Processes for Multiplex Nucleic Acid	JP	2014311001	3/16/12	Allowed
69.	Identification	JP2	201696686	5/18/12	Pending
07.	Products and Processes for Multiplex Nucleic Acid	J1 2	201070080	3/10/12	Teliding
70.	Identification	CN	80035668.9	5/18/12	Pending
70.	Products and Processes for Multiplex Nucleic Acid	CIT	00032000,3	3/10/12	Tonding
71.	Identification	CA2	2835942	5/18/12	Pending
	Products and Processes for Multiplex Nucleic Acid				
72.	Identification	EA	201391723	5/18/12	Pending
	Products and Processes for Multiplex Nucleic Acid				
73.	Identification	AU	2012254985	5/18/12	Pending
	Products and Processes for Multiplex Nucleic Acid				
74.	Identification	DV	13/790996	3/8/13	Pending
	Products and Processes for Multiplex Nucleic Acid	DC2	PCT/US2012/	Z/10/10	D 1:
75.	Identification	PC2	038710	5/18/12	Pending
	SEQ 6061				
	Preparation Enhancements And Methods Of Use For				
76.	Maldi Mass Spectrometry	UTt	9305756	3/13/13	Issued
	Preparation Enhancements And Methods Of Use For				
77.	Maldi Mass Spectrometry	CT	15/062,778	3/7/16	Pending
	Preparation Enhancements And Methods Of Use For	n cm	PCT/US2014/	0 (0 (1 )	L
78.	Maldi Mass Spectrometry	PCT	020001	3/3/14	Pending
	Preparation Enhancements And Methods Of Use For	ATT	2014240722	2/2/14	Danding
	Maldi Mass Spectrometry	AU	2014249722	3/3/14	Pending
	Preparation Enhancements And Methods Of Use For Maldi Mass Spectrometry	CA	2902323	3/3/14	Pending
	Preparation Enhancements And Methods Of Use For	CA	20148001456	3/3/14	Fending
	Maldi Mass Spectrometry	CN	72	3/3/14	Pending
	Preparation Enhancements And Methods Of Use For		1.2	5/5/17	Tonding
	Maldi Mass Spectrometry	EP	147107619	3/3/14	Pending
	RIGAKU ACQUIRED IP  Microarray Dispensing with Real Time Verification				
79.	and Inspection	US	6558623	5/6/03	Issued
1).	dia inspection	0.0	0550025	210103	155404

Referen	DATENT OF DATENT ADDITION THE E	Application Type/No.	Patent or Publication	Filing	States
ce No.	PATENT OR PATENT APPLICATION TITLE and Inspection	Country	Number	Date	Status
	<u> </u>				
81.	Microarray Dispensing with Real Time Verification and Inspection	US	7025933	4/11/06	Issued
01.	Microarray Dispensing with Real Time Verification	0.5	1023733	4/11/00	155400
82.	and Inspection	EP	EP1638689	7/21/10	Issued
	7001				
	Multiplexed Method for the Identification and				
	Quantification of Minor Alleles and Polymorphisms	UT	15/136,024	4/22/16	Pending
	Multiplexed Method for the Identification and		PCT/US2016		
	Quantification of Minor Alleles and Polymorphisms	PCT	028971	4/22/16	Pending
	7002				
	Multiplex Methods for the Detection and		PCT/US2016		
	Quantification of Minor Variants	PCT	6028980	4/22/16	Pending
	7003				
	Methods and Compositions for the Quantitation of				
	Mitochondrial Nucleic Acid	UT	15/268,058	9/16/16	Pending
	Methods and Compositions for the Quantitation of Mitochondrial Nucleic Acid	PCT	PCT/US2016 6052279	9/16/16	Pending
	Wittochondriai Nucicic Acid	FCI	0032279	9/10/10	rending
			+		
	SEQ 2003  Compositions and Methods for Immobilizing Nucleic	LIC Daissus			
83.	Acids to Solid Supports	US_Reissue Exam	RE41,005	10/17/02	Issued
84.	Beads Bound to a Solid Support and to Nucleic Acids	US DV	RE44,693	7/22/09	Issued
04.	• •	US_DV	KE44,093	1122109	Issueu
	SEQ 2016				
85.					
86.	Diagnostics Based on Mass Spectrometric Detection of Translated Target Polypeptides	DV	6387628	9/18/00	Issued
87.	Mass Spectrometric Detection of Polypeptides	UT	US6207370	9/2/97	Issued
88.	Mass Spectrometric Detection of Polypeptides	СР	US6322970	9/2/98	Issued
89.					
	SEQ 2058				
	Volatile Matrices for Matrix-assisted Laser				
90.	Desorption/Ionization Mass Spectrometry	UT	US6104028	5/29/98	Issued
91.	Volatile Matrices for Matrix-assisted Laser Desorption/Ionization Mass Spectrometry	CT	US6265716B	2/29/00	Issued
71.	Description/tomzation iviass spectrometry	C1	1	2/27/00	155000
					1
	SEQ 2059				
92.	DNA Typing by Mass Spectrometry with Polymorphic DNA Repeat Markers	UT	US6090558	9/18/98	Iccued
92.	DNA Typing by Mass Spectrometry with	U I	0.80090338	9/10/98	Issued
93.	Polymorphic DNA Repeat Markers	DV	US6764822	4/3/00	Issued
	- ypp				

Referen ce No.	PATENT OR PATENT APPLICATION TITLE	Application Type/No. Country	Patent or Publication Number	Filing Date	Status
	SEQ 2069	<u> </u>			
94.	Allele-specific Sequence Variation Analysis	UT	9394565	9/2/04	Issued
	SEQ 3001				
95.	Target-specific Componers and Methods of Use	UT	7785843	6/23/04	Issued
96.	Target-specific Componers and Methods of Use	DV	7867714	6/22/09	Issued
97.	Target-specific Compomers and Methods of Use	AU	AU5327980B	6/22/05	Issued
98.	Target-specific Componers and Methods of Use	CA	CA2569379A	6/22/05	Pending
99.	Target-specific Componers and Methods of Use	CN	CN10142693 2B	6/22/05	Issued
100.	Target-specific Componers and Methods of Use	ES	ES2406734	6/22/05	Pending
			EP1766092A		
101.	Target-specific Componers and Methods of Use	СН	2	6/22/05	Issued
102.	Target-specific Componers and Methods of Use	SE	EP1766092A	6/22/05	Issued
102.	ranget-specific Componiers and Methods of Use	SE	EP1766092A	0/22/03	Issueu
103.	Target-specific Componers and Methods of Use	DE	2	6/22/05	Issued
			EP1766092A		
104.	Target-specific Componers and Methods of Use	IE	2	6/22/05	Issued
105.	Target-specific Componers and Methods of Use	GB	EP1766092A	6/22/05	Issued
103.	ranget-specific componiers and intenious of osc	GB	EP1766092A	0/22/03	155000
106.	Target-specific Compomers and Methods of Use	NL	2	6/22/05	Issued
	SEQ 6003				
107.	Detection and Quantification of Biomolecules Using Mass Spectrometry	UT	US8133701	3/13/12	Issued
100	Detection and Quantification of Biomolecules Using	CD	1157002245	C/4/00	T 1
108.	Mass Spectrometry  Detection and Quantification of Biomolecules Using	СР	US7902345	6/4/08	Issued
109.	Mass Spectrometry	CT	US8383795	3/3/11	Issued
	Detection and Quantification of Biomolecules Using		AU7352560B		
110.	Mass Spectrometry	AU	2	12/4/07	Issued
111.	Detection and Quantification of Biomolecules Using Mass Spectrometry	CA	CA2671864	12/4/07	Pending
111.	Detection and Quantification of Biomolecules Using	CA	CA20/1804	12/4/07	Pending
112.	Mass Spectrometry	FR	EP2099934	5/30/12	Issued
	Detection and Quantification of Biomolecules Using				
113.	Mass Spectrometry	DE	EP2099934	5/30/12	Issued
114.	Detection and Quantification of Biomolecules Using Mass Spectrometry	UK	EP2099934	5/30/12	Issued
114.	Detection and Quantification of Biomolecules Using	UK	L1 2077734	3/30/12	155ucu
115.	Mass Spectrometry	JР	5382802	12/4/07	Issued
	Detection and Quantification of Biomolecules Using				
116.	Mass Spectrometry	CT2	US9051608	2/13/13	Issued
	SEQ 6004				

Referen ce No.	PATENT OR PATENT APPLICATION TITLE	Application Type/No. Country	Patent or Publication Number	Filing Date	Status
<b>cc</b> 110.	Method for Accurate Assessment of DNA Quality	Country	rumper	Date	Status
117.	After Bisulfite Treatment	US	8206927	6/26/12	Issued
	Method for Accurate Assessment of DNA Quality				
118.	After Bisulfite Treatment	CT	8673571	5/25/12	Issued
	SEQ 6009				
119.					
120.	Comparative Sequence Analysis Processes and Systems	AU	AU8240143B	4/13/08	Issued
<u> </u>	Comparative Sequence Analysis Processes and		CA2684217A		
121.	Systems	CA	A	4/13/08	allowed
	Comparative Sequence Analysis Processes and				
122.	Systems	DE	EP2145180B	4/13/08	Issued
	Comparative Sequence Analysis Processes and	****	1110001		
123.	Systems	HK	1140264	7/14/10	Pending
124.	Comparative Sequence Analysis Processes and Systems	CN	ZL20088001 6476.7	4/13/08	Iccued
124.	Comparative Sequence Analysis Processes and	CN	US20130337	4/13/06	Issued
125.	Systems Sequence Analysis Frocesses and	DV	446	5/16/13	Pending
120.	Comparative Sequence Analysis Processes and	<i>D</i> (	110	2/10/13	Tonding
126.	Systems	UK	EP2145180B	4/13/08	Issued
	Comparative Sequence Analysis Processes and				
127.	Systems	FR	EP2145180B	4/13/08	Issued
	SEQ 6010				<u> </u>
128.	Integrated Robotic Sample Transfer Device	CT	9068953	9/24/12	Issued
129.	Integrated Robotic Sample Transfer Device	CT2	14516436	10/16/14	Pending
	SEQ 6044				
130.					
150.	Methods and Compositions for Analyzing Nucleic				
131.	Acid	UT	14402658	5/16/13	Pending
	RIGAKU ACQUIRED IP				
132.	High Capacity Microarray Dispensing	US	6979425	12/27/05	Issued
133.	Automated Microplate Filling Device and Method	US	6360792	3/26/02	Issued
134.	Automated Microplate Filling Device and Method	US	6148878	11/21/00	Issued

# EXHIBIT C

## Trademarks

Mark	Application. No.	Registration No.	Status	Class(es)
EpiTYPER®				
UNITED STATES	78/979,370	3,363,895	REGISTERED	09, 42
iPLEX®				
UNITED STATES	78/521,743	3,228,569	REGISTERED	01, 42
iSEQ®				
UNITED STATES	77/349,991	4,031,877	REGISTERED	01, 09
OTTILD STITLES	111313,331	1,031,077	Tables	01, 07
MassARRAY®				
EUROPEAN UNION	001148634	001148634	REGISTERED	42
AUSTRALIA	921937	921937	REGISTERED	09
CANADA	1151971	TMA699061	REGISTERED	09
CHINA	3249717	3249717	REGISTERED	09
EUROPEAN UNION	002807113	002807113	REGISTERED	09
HONG KONG	200402014	200402014	REGISTERED	09
JAPAN	2001025246	0004654906	REGISTERED	01,05, 09, 42
SINGAPORE	T0210355C	T0210355C	REGISTERED	09
SOUTH KOREA	4020020036407	4005729450000	REGISTERED	09
TAIWAN	091030221	01065671	REGISTERED	09
UNITED STATES	76/379,539	2,878,299	REGISTERED	09
MassExtend®				
JAPAN	2001025245	0004654905	REGISTERED	01
UNITED STATES	76/227,337	2,767,429	REGISTERED	01
SpectroCHIP®				
GERMANY	39712778.2	39712778	REGISTERED	01, 05, 09
JAPAN	2001025247	0004654907	REGISTERED	01, 05, 09, 42
UNITED STATES	75/982,140	2,602,034	REGISTERED	01, 03, 07, 42
UNITED STATES	/3/362,140	2,002,034	REGISTERED	09
HemoCarta <sup>TM</sup>				
ELID ODE ANTINION	12014107	12014107	DECIGEDED	01.40
EUROPEAN UNION	12014106	12014106	REGISTERED	01, 42
Hemo ID <sup>TM</sup>				
CANADA	1668250		ALLOWED	01, 42
CHINA	14195855	14195855	REGISTERED	01, 42
EUROPEAN UNION	12699484	12699484	REGISTERED	01, 42
JAPAN	2014-21085	5728939	REGISTERED	01, 42
UNITED STATES	86/069,315	4,733,377	REGISTERED	01, 42
UNITED STATES	00/007,515	<b>T</b> , 133,311	REGISTERED	01, 72
LungCarta®	1174020	1174020	DECIGES 55	01.42
AUSTRALIA	1174938	1174938	REGISTERED	01, 42
EUROPEAN UNION	12015004	12015004	REGISTERED	01, 42
UNITED STATES	85/833,886	4,633,026	REGISTERED	01, 42

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Mark	Application. No.	Registration No.	Status	Class(es)
WIPO	1174938	1174938	REGISTERED	01, 42
LUNGFUSION	86/421,039		ALLOWED	01, 42
AGENA BIOSCIENCE				
AUSTRALIA	1244161	1244161	REGISTERED	09
CANADA	1707073		PENDING	09
CHINA	1244161	1244161	REGISTERED	09
EUROPEAN UNION	13552567	13552567	REGISTERED	09
JAPAN	1244161	1244161	REGISTERED	09
UNITED STATES	86/309,704		ALLOWED	09
WIPO	1244161	1244161	RENEWAL	09

## EXHIBIT D

Mask Works

NONE.

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> PATENT REEL: 042050 FRAME: 0906

RECORDED: 03/21/2017