

PATENT ASSIGNMENT COVER SHEET

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 Stylesheet Version v1.2

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
LOS ALAMOS NATIONAL SECURITY, LLC	11/01/2018

RECEIVING PARTY DATA

Name:	TRIAD NATIONAL SECURITY, LLC
Street Address:	LOS ALAMOS NATIONAL LABORATORY
Internal Address:	LC/TAS, P.O. BOX 1663
City:	LOS ALAMOS
State/Country:	NEW MEXICO
Postal Code:	87545

PROPERTY NUMBERS Total: 2

Property Type	Number
Application Number:	17008289
Application Number:	17008335

CORRESPONDENCE DATA

Fax Number: (206)682-6031

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: 2066224900

Email: AmandaG@SeedIP.com

Correspondent Name: SEED IP LAW GROUP LLP

Address Line 1: 701 5TH AVE.

Address Line 2: SUITE 5400

Address Line 4: SEATTLE, WASHINGTON 98104

ATTORNEY DOCKET NUMBER:	930185.410D1/D2
NAME OF SUBMITTER:	BROOKE L. SARGEANT, PH.D.
SIGNATURE:	/Brooke L. Sargeant/
DATE SIGNED:	05/12/2022

Total Attachments: 38

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PATENT

REEL: 060049 FRAME: 0751

PATENT ASSIGNMENT AGREEMENT

This **PATENT ASSIGNMENT AGREEMENT** (this "Agreement") is entered into by and among **Los Alamos National Security, LLC**, a Delaware Limited Liability Company, located at the Los Alamos National Laboratory, LC/TAS, P.O. Box 1663, Los Alamos, New Mexico 87545 and **Triad National Security, LLC**, a Delaware Limited Liability Company, located at the Los Alamos National Laboratory, LC/TAS, P.O. Box 1663, Los Alamos, New Mexico 87545. Los Alamos National Security, LLC is referred to herein as "the Assignor" and Triad National Security, LLC is referred to herein as "the Assignee." Los Alamos National Security, LLC and Triad National Security, LLC are individually referred to herein as a "Party" or collectively as the "Parties".

The Agreement is effective as of November 1, 2018.

RECITALS

WHEREAS, the Assignor desires to transfer and assign to the Assignee the patents and patent applications set forth in **Schedules A and B**.

NOW, THEREFORE, in consideration of the covenants, conditions, and undertakings hereinafter set forth, it is agreed by and among the Parties as follows:

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by the Assignor, the Assignor does hereby sell, assign, transfer and convey to the Assignee all of the Assignor's right, title and interest in, to and under the patents and patent applications set forth on **Schedules A and B**, in and to the inventions claimed or claimable therein, in the United States and its territories and in foreign countries, as well as any reissue, renewal, division, continuation or continuation-in-part or any foreign counterpart thereof, or any other application that claims priority to the patents and patent applications set forth in **Schedules A and B**, including foreign patent priority rights, the right to file and prosecute International Applications under the Patent Cooperation Treaty, and the right to file and prosecute applications under the European Patent Convention, together with all past, present, or future claims arising out of any infringement thereof, and all rights to claim priority on the basis of such patent applications and/or patents in the United States or in any foreign country; and all such rights above to be held and enjoyed by the Assignee, for its own use and benefit and for the use and benefit of its successors, assigns or other legal representatives as fully and entirely as the same would have been held and enjoyed by the Assignor if this Agreement and sale had not been made.

The Assignor hereby binds itself, its successors, assigns or other legal representatives, properly to execute without further consideration, any and all applications, petitions, oaths and assignments or other papers and instruments that may be necessary in order to carry into full force and effect the sale, assignment, transfer and conveyance hereby made or intended to be made.

IN WITNESS WHEREOF, each party has executed this Agreement by its proper officers thereunto duly authorized.

LOS ALAMOS NATIONAL SECURITY, LLC

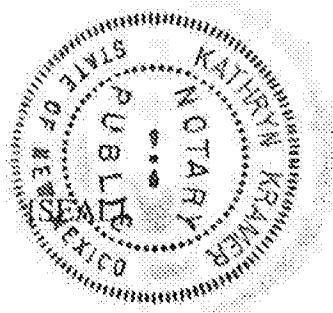
Name: David A. Sosinski

Title: General Counsel

Date: 11/11/18

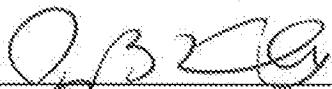
STATE OF New Mexico)
COUNTY OF Los Alamos) SS.

On this 1 day of November, 2018 before me personally appeared the foregoing individual, who executed the foregoing instrument and who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set forth.



Kathryn Kramer
Notary Public For
My commission expires: April 25, 2020

TRIAD NATIONAL SECURITY, LLC

Name: Ryan KennedyTitle: Chief Intellectual Property CounselDate: 11/15/18STATE OF New Mexico)
COUNTY OF Los Alamos) ss.
)On this 5th day of November, 2018, before me personally appeared the foregoing individual, who executed the foregoing instrument and who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set forth.Notary Public For
My commission expires: August 15, 2022

[SEAL]



SCHEDULE A

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S89603.002	United States - (US)	Deposition of coatings using an atmospheric pressure plasma jet	10/20/1998	09/176,046/ 6,194,036
S89664.000	United States - (US)	ATMOSPHERIC-PRESSURE PLASMA DECONTAMINATION/STERILIZATION CHAMBER	6/8/1999	09/328,169/ 6,228,330
S91756.000	United States - (US)	PROCESSING MATERIALS INSIDE AN ATMOSPHERIC-PRESSURE RF NONTHERMAL PLASMA DISCHARGE	2/2/2001	09/776,086/ 7,025,856
S94647.000	United States - (US)	COMBINED PLASMA/LIQUID CLEANING OF SUBSTRATES	3/8/2001	09/803,065/ 6,546,938
S94768.002	United States - (US)	PRODUCTION OF STABLE, NONTHERMAL ATMOSPHERIC PRESSURE RF CAPACITIVE PLASMAS USING GASES OTHER THAN HELIUM OR NEON	7/25/2002	10/205,786/ 6,909,237
S94755.000	United States - (US)	CORROSION PROTECTION	5/29/2001	09/867,841/ 6,569,263
S133425.009	Patent Cooperation Treaty - (WO)	SYSTEMS AND METHODS FOR IDENTIFICATION OF NUCLEIC ACIDS IN A SAMPLE	6/21/2018	PCT/US18/038855
S133517.001	Patent Cooperation Treaty - (WO)	System and Methods for Metagenomic Analysis	3/1/2018	PCT/US2018/20539
S121243.000	United States - (US)	NON-AQUEOUS LIQUID COMPOSITIONS COMPRISING ION EXCHANGE POLYMERS REFERENCE TO RELATED APPLICATION	11/2/2010	12/938,087/ 8,236,207
S133252.000	United States - (US)	Conductive polymer/fullerene blend thin films with honeycomb framework for transparent photovoltaic application	5/25/2012	13/480,716/ 9,012,770
S112882.000	United States - (US)	Device and Method for Generating a Beam of Acoustic Energy from a Borehole, and Applications Thereof	7/2/2008	12/166,842/ 7,839,718
S116303.000	United States - (US)	Submersible pumping system with heat transfer mechanism	4/29/2008	12/111,926/ 8,696,334
S116304.001	United States - (US)	Method and System for Generating a Beam of Acoustic Energy from a Borehole, and Applications Thereof	6/12/2008	12/137,980/ 8,116,167
S116304.002	Patent Cooperation Treaty - (WO)	METHOD AND SYSTEM FOR GENERATING A BEAM OF ACOUSTIC ENERGY FROM A BOREHOLE, AND APPLICATIONS THEREOF	6/12/2009	PCT/US2009/047184
S118969.002	Patent Cooperation Treaty - (WO)	System and Method to Estimate Compressional to Shear Velocity (VP/VS) Ratio in a Region Remote from a Borehole	4/16/2010	PCT/US10/31490

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S118970.001	Patent Cooperation Treaty - (WO)	System and Method to Create Three-Dimensional Images of Non-Linear Acoustic Properties in a Region Remote from a Borehole	4/16/2010	PCT/US10/31485
S121073.000	United States - (US)	LOW-MELTING ELEMENTAL METAL OR FUSIBLE ALLOY ENCAPSULATED POLYMERIZATION INITIATOR FOR DELAYED INITIATION	4/7/2011	13/081,935/ 9,217,101
S121244.002	Patent Cooperation Treaty - (WO)	Apparatus and Method for Acoustic Monitoring of Steam Quality and Flow	3/7/2012	PCT/US2012/028113
S121244.009	United States - (US)	Apparatus and Method for Acoustic Monitoring of Steam Quality and Flow	8/15/2016	15/237,522
S121335.002	Patent Cooperation Treaty - (WO)	Method for Noninvasive Determination of Acoustic Properties of Fluids Inside Pipes	9/6/2011	PCT/US2011/50583
S121336.002	Patent Cooperation Treaty - (WO)	Multiphase Fluid Characterization System	9/6/2011	PCT/US2011/50569
S121364.002	United States - (US)	Full-Frame Programmable Hyperspectral Imager	3/27/2014	14/348,001/ 9,716,846
S121582.000	United States - (US)	DEVICE AND METHOD FOR GENERATING A BEAM OF ACOUSTIC ENERGY FROM A BOREHOLE, AND APPLICATIONS THEREOF	6/3/2010	12/793,407/ 8,559,269
S121583.000	United States - (US)	DEVICE AND METHOD FOR GENERATING A BEAM OF ACOUSTIC ENERGY FROM A BOREHOLE AND APPLICATIONS THEREOF	6/3/2010	12/793,420/ 8,547,791
S121584.000	United States - (US)	DEVICE AND METHOD FOR GENERATING A BEAM OF ACOUSTIC ENERGY FROM A BOREHOLE AND APPLICATIONS THEREOF	6/3/2010	12/793,414/ 8,547,790
S121745.001	United States - (US)	System and method for investigating sub-surface features of a rock formation using compressional acoustic sources	11/9/2011	13/292,908/ 9,453,926
S121745.002	Patent Cooperation Treaty - (WO)	System and Method for Investigating Sub-Surface Features of a Rock Formation	11/9/2011	PCT/US2011/059967
S121745.005	Patent Cooperation Treaty - (WO)	System and Method for Generating Micro-Seismic Events and Characterizing Properties of a Medium with Non-Linear Acoustic Interactions	11/9/2011	PCT/US11/059973
S121845.000	United States - (US)	Device and Method for Imaging of Non-Linear and Linear Properties of Formations Surrounding a Borehole	9/29/2010	12/893,573/ 8,553,495

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S129164.000	United States - (US)	System and method for generating micro-seismic events and characterizing properties of a medium with non-linear acoustic interactions	11/9/2011	13/292,948/ 9,223,039
S129164.002	Patent Cooperation Treaty - (WO)	SYSTEM AND METHOD FOR GENERATING MICRO-SEISMIC EVENTS AND CHARACTERIZING PROPERTIES OF A MEDIUM WITH NON-LINEAR ACOUSTIC INTERACTIONS	11/9/2011	PCT/US2011/059973
S129165.000	United States - (US)	System and Method for Investigating Sub-Surface Features of a Rock Formation with Acoustic Source Generating Conical Broadcast Signals	11/9/2011	13/292,935/ 9,110,178
S129166.000	United States - (US)	Integrated system for investigating sub-surface features of a rock formation	11/9/2011	13/292,941/ 9,110,179
S129167.000	United States - (US)	Data acquisition and processing system and method for investigating sub-surface features of a rock formation	11/9/2011	13/292,924/ 8,942,063
S129168.000	United States - (US)	System and method for investigating sub-surface features and 3D imaging of non-linear property, compressional velocity VP, shear velocity VS and velocity ratio VP/VS of a rock formation	11/9/2011	13/292,929/ 9,046,620
S129809.000	United States - (US)	System and Method for Investigating Sub-Surface Features of a Rock Formation With Acoustic Sources Generating Coded Signals	11/9/2011	13/292,915/ 8,923,092
S133019.004	Patent Cooperation Treaty - (WO)	Time-Reversed Nonlinear Acoustics For Downhole Pressure Measurements	3/9/2017	PCT/US17/021606
S133019.007	United States - (US)	Time-Reversed Nonlinear Acoustics For Downhole Pressure Measurements	9/7/2018	16/083,441
S133092.001	United States - (US)	Acoustic Detector	3/15/2013	13/836,386
S133093.000	United States - (US)	Acoustic Source for Generating an Acoustic Beam	3/15/2013	13/836,718/ 9,354,346
S133094.000	United States - (US)	System and Method for Sonic Wave Measurements Using an Acoustic Beam Source	3/15/2013	13/836,611/ 9,103,944
S133197.000	United States - (US)	System and Method for Generating 3D Images of Non-Linear Properties of Rock Formation Using Surface Seismic or Surface to Borehole Seismic or Both	11/27/2013	14/092,051/ 9,360,573
S133248.000	United States - (US)	Cooling devices and methods for use with electric submersible pumps	11/13/2014	14/540,882/ 9,394,917
S133249.000	United States - (US)	Evaluating a vessel for suitability for containing fluid	3/4/2015	14/638,872/ 9,664,212

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S133292.000	United States - (US)	Cooling Devices And Methods For Use With Electric Submersible Pumps	12/19/2014	14/577,926/ 9,797,402
S133316.005	Patent Cooperation Treaty - (WO)	Fluid Characterization Using Acoustics	3/15/2018	PCT/US18/022741
S133433.001	Patent Cooperation Treaty - (WO)	Smart Gel Sealants for Well Systems	4/4/2017	PCT/US2017/025827
S133514.001	Patent Cooperation Treaty - (WO)	Downhole Nonlinear Acoustics Measurements in Rock Formations Using Dynamic Acoustic Elasticity and Time Reversal	10/24/2017	PCT/US2017/58160
S133514.003	Patent Cooperation Treaty - (WO)	Time-Reversed Nonlinear Downhole Pore Pressure Measurements	3/26/2017	PCT/US2017/024203
S133516.001	Patent Cooperation Treaty - (WO)	Apparatus and Method for Dynamic Acoustic-Elasticity Technique Measurements at Simulated Subsurface Pressures	3/26/2017	PCT/US2017/024202
S100649.000	United States - (US)	RF TRANSMISSION LINE AND DRILL/PIPE STRING SWITCHING TECHNOLOGY FOR DOWN-HOLE TELEMETRY	6/18/2004	10/872,054/ 7,256,707
S104868.000	United States - (US)	CONTROLLING THE PRESSURE WITHIN AN ANNULAR VOLUME OF A WELLBORE	11/18/2005	11/282,424/ 7,441,599
S109065.002	United States - (US)	KEROGEN EXTRACTION FROM SUBTERRANEAN OIL SHALE RESOURCES	2/16/2007	11/675,468/ 7,500,517
S112900.000	United States - (US)	Method of analysis of polymerizable monomeric species in a complex mixture	11/28/2007	11/998,331/ 8,673,827
S116381.001	United States - (US)	COOLING DEVICES AND METHODS FOR USE WITH ELECTRIC SUBMERSIBLE PUMPS	10/18/2012	13/655,328/ 8,899,054
S118969.001	United States - (US)	System and Method to Estimate Compressional to Shear Velocity (VP/VS) Ratio in a Region Remote from a Borehole	5/11/2009	12/463,796/ 8,289,808
S118970.000	United States - (US)	System and Method to Create Three-Dimensional Images of Non-Linear Acoustic Properties in a Region Remote from a Borehole	5/11/2009	12/463,802/ 8,345,509
S121224.000	United States - (US)	System and Method for Measurement Incorporating a Crystal Oscillator	11/30/2009	12/627,639
S121239.000	United States - (US)	System and Method for Assessing Hydrogen Sulfide in a Hydrocarbon Extraction Well in Situ in an Ongoing Manner	12/1/2010	12/958,054/ 8,596,380
S121579.000	United States - (US)	KEROGEN EXTRACTION FROM SUBTERRANEAN OIL SHALE RESOURCES	1/28/2009	12/361,473/ 7,789,164
S121592.000	United States - (US)	KEROGEN EXTRACTION FROM SUBTERRANEAN OIL SHALE RESOURCES	6/21/2010	12/819,790/ 8,104,536

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S121593.000	United States - (US)	Controlling the pressure within an annular volume of a wellbore	3/12/2010	12/723,528/ 7,870,905
S121743.000	United States - (US)	System for Generating a Beam of Acoustic Energy from a Borehole, and Applications Thereof	8/27/2010	12/870,604/ 8,259,530
S121744.000	United States - (US)	System for Generating a Beam of Acoustic Energy from a Borehole, and Applications Thereof	8/27/2010	12/870,440/ 8,233,349
S121846.000	United States - (US)	Device and Method for Imaging of Non-Linear and Linear Properties of Formations Surrounding a Borehole	9/29/2010	12/893,530/ 8,576,661
S121846.001	Patent Cooperation Treaty - (WO)	Device and Method for Imaging of Non-Linear and Linear Properties of Formations Surrounding a Borehole	9/28/2011	PCT/US2011/53645
S121851.000	United States - (US)	CONTROLLING THE PRESSURE WITHIN AN ANNULAR VOLUME OF A WELLBORE	12/17/2009	12/641,272/ 7,950,460
S121981.000	United States - (US)	CONTROLLING THE PRESSURE WITHIN AN ANNULAR VOLUME OF A WELLBORE	12/17/2009	12/641,257/ 7,963,333
S129393.001	United States - (US)	Olefin Metathesis for Kerogen Upgrading	11/25/2008	12/277,531/ 7,905,288
S129813.000	United States - (US)	System and Method for Assessing Hydrogen Sulfide in a Hydrocarbon Extraction Well in Situ in an Ongoing Manner	12/1/2010	12/957,996/ 8,596,379
S133073.000	United States - (US)	Directional Antennas for Electromagnetic Mapping in a Borehole	9/26/2014	14/498,511/ 9,638,827
S133095.000	United States - (US)	Heating Production Fluids in a Wellbore	6/21/2013	13/923,770/ 9,388,667
S133535.000	United States - (US)	Metal nanoparticle-deposited, nitrogen-doped carbon adsorbents for removal of sulfur impurities in fuels	2/26/2018	62/635,482
S133578.000	United States - (US)	Detection, Monitoring, and Determination of Location of Changes in Metallic Structures Using Multimode Acoustic Signals	4/27/2018	15/964,967
S94600.000	United States - (US)	Long-range, full-duplex, modulated-reflector cell phone for voice/data transmission	1/12/2001	09/760,193/ 6,434,372
S94727.000	United States - (US)	CYLINDRICAL ACOUSTIC LEVITATOR/CONCENTRATOR	3/15/2001	09/810,905/ 6,467,350
S99908.000	United States - (US)	REMOTE DOWN-HOLE WELL TELEMETRY	6/28/2002	10/187,025/ 6,766,141
S121080.000	United States - (US)	Superluminal Antenna	2/7/2012	13/368,200/ 9,608,330
S121080.001	Patent Cooperation Treaty - (WO)	Superluminal Antenna	2/5/2013	PCT/US2013/024769
S121080.005	United States - (US)	Superluminal Antenna	11/16/2016	15/353,420/ 9,948,011

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S133187.000	Patent Cooperation Treaty - (WO)	Feed Network and Electromagnetic Radiation Source	12/17/2013	PCT/US2013/075812
S133187.002	United States - (US)	Feed Network and Electromagnetic Radiation Source	12/17/2013	14/651,504/ 9,548,536
S133346.001	Patent Cooperation Treaty - (WO)	STRIPLINE FEED STRUCTURE FOR SUPERLUMINAL ANTENNA ARRAY	10/26/2016	PCT/US2016/058857
S133346.002	United States - (US)	STRIPLINE FEED STRUCTURE FOR SUPERLUMINAL ANTENNA ARRAY	4/24/2016	15/770,701
S104985.000	United States - (US)	Apparatus and Method for Phase Fronts Based on Superluminal Polarization Current	8/13/2008	12/191,148/ 8,125,385
S109093.002	Patent Cooperation Treaty - (WO)	Partical Detection and Applications in Security and Portal Monitoring	10/26/2007	PCT/US2007/082735
S109157.001	Patent Cooperation Treaty - (WO)	Statistical Tomographic Reconstruction Based on Measurements of Charged Particles	10/26/2007	PCT/US2007/082753
S112982.002	Patent Cooperation Treaty - (WO)	IMAGING BASED ON COSMIC-RAY PRODUCED CHARGED PARTICLES	8/27/2009	PCT/US2009/055253
S112982.003	United States - (US)	IMAGING BASED ON COSMIC-RAY PRODUCED CHARGED PARTICLES	8/27/2009	13/061,491/ 8,536,527
S129616.001	United States - (US)	NON-INVASIVE IN-SITU IMAGING OF INTERIOR OF NUCLEAR REACTORS	4/1/2015	14/676,636
S129616.002	Patent Cooperation Treaty - (WO)	NON-INVASIVE IN-SITU IMAGING OF INTERIOR OF NUCLEAR REACTORS	4/1/2015	PCT/US2015/023936
S129810.000	United States - (US)	Systems for Detecting Charged Particles in Object Inspection	8/21/2012	13/591,118/ 8,513,601
S129822.000	United States - (US)	Particle detection and applications in security and portal monitoring	10/26/2009	12/447,459/ 8,247,767
S109064.000	United States - (US)	Particle detection systems and methods	10/24/2007	11/977,314/ 7,714,297
S109092.004	United States - (US)	Measuring Momentum for Charged Particle Tomography	10/24/2007	11/977,410/ 7,838,841

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S109093.000	United States - (US)	Radiation portal monitor system and method	6/29/2007	11/771,169/ 7,633,062
S102324.002	United States - (US)	IMMUNOGENIC PEPTIDES COMPRISING A T-HELPER EPITOPE AND A B-CELL NEUTRALIZING ANTIBODY EPITOPE	11/7/2002	10/289,228/ 7,153,509
S102325.001	Patent Cooperation Treaty - (WO)	CONSENSUS/ANCESTRAL IMMUNOGENS	9/17/2004	PCT/US2004/030397
S102325.002	United States - (US)	Nucleic acids encoding modified human immunodeficiency virus type 1 (HIV-1) group M consensus envelope glycoproteins	12/22/2006	10/572,638/ 8,071,107
S109007.002	United States - (US)	Immunogenic Compositions Comprising Human Immunodeficiency Virus (HIV) Mosaic NEF Proteins	4/20/2009	11/990,222/ 8,119,140
S109007.016	United States - (US)	MOSAIC CLADE M HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HIV-1) ENVELOPE IMMUNOGENS	8/14/2008	12/192,015/ 7,951,377
S116267.002	Patent Cooperation Treaty - (WO)	POLYVALENT VACCINE	8/14/2009	PCT/US2009/004664
S121569.001	Patent Cooperation Treaty - (WO)	POLYVALENT IMMUNOGEN	9/28/2011	PCT/US2011/001664
S121869.000	United States - (US)	Nucleic Acids Encoding Mosaic Clade M Human Immunodeficiency Virus Type 1 (HIV-1) Envelope Immunogens	4/26/2011	13/094,734/ 9,011,873
S129173.006	United States - (US)	Mosaic Clade M Human Immunodeficiency Virus Type 1 (HIV-1) GAG Immunogens	2/1/2012	12/737,761/ 9,044,445
S129391.000	United States - (US)	MODIFIED HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HIV-1) GROUP M CONSENSUS ENVELOPE GLYCOPROTEINS CAPABLE OF INDUCING BROADLY REACTIVE T- AND B-CELL RESPONSES	8/23/2011	13/137,517/ 9,844,589
S129391.001	United States - (US)	Consensus/Ancestral Immunogens	11/5/2017	15/813,992
S129609.000	United States - (US)	Human Immunodeficiency Virus Type 1 Clade M Mosaic GAG Polypeptides	2/17/2012	13/399,963/ 9,011,875
S133140.001	Patent Cooperation Treaty - (WO)	Polyvalent HIV-1 Immunogen	4/15/2014	PCT/US2014/034126
S133140.004	United States - (US)	POLYVALENT HIV-1 IMMUNOGEN	10/14/2015	14/784,496
S133289.000	United States - (US)	Nucleic acids encoding mosaic HIV-1 gag proteins	4/17/2015	14/689,957/ 9,492,532

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S133294.001	United States - (US)	Polyvalent Vaccine	12/15/2018	15/843,233
S133329.000	United States - (US)	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 GROUP M CONSENSUS AND MOSAIC ENVELOPE GLYCOPROTEINS	4/17/2015	14/689,995/ 9,821,053
S133508.001	Patent Cooperation Treaty - (WO)	MPER-LIPOSOME CONJUGATES AND USES THEREOF	9/29/2014	PCT/US2014/058032
S133508.002	United States - (US)	MPER-LIPOSOME CONJUGATES AND USES THEREOF	3/24/2016	15/024,600/ 10,076,567
S133509.001	Patent Cooperation Treaty - (WO)	Swarm Immunization with Envelopes from CH505	3/19/2015	PCT/US15/21528
S133509.002	United States - (US)	Swarm Immunization with Envelopes from CH505	9/14/2016	15/126,220
S133511.001	Patent Cooperation Treaty - (WO)	MOSAIC HIV-1 SEQUENCES AND USES THEREOF	3/25/2015	PCT/US2015/22380
S133513.003	Patent Cooperation Treaty - (WO)	ANTIBODY EVOLUTION IMMUNOGENS	9/12/2013	PCT/US2013/000210
S133513.004	United States - (US)	ANTIBODY EVOLUTION IMMUNOGENS	3/11/2015	14/427,581/ 10,004,800
S133513.007	United States - (US)	ANTIBODY EVOLUTION IMMUNOGENS	1/8/2018	15/864,822
S133550.000	United States - (US)	CAP260, CAP174 and Ko224 HIV-1 Envelopes, Peptide and Compositions	6/16/2016	15/105,214
S133550.003	Patent Cooperation Treaty - (WO)	CAP260, CAP174 and Ko224 HIV-1 Envelopes, Peptide and Compositions	12/18/2014	PCT/US2014/071117
S133552.002	United States - (US)	Compositions Comprising CH848 Envelopes and Uses Thereof	5/28/2016	15/300,051
S133553.000	Patent Cooperation Treaty - (WO)	Compositions Comprising CH505 Envelopes, and Trimers (Eight Valient HIV-1 Composition and Methods)	12/23/2015	PCT/US2015/000222
S112799.001	Patent Cooperation Treaty - (WO)	ACUTE TRANSMITTED HIV ENVELOPE SIGNATURES	3/27/2008	PCT/US2008/03965
S129173.000	Patent Cooperation Treaty - (WO)	Mosaic Clade M Human Immunodeficiency Virus Type 1 (HIV-1) Envelope Immunogens	8/14/2009	PCT/US2009/04664

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S129817.001	Patent Cooperation Treaty - (WO)	Genetic Signatures in HIV-1 Subtype C Envelope Glycoproteins	5/9/2011	PCT/US2011/000810
S133552.001	Patent Cooperation Treaty - (WO)	Compositions Comprising CH848 Envelopes and Uses Thereof	3/31/2015	PCT/US2016/023632
S129634.000	United States - (US)	Storing files in a parallel computing system based on user or application specification	6/28/2012	13/536,289/ 9,298,733
S129635.000	United States - (US)	Small File Aggregation in a Parallel Computing System	6/28/2012	13/536,315/ 8,825,652
S129637.000	United States - (US)	Methods and apparatus for capture and storage of semantic information with sub-files in a parallel computing system	6/28/2012	13/536,384/ 8,949,255
S133115.000	United States - (US)	Cooperative storage of shared files in a parallel computing system with dynamic block size	12/28/2012	13/730,080/ 9,183,211
S133116.000	United States - (US)	Cloud Object Store for Checkpoints of High Performance Computing Applications Using Decoupling Middleware	12/28/2012	13/730,058
S133117.000	United States - (US)	Cloud object store for archive storage of high performance computing data using decoupling middleware	12/28/2012	13/730,097/ 9,069,778
S133119.000	United States - (US)	Parallel Checksumming of Data Chunks of a Shared Data Object Using a Log-Structured File System	3/13/2013	13/799,264/ 9,436,722
S133120.000	United States - (US)	Global Distributed File Append Using Log-Structured File System	6/19/2013	13/921,657
S133121.000	United States - (US)	Storage of Sparse Files Using Parallel Log-Structured File System	6/19/2013	13/921,719
S133122.000	United States - (US)	Parallel File System with Metadata Distributed Across Partitioned Key-Value Store	6/29/2013	13/931,832
S133168.000	United States - (US)	Pattern-Aware Prefetching Using Parallel Log-Structured File System	9/30/2013	14/041,457
S133169.000	United States - (US)	Parallel Storage System with Burst Buffer Appliance for Storage of Partitioned Key-Value Store Across a Plurality of Storage Tiers	12/30/2013	14/143,749
S133170.000	United States - (US)	Partitioned Key-Value Store with One-Sided Communications for Secondary Global Key Lookup by Range-Knowledgeable Clients	12/30/2013	14/143,758
S133171.000	United States - (US)	Parallel sort with a ranged, partitioned key-value store in a high performance computing environment	12/30/2013	14/143,771/ 9,245,048
S133250.000	United States - (US)	KEY-VALUE STORE WITH INTERNAL KEY-VALUE STORAGE INTERFACE	12/22/2014	14/579,323

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S133275.000	United States - (US)	Distributed Metadata Servers for Cluster File Systems using Shared Low Latency Persistent Key-Value Metadata Store	3/20/2015	14/663,634
S133305.000	United States - (US)	COMPUTING ERASURE METADATA AND DATA LAYOUT PRIOR TO STORAGE USING A PROCESSING PLATFORM	6/26/2015	14/751,372
S133351.000	United States - (US)	Distributed Metadata Servers in a File System with Separate Metadata Servers for File Metadata and Directory Metadata	12/10/2015	14/965,257
S133441.000	United States - (US)	Partitioned key-value store with atomic memory operations	9/30/2014	14/502,231/ 9,563,426
S133448.000	United States - (US)	Metadata Compression	9/30/2013	14/041,872
S129808.000	United States - (US)	Storing Files in a Parallel Computing System Based on User-Specified Parser Function	6/28/2012	13/536,369/ 8,868,576
S100545.000	United States - (US)	CANISTER, SEALING METHOD AND COMPOSITION FOR SEALING A BOREHOLE	1/21/2003	10/349,359/ 6,910,537
S121717.001	Patent Cooperation Treaty - (WO)	Antiviral Vaccines with Improved Cellular Immunogenicity	11/18/2009	PCT/US2009/064999
S121717.010	United States - (US)	Antiviral Vaccines with Improved Cellular Immunogenicity	12/8/2011	13/130,018/ 9,017,691
S121717.029	United States - (US)	Antiviral Vaccines with Improved Cellular Immunogenicity	4/17/2017	15/489,220
S133294.000	United States - (US)	Mosaic Clade M Human Immunodeficiency Virus Type 1 (HIV-1) GAG Immunogens	5/29/2015	14/726,373/ 9,844,590
S133469.001	Patent Cooperation Treaty - (WO)	Signature Based Human Immunodeficiency Virus (HIV) Envelope (ENV) Trimer Vaccines and Methods of Using the Same	10/17/2017	PCT/US2017/057045
S121717.028	United States - (US)	Antiviral Vaccines with Improved Cellular Immunogenicity	2/26/2015	14/632,869/ 9,670,253
S133283.000	United States - (US)	Bunch length compression method for free electron lasers to avoid parasitic compressions	10/1/2014	14/503,499/ 9,040,936
S100650.000	United States - (US)	NANOCRYSTAL STRUCTURES	11/15/2002	10/294,742/ 7,150,910

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S100650.002	Patent Cooperation Treaty - (WO)	NANOCRYSTAL STRUCTURES	11/18/2002	PCT/US2002/36900
S94623.002	United States - (US)	OPTICAL AMPLIFIERS AND LASERS	3/14/2001	09/805,435/ 6,819,692
S109114.000	United States - (US)	NUCLEIC ACID DETECTION SYSTEM AND METHOD FOR DETECTING INFLUENZA	8/22/2007	11/894,908/ 8,980,561
S109192.004	United States - (US)	MINIATURIZED LATERAL FLOW DEVICE FOR RAPID AND SENSITIVE DETECTION OF PROTEINS OR NUCLEIC ACIDS	2/13/2017	15/431,705
S112889.002	United States - (US)	Highly simplified lateral flow-based nucleic acid sample preparation and passive fluid flow control	11/5/2010	12/940,973/ 9,207,236
S133272.001	United States - (US)	NUCLEIC ACID DETECTION SYSTEM AND METHOD FOR DETECTING INFLUENZA	4/26/2017	15/498,344
S133352.000	United States - (US)	Highly Simplified Lateral Flow-Based Nucleic Acid Sample Preparation and Passive Fluid Flow Control	12/8/2015	14/962,967/ 9,944,922
S112889.001	Patent Cooperation Treaty - (WO)	Highly Simplified Lateral Flow-Based Nucleic Acid Sample Preparation and Passive Fluid Flow Control	5/5/2009	PCT/US2009/002809
S133284.000	United States - (US)	OPTOELECTRONIC DEVICES UTILIZING MATERIALS HAVING ENHANCED ELECTRONIC TRANSITIONS	2/22/2011	13/032,076/ 8,415,758
S133375.001	Patent Cooperation Treaty - (WO)	IMPROVED PRODUCTIVITY AND BIOPRODUCT FORMATION IN PHOTOTROPIN KNOCK/OUT MUTANTS IN MICROALGAE	6/6/2016	PCT/US2016/036077
S133375.002	Patent Cooperation Treaty - (WO)	IMPROVED PRODUCTIVITY AND BIOPRODUCT FORMATION IN PHOTOTROPIN KNOCK/OUT MUTANTS IN MICROALGAE	7/26/2016	PCT/IB2016/054466
S104971.000	United States - (US)	Electrochemical detection of single molecules using abiotic nanopores having electrically tunable dimensions	9/21/2006	11/525,329/ 7,638,034
S104971.002	United States - (US)	ELECTROCHEMICAL DETECTION OF SINGLE MOLECULES USING ABIOTIC NANOPORES HAVING ELECTRICALLY TUNABLE DIMENSIONS	12/28/2011	13/339,010/ RE46,479
S133229.000	United States - (US)	ELECTROCHEMICAL DETECTION OF SINGLE MOLECULES USING ABIOTIC NANOPORES HAVING ELECTRICALLY TUNABLE DIMENSIONS	5/28/2014	14/289,388/ RE46,545
S133230.000	United States - (US)	ELECTROCHEMICAL DETECTION OF SINGLE MOLECULES USING ABIOTIC NANOPORES HAVING ELECTRICALLY TUNABLE DIMENSIONS	5/28/2014	14/289,445/ RE46,594

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S104971.003	United States - (US)	ELECTROCHEMICAL DETECTION OF SINGLE MOLECULES USING ABIOTIC NANOPORES HAVING ELECTRICALLY TUNABLE DIMENSIONS	7/17/2017	15/651,625
S105060.000	United States - (US)	CHEMICAL SOLUTION DEPOSITION METHOD OF FABRICATING HIGHLY ALIGNED MgO TEMPLATES	6/2/2005	11/143,369/ 7,553,799
S121341.000	United States - (US)	Hair treatment process providing dispersed colors by light diffraction	9/29/2011	13/248,746/ 8,607,803
S94648.002	United States - (US)	OPTIMIZING THE AVAILABILITY OF A BUFFERED INDUSTRIAL PROCESS	5/3/2001	09/848,817/ 6,782,295
S96591.000	United States - (US)	SYSTEM LEVEL ANALYSIS AND CONTROL OF MANUFACTURING PROCESS VARIATION	7/9/2002	10/191,202/ 6,901,308
S100637.000	United States - (US)	INTEGRATED OPTICAL BIOSENSOR SYSTEM (IOBS)	5/11/2004	10/842,750/ 7,289,207
S102367.000	United States - (US)	Planar optical waveguide based sandwich assay sensors and processes for the detection of biological targets including protein markers, pathogens and cellular debris	6/29/2005	11/172,246/ 7,541,197
S102380.002	United States - (US)	NOISE CANCELLATION IN MAGNETOENCEPHALOGRAPHY AND ELECTROENCEPHALOGRAPHY WITH ISOLATED REFERENCE SENSORS	3/31/2005	11/096,142/ 7,729,740
S104952.000	United States - (US)	PLANAR OPTICAL WAVEGUIDE BASED SANDWICH ASSAY SENSORS AND PROCESSES FOR THE DETECTION OF BIOLOGICAL TARGETS INCLUDING EARLY DETECTION OF CANCERS	6/29/2005	11/172,244/ 7,541,196
S104998.000	United States - (US)	DIRECT IMAGING OF NEURAL CURRENTS USING ULTRA-LOW FIELD MAGNETIC RESONANCE TECHNIQUES	2/22/2007	11/678,023/ 7,573,268
S133266.001	United States - (US)	Poly(phenylene) Based Anion Exchange Polymers and Methods Thereof	1/4/2017	15/398,547/ 10,053,535
S133266.002	Patent Cooperation Treaty - (WO)	Poly(phenylene) Based Anion Exchange Polymers and Methods Thereof	1/4/2017	PCT/US17/12205
S100564.000	United States - (US)	BUFFER LAYER FOR THIN FILM STRUCTURES	7/21/2003	10/624,855/ 7,129,196
S109144.000	United States - (US)	BUFFER LAYER FOR THIN FILM STRUCTURES	10/31/2006	11/591,269/ 7,736,761
S91748.002	United States - (US)	APPARATUS FOR MEASUREMENT OF CRITICAL CURRENT IN SUPERCONDUCTIVE TAPES	7/13/2000	09/615,640/ 6,452,375
S112879.000	United States - (US)	Anti-sulfotyrosine antibodies	9/12/2007	11/900,689/ 7,589,182

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S116383.000	United States - (US)	POLYNUCLEOTIDES ENCODING ANTI-SULFOTYROSINE ANTIBODIES	9/15/2009	12/560,294/ 7,868,152
S102372.001	Patent Cooperation Treaty - (WO)	ULTRASONIC ANALYTE CONCENTRATION AND APPLICATION IN FLOW CYTOMETRY	7/27/2005	PCT/US2005/026524
S102372.002	United States - (US)	ULTRASONIC ANALYTE CONCENTRATION AND APPLICATION IN FLOW CYTOMETRY	11/2/2004	10/979,065/ 7,340,957
S109054.000	United States - (US)	SYSTEM AND METHOD FOR MEASURING PARTICLES IN A SAMPLE STREAM OF A FLOW CYTOMETER OR THE LIKE	11/3/2006	11/593,312/ 7,835,000
S109125.000	United States - (US)	ACOUSTIC CONCENTRATION OF PARTICLES IN FLUID FLOW	4/9/2007	11/784,936/ 7,837,040
S109127.000	United States - (US)	Apparatus for separating particles utilizing engineered acoustic contrast capture particles	4/9/2007	11/784,928/ 8,083,068
S112914.006	United States - (US)	Ultrasonic analyte concentration and application in flow cytometry	10/31/2007	11/982,042/ 8,783,109
S112929.001	United States - (US)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER - (APPARATUS)	9/11/2008	12/283,461/ 8,266,950
S112929.002	Patent Cooperation Treaty - (WO)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER - (APPARATUS)	12/19/2008	PCT/US2008/087579
S116234.000	United States - (US)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER- (METHOD)	9/11/2008	12/283,491/ 8,266,951
S116234.013	Patent Cooperation Treaty - (WO)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER- (METHOD)	12/19/2008	PCT/US2008/087579
S121721.000	United States - (US)	Acoustic concentration of particles in fluid flow	10/12/2010	12/903,042/ 9,733,171
S121721.002	United States - (US)	Acoustic concentration of particles in fluid flow	7/10/2017	15/645,044
S121722.000	United States - (US)	SYSTEM AND METHOD FOR MEASURING PARTICLES IN A SAMPLE STREAM OF A FLOW CYTOMETER USING A LOW POWER LASER SOURCE	10/12/2010	12/903,003/ 8,564,776
S129161.000	United States - (US)	APPARATUS FOR SEPARATING PARTICLES UTILIZING ENGINEERED ACOUSTIC CONTRAST CAPTURE PARTICLES	11/14/2011	13/295,934/ 8,863,958
S129811.000	United States - (US)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER	8/10/2012	13/571,662/ 9,488,621
S129812.000	United States - (US)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER	8/10/2012	13/571,629/ 9,038,467

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S133112.000	United States - (US)	SYSTEM AND METHOD FOR MEASURING PARTICLES IN A SAMPLE STREAM OF A FLOW CYTOMETER USING A LOW POWER LASER SOURCE	8/14/2013	13/966,624/ 8,767,208
S133143.000	United States - (US)	Ultrasonic analyte concentration and application in flow cytometry	9/14/2012	13/618,237/ 9,074,979
S133207.000	United States - (US)	System and method for measuring particles in a sample stream of a flow cytometer using low-power laser source	5/16/2014	14/280,053/ 9,494,509
S133236.000	United States - (US)	APPARATUS FOR SEPARATING PARTICLES UTILIZING ENGINEERED ACOUSTIC CONTRAST CAPTURE PARTICLES	9/10/2014	14/482,111/ 9,339,744
S133236.002	United States - (US)	SYSTEMS AND METHODS FOR SEPARATING PARTICLES UTILIZING ENGINEERED ACOUSTIC CONTRAST CAPTURE PARTICLES	4/14/2016	15/098,873/ 9,909,117
S133281.000	United States - (US)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER	4/21/2015	14/691,721
S133296.000	United States - (US)	ULTRASONIC ANALYTE CONCENTRATION AND APPLICATION IN FLOW CYTOMETRY	6/3/2015	14/729,244
S133332.001	Patent Cooperation Treaty - (WO)	HIV VACCINES COMPRISING ONE OR MORE POPULATION EPISENSUS ANTIGENS	10/5/2015	PCT/US2015/054067
S133332.011	United States - (US)	HIV VACCINES COMPRISING ONE OR MORE POPULATION EPISENSUS ANTIGENS	4/3/2017	15/516,491
S121079.000	United States - (US)	Flexible Electronics Using Ion Implantation to Adhere Polymer Substrate to Single Crystal Silicon Substrate	11/17/2004	10/579,051/ 7,541,261
S116277.000	United States - (US)	Measurement of Carbon Capture Efficiency and Stored Carbon Leakage	3/23/2010	12/730,031/ 8,359,167
S133149.001	Patent Cooperation Treaty - (WO)	IONIC LIQUIDS FOR TRANSDERMAL DRUG DELIVERY	11/3/2014	PCT/US2014/063745
S133149.002	United States - (US)	IONIC LIQUIDS FOR TRANSDERMAL DRUG DELIVERY	5/3/2016	15/034,138
S133412.001	United States - (US)	Rapid phenotype tests for antitubercular drug sensitivity and resistance	8/17/2016	15/119,519
S133412.002	Patent Cooperation Treaty - (WO)	RAPID PHENOTYPE TESTS FOR ANTITUBERCULAR DRUG SENSITIVITY AND RESISTANCE	2/18/2015	PCT/US2015/016349
S94621.000	United States - (US)	METHOD FOR PRODUCING CERAMIC PARTICLES AND AGGLOMERATES	8/11/2000	09/637,172/ 6,261,484
S94640.000	United States - (US)	SEMICONDUCTOR-BASED OPTICAL REFRIGERATOR	3/2/2001	09/798,339/ 6,378,321

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S97727.000	United States - (US)	METHOD FOR PRODUCING METALLIC MICROPARTICLES	4/18/2002	10/126,039/ 6,755,886
S133216.001	United States - (US)	Method and apparatus for enhancing vortex pinning by conformal crystal arrays	3/7/2014	14/201,131/ 9,082,923
S133365.000	United States - (US)	Context-Dependent Piano Music Transcription with Convolutional Sparse Coding	2/18/2016	15/046,724/ 9,779,706
S121853.001	United States - (US)	PROTECTIVE GLOVE	6/21/2013	29/458,716/ D733974
S112774.000	United States - (US)	Material with Core-Shell Structure	6/20/2008	12/142,974/ 8,057,900
S112927.002	United States - (US)	Rapid Generation of Carbon Filament Structures of Controlled Geometry at Low Temperatures	1/16/2009	12/355,265/ 8,298,615
S116238.000	United States - (US)	Metal Oxide Nanoparticles and Process for Producing the Same	6/8/2006	11/449,373/ 7,629,553
S116239.000	United States - (US)	Multi-Scale Carbon Structure and Method of Making the Same.	11/12/2009	12/617,617/ 8,277,872
S118895.001	United States - (US)	Carbon Fiber Foam Composites and Methods for Making the Same	9/7/2011	13/227,413/ 8,679,381
S121215.001	United States - (US)	Reductive/Expansion Synthesis of Graphene	3/4/2011	13/040,976/ 8,894,886
S121237.001	United States - (US)	Generation of metal and alloy micron, submicron, or nano particles in simple, rapid process	2/3/2011	13/020,791/ 8,709,126
S121238.002	United States - (US)	Aerosol reduction/expansion synthesis (A-RES) for zero valent metal particles	7/12/2013	13/884,746/ 9,308,585
S121728.003	United States - (US)	SUPPORTED METAL CATALYST AND METHOD OF MAKING THE CATALYST	5/16/2014	14/359,087
S133356.001	Patent Cooperation Treaty - (WO)	Methods for diagnosing bacterial infections	10/8/2013	PCT/US13/063827
S133356.003	United States - (US)	METHODS FOR DIAGNOSING BACTERIAL INFECTIONS	4/9/2015	14/434,509/ 10,000,787
S133376.000	United States - (US)	Incremental principal component pursuit for video background modeling	5/27/2015	14/722,651/ 9,595,112
S94797.000	United States - (US)	SPHERICAL BORON NITRIDE PARTICLES AND METHOD FOR PREPARING THEM	5/17/2001	09/860,016/ 6,652,822
S97728.000	United States - (US)	METHOD FOR PRODUCING METALLIC NANOPARTICLES	12/13/2001	10/017,289/ 6,689,192
S133243.000	United States - (US)	Thionin-D4E1 Chimeric Protein Protects Plants Against Bacterial Infections	4/21/2015	14/691,780/ 9,725,734

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S133243.001	United States - (US)	Optimized Thionin Protects Plants Against Bacterial Infections	6/29/2017	15/637,660
S133358.000	United States - (US)	Forest Fire Fuel Heat Transfer Sensor	5/18/2017	15/598,599
S133468.002	Patent Cooperation Treaty - (WO)	Mosaic vaccines for serotype A Foot-and-mouth disease virus	10/25/2017	PCT/US17/58295
S100591.000	United States - (US)	TRAVELING-WAVE THERMOACOUSTIC ENGINES WITH INTERNAL COMBUSTION	3/13/2003	10/387,688/ 6,732,515
S100625.000	United States - (US)	Use of Prolines for Improving Growth and/or Yield	11/7/2005	11/269,417/ 8,551,917
S100625.001	Patent Cooperation Treaty - (WO)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	PCT/US2006/043409
S133027.000	United States - (US)	Preparation of 4-Amino-2, 4-Dioxobutanoic Acid	3/14/2013	13/828,905/ 9,045,392
S133027.001	Patent Cooperation Treaty - (WO)	Preparation of 4-Amino-2, 4-Dioxobutanoic Acid	3/7/2014	PCT/US14/021620
S133037.001	Patent Cooperation Treaty - (WO)	Compounds and Methods for Improving Plant Performance	8/8/2014	PCT/US2014/050274
S133037.006	United States - (US)	Compounds and Methods for Improving Plant Performance	8/8/2014	14/454,849/ 9,446,992
S133037.016	United States - (US)	Compounds and Methods for Improving Plant Performance	8/1/2016	15/225,657
S133152.000	United States - (US)	Use of Prolines for Improving Growth and/or Yield	10/7/2013	14/047,366/ 8,802,595
S133235.000	United States - (US)	Preparation of 4-Amino-2,4-Dioxobutanoic Acid	9/15/2014	14/486,423/ 9,290,442
S133237.000	United States - (US)	Preparation of 4-Amino-2, 4-Dioxobutanoic Acid	9/17/2014	14/489,329/ 9,290,443
S91735.000	United States - (US)	Use of Prolines for Improving Growth and Other Properties of Plants and Algae	1/27/2000	09/493,039/ 6,831,040
S97846.000	United States - (US)	USE OF PROLINES FOR IMPROVING GROWTH AND OTHER PROPERTIES OF PLANTS AND ALGAE	4/16/2002	10/124,568/ 6,593,275
S97845.000	United States - (US)	Use of Prolines for Improving Growth and Other Properties of Plants and Algae	4/16/2002	10/124,520/ 6,555,500

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S100556.001	Patent Cooperation Treaty - (WO)	THROUGH-THE-EARTH RADIO	6/8/2004	PCT/US2004/018355
S109025.000	United States - (US)	THROUGH-THE-EARTH RADIO	2/28/2006	11/364,396/ 7,149,472
S87243.002	United States - (US)	Narrowband high temperature superconducting receiver for low frequency radio waves	9/25/1998	09/161,162/ 6,263,189
S94650.002	United States - (US)	METHOD AND APPARATUS FOR FREE-SPACE QUANTUM KEY DISTRIBUTION IN DAYLIGHT	4/27/2001	09/844,176/ 6,748,083

SCHEDULE B

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S116304.005	Brazil - (BR)	Method to Generate Beam Acoustic Energy on a Rock Formation, System to Determine the Information Pespeito of a Rock Formation and, System Featuring an Property Not Linear of a Rock Formation	6/12/2009	PI0915138-9
S116304.006	Canada - (CA)	Method and System for Generating a Beam of Acoustic Energy from a Borehole, and Applications Thereof	6/12/2009	2727372/ 2727372
S116304.007	China P.R. - (CN)	Method and System for Generating a Beam of Acoustic Energy from a Borehole, and Applications Thereof	6/12/2009	200980121863.1/ ZL200980121963
S116304.008	Eurasian Patent Convention - (EA)	Method and System for Generating a Beam of Acoustic Energy from a Borehole, and Applications Thereof	6/12/2009	201170006/ 022887
S116304.012	Great Britain - (GB)	Method and System for Generating a Beam of Acoustic Energy from a Borehole, and Applications Thereof	6/12/2009	09763704.5/ 2304474
S116304.017	Mexico - (MX)	Method and System for Generating a Beam of Acoustic Energy from a Borehole, and Applications Thereof	6/12/2009	MX/A/2010/013406/ 307048
S116304.020	Norway - (NO)	Method and System for Generating a Beam of Acoustic Energy from a Borehole, and Applications Thereof	6/12/2009	09763704.5/ 2304474
S116304.026	Australia - (AU)	Method and System for Generating a Beam of Acoustic Energy from a Borehole, and Applications Thereof	6/12/2009	2009257339/ 2009257339
S116304.027	Russian Federation - (RU)	METHOD AND SYSTEM FOR GENERATING A BEAM OF ACOUSTIC ENERGY FROM A BOREHOLE, AND APPLICATIONS THEREOF	6/12/2009	201170006/ 022887
S116381.003	Canada - (CA)	COOLING DEVICES AND METHODS FOR USE WITH ELECTRIC SUBMERSIBLE PUMPS	10/18/2012	2852919
S118927.014	European Patent Convention - (EP)	Integrated Acoustic Phase Separator and Multiphase Fluid Composition Monitoring Apparatus and Method	9/6/2011	11822770.1/ 2612140
S118969.005	Australia - (AU)	System and Method to Estimate Compressional to Shear Velocity (VP/VS) Ratio in a Region Remote from a Borehole	4/16/2010	2010236139/ 2010236139
S118969.007	Brazil - (BR)	System and Method to Estimate Compressional to Shear Velocity (VP/VS) Ratio in a Region Remote from a Borehole	4/16/2010	PI1014033-6

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S118969.008	Canada - (CA)	SYSTEM AND METHOD TO ESTIMATE COMPRESSIONAL TO SHEAR VELOCITY (VP/VS) RATIO IN A REGION REMOTE FROM A BOREHOLE	4/16/2010	2758938/ 2758938
S118969.009	China P.R. - (CN)	System and Method to Estimate Compressional to Shear Velocity (VP/VS) Ratio in a Region Remote from a Borehole	4/16/2010	201080016551.7/ ZL20108001655.7
S118969.010	Eurasian Patent Convention - (EA)	System and Method to Estimate Compressional to Shear Velocity (VP/VS) Ratio in a Region Remote from a Borehole	4/16/2010	201171255/ 021800
S118969.024	China P.R. - (CN)	System and Method to Estimate Compressional to Shear Velocity (VP/VS) Ratio in a Region Remote from a Borehole	12/31/2014	201410849888.6/ 201410849888.6
S118969.028	Norway - (NO)	System and Method to Estimate Compressional to Shear Velocity (VP/VS) Ratio in a Region Remote from a Borehole	4/16/2010	2419763
S118969.031	United Kingdom - (UNIK)	System and Method to Estimate Compressional to Shear Velocity (VP/VS) Ratio in a Region Remote from a Borehole	4/16/2010	2419763
S118969.032	Australia - (AU)	System and Method to Estimate Compressional to Shear Velocity (VP/VS) Ratio in a Region Remote from a Borehole	4/12/2013	2013204299/ 2013204299
S118969.033	Great Britain - (GB)	System and Method to Estimate Compressional to Shear Velocity (VP/VS) Ratio in a Region Remote from a Borehole	4/16/2010	10715633.3/ 2419763
S118969.034	Russian Federation - (RU)	System and Method to Estimate Compressional to Shear Velocity (VP/VS) Ratio in a Region Remote from a Borehole	4/16/2010	201171255/ 021800
S118970.004	Australia - (AU)	System and Method to Create Three-Dimensional Images of Non-Linear Acoustic Properties in a Region Remote from a Borehole	4/16/2010	2010236226/ 2010236226
S118970.006	Brazil - (BR)	System and Method to Create Three-Dimensional Images of Non-Linear Acoustic Properties in a Region Remote from a Borehole	4/16/2010	PI1015009-9
S118970.007	Canada - (CA)	System and Method to Create Three-Dimensional Images of Non-Linear Acoustic Properties in a Region Remote from a Borehole	4/16/2010	2758959/ 2758959
S118970.008	China P.R. - (CN)	System and Method to Create Three-Dimensional Images of Non-Linear Acoustic Properties in a Region Remote from a Borehole	4/16/2010	201080016561.0/ ZL201080016561.0
S118970.009	Eurasian Patent Convention - (EA)	System and Method to Create Three-Dimensional Images of Non-Linear Acoustic Properties in a Region Remote from a Borehole	4/16/2010	201171254

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S118970.017	Mexico - (MX)	System and Method to Create Three-Dimensional Images of Non-Linear Acoustic Properties in a Region Remote from a Borehole	4/16/2010	MX/a/2011/010553/ 323955
S118970.027	Great Britain - (GB)	SYSTEM AND METHOD TO CREATE THREE-DIMENSIONAL IMAGES OF NON-LINEAR ACOUSTIC PROPERTIES IN A REGION REMOTE FROM A BOREHOLE	4/16/2010	10715066/ 2419762
S118970.029	Norway - (NO)	SYSTEM AND METHOD TO CREATE THREE-DIMENSIONAL IMAGES OF NON-LINEAR ACOUSTIC PROPERTIES IN A REGION REMOTE FROM A BOREHOLE	4/16/2010	10715066/ 2419762
S121244.004	Republic of Korea - (KR)	Apparatus and Method for Acoustic Monitoring of Steam Quality and Flow	3/7/2012	10-2013-7026414
S121364.003	Germany - (DE)	Programmable Full-Frame Hyperspectral Imager	9/28/2012	112012004100.3
S121364.004	Japan - (JP)	Full-Frame Programmable Hyperspectral Imager	9/28/2012	2014533513
S121364.005	Japan - (JP)	Full-Frame Programmable Hyperspectral Imager	4/6/2017	2017-075912/ 6386614
S121745.006	Mexico - (MX)	System And Method For Investigating Sub-Surface Features Of A Rock Formation	11/9/2011	MX/a/2014/005694/ 328413
S121745.015	Mexico - (MX)	System and Method for Investigating Sub-Surface Features of a Rock Formation	11/9/2011	MX/a/2014/014944/ 334010
S121745.019	Mexico - (MX)	SYSTEM AND METHOD FOR INVESTIGATING SUB-SURFACE FEATURES OF A ROCK FORMATION.	5/10/2013	MX/A/2015/008273/ 338705
S121745.020	China P.R. - (CN)	System and Method for Investigating Sub-Surface Features of a Rock Formation	11/9/2011	201180062766.7
S121745.022	Mexico - (MX)	SYSTEM AND METHOD FOR INVESTIGATING SUB-SURFACE FEATURES OF A ROCK FORMATION.	5/10/2013	2013005333/ 325755
S121745.030	Mexico - (MX)	System and Method for Investigating Sub-Surface Features of a Rock Formation	1/27/2016	MX/a/2016/01185
S121846.003	Brazil - (BR)	Device and Method for Imaging of Non-Linear and Linear Properties of Formations Surrounding a Borehole	9/28/2011	BR112013005705-0
S121846.006	European Patent Convention - (EP)	Device and Method for Imaging of Non-Linear and Linear Properties of Formations Surrounding a Borehole	9/28/2011	11770259.7
S121846.012	Mexico - (MX)	Device and Method for Imaging of Non-Linear and Linear Properties of Formations Surrounding a Borehole	9/28/2011	MX/A/2013/003144/ 319246
S129164.007	Australia - (AU)	System and Method for Generating Micro-Seismic Events and Characterizing Properties of a Medium with Non-Linear Acoustic Interactions	11/9/2011	2011326570

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S129164.008	Brazil - (BR)	System and Method for Generating Micro-Seismic Events and Characterizing Properties of a Medium with Non-Linear Acoustic Interactions	11/9/2011	BR112013011863-6
S129164.010	European Patent Convention - (EP)	SYSTEM AND METHOD FOR GENERATING MICRO-SEISMIC EVENTS AND CHARACTERIZING PROPERTIES OF A MEDIUM WITH NON-LINEAR ACOUSTIC INTERACTIONS	11/9/2011	11791671.8
S129164.013	Mexico - (MX)	SYSTEM AND METHOD FOR GENERATING MICRO-SEISMIC EVENTS AND CHARACTERIZING PROPERTIES OF A MEDIUM WITH NON-LINEAR ACOUSTIC INTERACTIONS.	5/7/2013	2013005146
S129164.014	Australia - (AU)	System and method for investigating sub-surface features of a rock formation	8/14/2014	2014213540
S133108.002	Japan - (JP)	Detection and Monitoring of Changes in Metallic Structures Using Multimode Acoustic Signals	8/12/2016	JP2018-508225
S133108.003	China P.R. - (CN)	Detection and Monitoring of Changes in Metallic Structures Using Multimode Acoustic Signals	8/12/2016	201680059598.9
S133108.004	European Patent Convention - (EP)	Detection and Monitoring of Changes in Metallic Structures Using Multimode Acoustic Signals	8/12/2016	16873503.3
S133108.006	Republic of Korea - (KR)	Detection and Monitoring of Changes in Metallic Structures Using Multimode Acoustic Signals	8/12/2016	10-2018-7004228
S133019.005	Brazil - (BR)	Time-Reversed Nonlinear Acoustics For Downhole Pressure Measurements	3/9/2017	PCT/US17/021606
S133019.006	Thailand - (TH)	Time-Reversed Nonlinear Acoustics For Downhole Pressure Measurements	3/9/2017	PCT/US17/021606
S133019.008	Canada - (CA)	Time-Reversed Nonlinear Acoustics For Downhole Pressure Measurements	3/9/2017	3017196
S121846.005	China P.R. - (CN)	Device and Method for Imaging of Non-Linear and Linear Properties of Formations Surrounding a Borehole	9/28/2011	201180047125.4/201180047125.4
S121080.002	Brazil - (BR)	Systems and Methods of Detecting, Measuring and Extracting Signatures of Signals Embedded in Social Media Data Streams	2/5/2013	BR112014019371-1
S121080.003	India - (IN)	Superluminal Antenna	8/12/2014	6753/DELNP/2014
S121080.004	European Patent Convention - (EP)	Superluminal Antenna	2/5/2013	EP20130746413

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S133187.003	India - (IN)	Feed Network and Electromagnetic Radiation Source	12/17/2013	1050/MUMNP/2015
S133187.004	Brazil - (BR)	Feed Network and Electromagnetic Radiation Source	12/17/2013	BR112015009976-9
S133187.005	European Patent Convention - (EP)	Feed Network and Electromagnetic Radiation Source	12/17/2013	EP20130819122
S109093.003	Canada - (CA)	PARTICLE DETECTION AND APPLICATIONS IN SECURITY AND PORTAL MONITORING	10/26/2007	2667777/2667777
S109093.004	European Patent Convention - (EP)	PARTICAL DETECTION AND APPLICATIONS IN SECURITY AND PORTAL MONITORING	10/26/2007	EP20070873571.9
S109093.005	Japan - (JP)	Partical Detection and Applications in Security and Portal Monitoring	10/26/2007	2009-534904/5479904
S109093.007	Russian Federation - (RU)	Partical Detection and Applications in Security and Portal Monitoring	10/26/2007	2009119985/28/2468391
S109093.008	Australia - (AU)	Radiation Portal Monitor System and Method	10/26/2007	2007349817/2007349817
S109093.011	Singapore - (SG)	Partical Detection and Applications in Security and Portal Monitoring	10/26/2007	201107892-0/175686
S109093.012	Israel - (IL)	PARTICLE DETECTION AND APPLICATIONS IN SECURITY AND PORTAL MONITORING	4/26/2009	198406/198406
S109093.014	Australia - (AU)	Radiation Portal Monitor System and Method	11/15/2012	2012254928
S109093.015	United Arab Emirates - (AE)	Partical Detection and Applications in Security and Portal Monitoring	10/26/2007	381/2009
S109093.016	Japan - (JP)	Partical Detection and Applications in Security and Portal Monitoring	12/11/2013	2013-255685/2013255685
S109157.003	Japan - (JP)	Statistical Tomographic Reconstruction Based on Measurements of Charged Particles	10/26/2007	000534916/5623746
S109157.004	Israel - (IL)	Statistical tomographic reconstruction based on measurements of charged particles	4/22/2009	19829509

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S112982.004	United Arab Emirates - (AE)	IMAGING BASED ON COSMIC-RAY PRODUCED CHARGED PARTICLES	2/27/2011	183/2011
S112982.006	Israel - (IL)	IMAGING BASED ON COSMIC-RAY PRODUCED CHARGED PARTICLES	2/27/2011	21143411
S112982.007	Japan - (JP)	IMAGING BASED ON COSMIC-RAY PRODUCED CHARGED PARTICLES	8/27/2009	000525212/ 5819726
S112982.008	Singapore - (SG)	IMAGING BASED ON COSMIC-RAY PRODUCED CHARGED PARTICLES	8/27/2009	201101413-1
S112982.009	Australia - (AU)	IMAGING BASED ON COSMIC-RAY PRODUCED CHARGED PARTICLES	8/27/2009	2009285682
S112982.010	Canada - (CA)	IMAGING BASED ON COSMIC-RAY PRODUCED CHARGED PARTICLES	8/27/2009	2735546/ 2735546
S129616.003	Japan - (JP)	NON-INVASIVE IN-SITU IMAGING OF INTERIOR OF NUCLEAR REACTORS	8/11/2014	2014163386
S102325.003	Australia - (AU)	Consensus/ancestral immunogens	9/17/2004	2004274937/ 2004274937
S102325.005	Canada - (CA)	CONSENSUS/ANCESTRAL IMMUNOGENS	9/17/2004	2539325/ 2539325
S102325.006	China P.R. - (CN)	CONSENSUS/ANCESTRAL IMMUNOGENS	9/17/2004	200480026658.4/ 200480026658.4
S102325.009	Japan - (JP)	CONSENSUS/ANCESTRAL IMMUNOGENS	9/17/2004	2006527030/ 4773352
S102325.010	Mexico - (MX)	CONSENSUS/ANCESTRAL IMMUNOGENS	9/17/2004	PA/a/2006/003076/ 291603
S102325.012	European Patent Convention - (EP)	CONSENSUS/ANCESTRAL IMMUNOGENS	9/17/2004	04784298.4/ 1667714
S102325.017	Israel - (IL)	CONSENSUS/ANCESTRAL IMMUNOGENS	11/19/2009	202249.0/ 202249
S102325.021	Japan - (JP)	Expression of Ancestral and Consensus Genes in Live Vectors for HIV Vaccines	12/6/2013	000253689/ 6165612
S102325.024	Canada - (CA)	CONSENSUS/ANCESTRAL IMMUNOGENS	9/17/2004	2918585
S102325.025	Germany - (DE)	CONSENSUS/ANCESTRAL IMMUNOGENS	9/17/2004	1667714/ 60 2004 052 251.1
S102325.026	Germany - (DE)	CONSENSUS/ANCESTRAL IMMUNOGENS	9/17/2004	04784298.4/ 1667704

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S102325.027	France - (FR)	CONSENSUS/ANCESTRAL IMMUNOGENS	9/17/2004	04784298.4/ 1667714
S102325.028	Great Britain - (GB)	CONSENSUS/ANCESTRAL IMMUNOGENS	9/17/2004	04784298.4/ 1667714
S112799.004	India - (IN)	ACUTE TRANSMITTED HIV ENVELOPE SIGNATURES	3/27/2008	6125/DELNP/2009
S121872.004	Australia - (AU)	CONSENSUS/ANCESTRAL IMMUNOGENS	1/20/2017	2017200429
S129173.002	Canada - (CA)	MOSAIC CLADE M ENV-BASED POLYVALENT HIV VACCINE	8/14/2009	2733898/ 2733898
S129173.003	Israel - (IL)	Mosaic Clade M Human Immunodeficiency Virus Type 1 (HIV-1) Envelope Immunogens	8/14/2009	IL211184
S129173.004	Australia - (AU)	Mosaic Clade M Human Immunodeficiency Virus Type 1 (HIV-1) Envelope Immunogens	8/14/2009	2009282442/ 2009282442
S129173.012	European Patent Convention - (EP)	POLYVALENT VACCINE	8/14/2009	16184203
S133140.002	European Patent Convention - (EP)	Polyvalent HIV-1 Immunogen	4/15/2014	14785257.8
S133140.003	Thailand - (TH)	Polyvalent HIV-1 Immunogen	4/15/2014	1501006344
S133509.003	European Patent Convention - (EP)	Swarm Immunization with Envelopes from CH505	3/19/2015	15764507.8
S133509.004	Canada - (CA)	Swarm Immunization with Envelopes from CH505	3/19/2015	2972753
S133509.005	Australia - (AU)	Swarm Immunization with Envelopes from CH505	3/19/2015	2015231163
S133511.003	Australia - (AU)	MOSAIC HIV-1 SEQUENCES AND USES THEREOF	3/25/2015	2015236147
S133513.006	China P.R. - (CN)	ANTIBODY EVOLUTION IMMUNOGENS	9/12/2013	CN201380058891X
S133513.008	Australia - (AU)	ANTIBODY EVOLUTION IMMUNOGENS	9/12/2013	2013316100/ 2013316100
S133513.009	Australia - (AU)	ANTIBODY EVOLUTION IMMUNOGENS	9/12/2013	2018203805
S133513.010	European Patent Convention - (EP)	ANTIBODY EVOLUTION IMMUNOGENS	9/12/2013	13837551.4

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S133513.011	Canada - (CA)	ANTIBODY EVOLUTION IMMUNOGENS	9/12/2013	2884859
S133550.004	Canada - (CA)	CAP260, CAP174 and Ko224 HIV-1 Envelopes, Peptide and Compositions	6/14/2016	2933887
S133550.005	European Patent Convention - (EP)	CAP260, CAP174 and Ko224 HIV-1 Envelopes, Peptide and Compositions	12/18/2014	14870945.4
S133552.003	European Patent Convention - (EP)	COMPOSITIONS COMPRISING CH848 ENVELOPES AND USES THEREOF	3/31/2015	15772335.4
S133552.004	Australia - (AU)	Compositions Comprising CH848 Envelopes and Uses Thereof	3/31/2015	2015240883
S133552.005	Canada - (CA)	Compositions Comprising CH848 Envelopes and Uses Thereof	3/31/2015	2944068
S133553.004	Canada - (CA)	Compositions Comprising CH505 Envelopes, and Trimers (Eight Valient HIV-1 Composition and Methods)	12/23/2015	2972231
S112799.005	China P.R. - (CN)	ACUTE TRANSMITTED HIV ENVELOPE SIGNATURES	7/25/2009	20080009784.7
S112799.010	Japan - (JP)	ACUTE TRANSMITTED HIV ENVELOPE SIGNATURES	9/28/2009	2010-500974
S112799.011	Israel - (IL)	ACUTE TRANSMITTED HIV ENVELOPE SIGNATURES	3/27/2008	PCT/US2008/003965
S112799.014	China P.R. - (CN)	ACUTE TRANSMITTED HIV ENVELOPE SIGNATURES	3/27/2008	200880009784.7
S129817.005	Canada - (CA)	Genetic Signatures in HIV-1 Subtype C Envelope Glycoproteins	5/9/2011	2,798,764
S133513.005	Japan - (JP)	ANTIBODY EVOLUTION IMMUNOGENS	9/12/2013	2015-531903
S121717.003	Japan - (JP)	Antiviral Vaccines with Improved Cellular Immunogenicity	11/18/2009	000537586/ 5694945
S121717.004	Israel - (IL)	ANTIVIRAL VACCINES WITH IMPROVED CELLULAR IMMUNOGENDICITY	5/18/2011	21298411
S121717.005	Australia - (AU)	Antiviral Vaccines with Improved Cellular Immunogenicity	11/18/2009	2009316629/ 2009316629
S121717.006	India - (IN)	Antiviral Vaccines with Improved Cellular Immunogenicity	11/18/2009	4698/DELNP/2011

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S121717.007	European Patent Convention - (EP)	Antiviral Vaccines with Improved Cellular Immunogenicity	11/18/2009	EP09828172.8/ EP2358757
S121717.008	New Zealand - (NZ)	Optimized antiviral vaccines with improved cellular immunogenicity	11/18/2009	59359809
S121717.009	South Africa - (ZA)	Antiviral Vaccines with Improved Cellular Immunogenicity	11/18/2009	2011/04538/ 2011/04538
S121717.011	Brazil - (BR)	Antiviral Vaccines with Improved Cellular Immunogenicity	11/18/2009	PI0921588.3
S121717.012	China P.R. - (CN)	Antiviral Vaccines with Improved Cellular Immunogenicity	11/18/2009	CN2009801547874/ ZL200980154787.4
S121717.013	A.R.I.P.O. - (AP)	ANTIVIRAL VACCINES WITH IMPROVED CELLULAR IMMUNOGENICITY	11/18/2009	AP 201105767 D0/ AP 3719 A
S121717.014	Hong Kong - (HK)	Antiviral Vaccines with Improved Cellular Immunogenicity	2/9/2012	12101286.7
S121717.018	Hong Kong - (HK)	ANTIVIRAL VACCINES WITH IMPROVED CELLULAR IMMUNOGENICITY	6/5/2012	12105453/ 1164896
S121717.019	South Africa - (ZA)	ANTIVIRAL VACCINES WITH IMPROVED CELLULAR IMMUNOGENICITY	11/18/2009	201204999/ 201204999
S121717.020	New Zealand - (NZ)	Antiviral Vaccines with Improved Cellular Immunogenicity	9/18/2012	602504/ 602504
S121717.021	South Africa - (ZA)	Antiviral Vaccines with Improved Cellular Immunogenicity	11/18/2009	2014/04080/ 2014/04080
S121717.023	Japan - (JP)	Antiviral Vaccines with Improved Cellular Immunogenicity	2/5/2015	2015-021128/ 6023233
S121717.024	Singapore - (SG)	Antiviral Vaccines with Improved Cellular Immunogenicity	12/30/2014	10201408784S
S121717.026	Israel - (IL)	Antiviral vaccines with improved cellular immunogenicity	2/7/2016	24399116

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S121717.027	Japan - (JP)	ANTIVIRAL VACCINE WITH IMPROVED CELLULAR IMMUNOGENICITY	10/6/2016	2016-198037/ 6224197
S121717.030	Japan - (JP)	ANTIVIRAL VACCINE WITH IMPROVED CELLULAR IMMUNOGENICITY	10/4/2017	2017-193941/ 6368416
S121717.031	European Patent Convention - (EP)	Antiviral Vaccines with Improved Cellular Immunogenicity	8/29/2018	18191558.8
S100650.003	Japan - (JP)	NANOCRYSTAL STRUCTURES	11/18/2002	2003545469/ 4703112
S100650.005	Australia - (AU)	Nanocrystal structures	11/18/2002	2002366091/ 2002366091
S100650.006	European Patent Convention - (EP)	NANOCRYSTAL STRUCTURES	11/18/2002	02803649.9/ 1463628
S100650.007	Germany - (DE)	NANOCRYSTAL STRUCTURES	11/18/2002	2002366091
S112889.003	China P.R. - (CN)	Highly simplified lateral flow-based nucleic acid sample preparation and passive fluid flow control	5/5/2009	200980125614X/ ZL200980125614.X
S112889.004	Japan - (JP)	HIGHLY SIMPLIFIED LATERAL FLOW-BASED NUCLEIC ACID SAMPLE PREPARATION AND PASSIVE FLUID FLOW CONTROL	5/5/2009	2011508502
S112889.005	Canada - (CA)	HIGHLY SIMPLIFIED LATERAL FLOW-BASED NUCLEIC ACID SAMPLE PREPARATION AND PASSIVE FLUID FLOW CONTROL	5/5/2009	2723536/ 2723536
S112889.006	European Patent Convention - (EP)	HIGHLY SIMPLIFIED LATERAL FLOW-BASED NUCLEIC ACID SAMPLE PREPARATION AND PASSIVE FLUID FLOW CONTROL	5/5/2009	09743046/ 2279403
S112889.007	Japan - (JP)	HIGHLY SIMPLIFIED LATERAL FLOW-BASED NUCLEIC ACID SAMPLE PREPARATION AND PASSIVE FLUID FLOW CONTROL	2/2/2015	000018327/ 6026570

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S112889.008	European Patent Convention - (EP)	LATERAL FLOW-BASED NUCLEIC ACID SAMPLE PREPARATION DEVICE, INTEGRATED WITH PASSIVE FLUID FLOW CONTROL	5/5/2009	15196744.5
S112889.009	France - (FR)	HIGHLY SIMPLIFIED LATERAL FLOW-BASED NUCLEIC ACID SAMPLE PREPARATION AND PASSIVE FLUID FLOW CONTROL	5/5/2009	09743046/ 2279403
S112889.011	Ireland - (IE)	HIGHLY SIMPLIFIED LATERAL FLOW-BASED NUCLEIC ACID SAMPLE PREPARATION AND PASSIVE FLUID FLOW CONTROL	5/5/2009	09743046/ 2279403
S112889.012	Great Britain - (GB)	HIGHLY SIMPLIFIED LATERAL FLOW-BASED NUCLEIC ACID SAMPLE PREPARATION AND PASSIVE FLUID FLOW CONTROL	5/5/2009	09743046/ 2279403
S112889.013	Hong Kong - (HK)	HIGHLY SIMPLIFIED LATERAL FLOW-BASED NUCLEIC ACID SAMPLE PREPARATION AND PASSIVE FLUID FLOW CONTROL	10/11/2016	11112579.1/ 1158312
S112889.014	Germany - (DE)	HIGHLY SIMPLIFIED LATERAL FLOW-BASED NUCLEIC ACID SAMPLE PREPARATION AND PASSIVE FLUID FLOW CONTROL	5/5/2009	09743046/ 2279403
S112889.015	Ireland - (IE)	HIGHLY SIMPLIFIED LATERAL FLOW-BASED NUCLEIC ACID SAMPLE PREPARATION AND PASSIVE FLUID FLOW CONTROL	5/5/2009	09743046/ 2279403
S112889.016	United Kingdom - (UNIK)	HIGHLY SIMPLIFIED LATERAL FLOW-BASED NUCLEIC ACID SAMPLE PREPARATION AND PASSIVE FLUID FLOW CONTROL	5/5/2009	09743046/ 2279403
S89676.002	Japan - (JP)	LITHIUM NIOBATE SINGLE CRYSTAL AND OPTICAL FUNCTIONAL ELEMENT	9/28/1998	10274047/ 3213907
S121341.002	India - (IN)	HAIR TREATMENT PROCESS PROVIDING DISPERSED COLORS BY LIGHT DIFFRACTION	9/27/2012	2321/DELNP/2014
S121341.005	China P.R. - (CN)	Hair treatment process providing dispersed colors by light diffraction	3/28/2014	201480002947
S102372.005	Japan - (JP)	ULTRASONIC ANALYTE CONCENTRATION AND APPLICATION IN FLOW CYTOMETRY	7/12/2012	2012-156673/ 5705800
S102372.006	Great Britain - (GB)	ULTRASONIC ANALYTE CONCENTRATION AND APPLICATION IN FLOW CYTOMETRY	7/27/2005	1774283/ 1774283
S102372.007	Germany - (DE)	ULTRASONIC ANALYTE CONCENTRATION AND APPLICATION IN FLOW CYTOMETRY	7/27/2005	05814034/ 1774283
S102372.009	European Patent Convention - (EP)	ULTRASONIC ANALYTE CONCENTRATION AND APPLICATION IN FLOW CYTOMETRY	7/27/2005	15199334.2/ EP3032239

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S102372.010	France - (FR)	ULTRASONIC ANALYTE CONCENTRATION AND APPLICATION IN FLOW CYTOMETRY	7/27/2005	05814034/ 1774283
S112929.003	Republic of Korea - (KR)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER - (APPARATUS)	12/19/2008	10-2010-7015851/ 10-1721265
S112929.004	Republic of Korea - (KR)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER - (APPARATUS)	12/19/2008	10-2015-7033004/ 10-1817410
S116234.002	Brazil - (BR)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER - (METHOD)	12/19/2008	PI0821646-0
S116234.003	India - (IN)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER - (METHOD)	12/19/2008	4836/DELP/2010
S116234.005	China P.R. - (CN)	Particle analysis in an acoustic cytometer	12/19/2008	200880127473.0/ ZL200880127473
S116234.007	South Africa - (ZA)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER	6/17/2010	201004306 /201004306
S116234.008	Israel - (IL)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER	6/13/2010	206331/ 206331
S116234.009	Singapore - (SG)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER - (METHOD)	12/19/2008	201004256-2/ 162354
S116234.010	Republic of Korea - (KR)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER - (METHOD)	12/19/2008	2010-7015851/ 10-1721265
S116234.011	Eurasian Patent Convention - (EA)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER	12/19/2008	201070765/ 022506
S116234.012	Australia - (AU)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER - (METHOD)	4/13/2013	2013205061/ 2013205061
S116234.015	Canada - (CA)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER- (METHOD)	12/19/2008	2709765
S116234.016	Australia - (AU)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER- (METHOD)	12/19/2008	2008343033/ 2008343033
S116234.017	Japan - (JP)	PARTICLE ANALYSIS IN ACOUSTIC CYTOMETER	12/19/2008	2013-035328/ 6163320
S116234.019	Japan - (JP)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER - (METHOD)	12/19/2008	2013-208104
S116234.022	China P.R. - (CN)	Particle analysis in an acoustic cytometer	12/19/2008	201510064850.2/ ZL201510064850.2
S116234.024	Japan - (JP)	PARTICLE ANALYSIS IN ACOUSTIC CYTOMETER	12/19/2008	2015117340
S116234.026	Republic of Korea - (KR)	PARTICLE ANALYSIS IN AN ACOUSTIC CYTOMETER	11/18/2015	10-2015-7033004/ 10-1817410
S133332.009	Republic of Korea - (KR)	HIV VACCINES COMPRISING ONE OR MORE POPULATION EPISENSUS ANTIGENS	10/5/2015	PCT/US2015/054067
S133332.002	Brazil - (BR)	HIV VACCINES COMPRISING ONE OR MORE POPULATION EPISENSUS ANTIGENS	10/5/2015	BR1120170068656

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S133332.003	Thailand - (TH)	HIV VACCINES COMPRISING ONE OR MORE POPULATION EPISENSUS ANTIGENS	10/5/2015	1701001860
S133332.004	India - (IN)	HIV VACCINES COMPRISING ONE OR MORE POPULATION EPISENSUS ANTIGENS	10/5/2015	201737014998
S133332.005	China P.R. - (CN)	HIV VACCINES COMPRISING ONE OR MORE POPULATION EPISENSUS ANTIGENS	10/5/2015	201580063643.3
S133332.006	South Africa - (ZA)	HIV VACCINES COMPRISING ONE OR MORE POPULATION EPISENSUS ANTIGENS	10/5/2015	AP/P/2017/009884
S133332.007	Indonesia - (ID)	HIV VACCINES COMPRISING ONE OR MORE POPULATION EPISENSUS ANTIGENS	10/5/2015	PCT/US2015/054067
S133332.008	Eurasian Patent Convention - (EA)	HIV VACCINES COMPRISING ONE OR MORE POPULATION EPISENSUS ANTIGENS	10/5/2015	PCT/US2015/054067
S133332.010	Ukraine - (UA)	HIV VACCINES COMPRISING ONE OR MORE POPULATION EPISENSUS ANTIGENS	10/5/2015	PCT/US2015/054067
S133149.003	India - (IN)	Ionic Liquids for Transdermal Drug Delivery	11/3/2014	201617018519
S133149.004	Canada - (CA)	Ionic Liquids for Transdermal Drug Delivery	11/3/2014	2929630
S133149.005	Republic of Korea - (KR)	IONIC LIQUIDS FOR TRANSDERMAL DRUG DELIVERY	11/3/2014	PCT/US2014/063745
S133149.006	Japan - (JP)	Ionic Liquids for Transdermal Drug Delivery	11/3/2014	2016552446
S133149.007	European Patent Convention - (EP)	Ionic Liquids for Transdermal Drug Delivery	11/3/2014	14859243.9
S133149.008	Hong Kong - (HK)	Ionic Liquids for Transdermal Drug Delivery	11/3/2014	17102336.0
S121238.004	European Patent Convention - (EP)	AEROSOL REDUCTION/EXPANSION SYNTHESIS (A-RES) FOR ZERO VALENT METAL PARTICLES	11/10/2011	11839022.8
S133356.002	European Patent Convention - (EP)	Methods for diagnosing bacterial infections	10/8/2013	13845074.7
S100625.002	Australia - (AU)	Use of prolines for improving growth and/or yield	11/6/2006	2006311623/2006311623

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S100625.003	Taiwan - (TW)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	95141021/ I398218
S100625.004	Brazil - (BR)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	PI0618229-1/ PI0618229-1
S100625.005	Canada - (CA)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	2626021/ 2626021
S100625.006	China P.R. - (CN)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	200680038386.9/ 200680038386.9
S100625.007	Colombia - (CO)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	2008-046117
S100625.014	Guatemala - (GT)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	5640/ 5640
S100625.015	Honduras - (HN)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	5/7/2008	2008000730/ 2008-000730
S100625.016	India - (IN)	Composition Comprising L- and D- Pyroglutamate for Treating Plants and Seed Coating Composition Comprising the Same a One of the Components	4/15/2008	1517/KOLNP/2008/ 262278
S100625.017	Indonesia - (ID)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	W0020081382/ IDP0033800
S100625.018	Israel - (IL)	Compositions Comprising a Mixture of L- and D- Pyroglutamate Stereoisomers, Methods for Increasing the Agronomic Performance of a Target Plant, and Methods of Treating Seeds Prior to Planting	11/6/2006	190677/ 190677
S100625.019	Mexico - (MX)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	MX/a/2008/005690/ 280576
S100625.020	Morocco - (MA)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	30897/ 29929
S100625.021	New Zealand - (NZ)	Use of a L-pyroglutamate and D-pyroglutamate mixture in a ratio between 80:20 to 97:3 for improving growth and/or yield of plants	11/6/2006	56780206/ 567802
S100625.022	Philippines - (PH)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	1-2008-500861/ 1-2008-500861
S100625.023	Russian Federation - (RU)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	2008117451/ 2381652
S100625.026	South Africa - (ZA)	Use of prolines for improving growth and/or yield	4/8/2008	200803005/ 200803005
S100625.027	Republic of Korea - (KR)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	4/30/2008	1020087010593/ 101121767
S100625.029	Ukraine - (UA)	COMPOSITION FOR IMPROVING GROWTH OF PLANTS OR SEEDS, METHOD FOR TREATMENT OF PLANTS AND SEEDS, COMPOSITION FOR COVERING SEEDS	11/6/2006	2008004949/ 90021

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S100625.030	Japan - (JP)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	2008539126/ 5235137
S100625.032	Bulgaria - (BG)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283.9/ 1945035
S100625.033	Switzerland - (CH)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283.9/ 1945035
S100625.034	Cyprus - (CY)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283/ 1945035
S100625.035	Czech Republic - (CZ)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283.9/ 1945035
S100625.037	Austria - (AT)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283.9/ 1945035
S100625.038	Belgium - (BE)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283.9/ 1945035
S100625.039	Spain - (ES)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283.9/ 1945035
S100625.040	Greece - (GR)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283.9
S100625.041	Hungary - (HU)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283.9/ 1945035
S100625.042	Ireland - (IE)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283.9/ 1945035
S100625.043	Italy - (IT)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283.9/ 1945035
S100625.044	Lithuania - (LT)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283/ 1945035
S100625.045	Monaco - (MC)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283.9/ 1945035
S100625.046	Latvia - (LV)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283/ 1945035
S100625.047	Portugal - (PT)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283.9/ 1945035
S100625.048	Portugal - (PT)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283.9/ 1945035
S100625.049	Romania - (RO)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283/ 1945035
S100625.050	Turkey - (TR)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283.9/ 1945035
S100625.052	Slovenia - (SI)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283.9/ 1945035
S100625.053	Japan - (JP)	USE OF PROLINE FOR IMPROVEMENT OF STRESS RESISTANCE TO HERBICIDE	2/22/2013	000033400/ 5775539
S100625.054	Germany - (DE)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283/ 1945035

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S100625.055	Denmark - (DK)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283.9/ 1945035
S100625.056	France - (FR)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283.9/ 1945035
S100625.057	Great Britain - (GB)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283.9/ 1945035
S100625.058	Netherlands - (NL)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	06844283.9/ 1945035
S100625.060	Israel - (IL)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	4/7/2008	243109/ 243109
S100625.061	India - (IN)	USE OF PROLINES FOR IMPROVING GROWTH AND/OR YIELD	11/6/2006	262278
S133037.002	Paraguay - (PY)	Compounds and Methods for Improving Plant Performance	8/16/2014	34.396
S133037.003	Uruguay - (UY)	COMPOSICIONES Y MÉTODOS PARA MEJORAR LAS CARACTERÍSTICAS DE CRECIMIENTO DE UNA PLANTA	8/8/2014	35699/ 35699
S133037.004	Taiwan - (TW)	Compounds and Methods for Improving Plant Performance	8/8/2014	103127301
S133037.005	Argentina - (AR)	Compounds and Methods for Improving Plant Performance	8/12/2014	20140103026
S133037.007	New Zealand - (NZ)	Compounds and Methods for Improving Plant performance	8/8/2014	629709
S133037.008	Colombia - (CO)	Compounds and Methods for Improving Plant Performance	8/8/2014	16024740
S133037.009	Malaysia - (MY)	Compounds and Methods for Improving Plant performance	8/16/2013	PI2016700428
S133037.010	Russian Federation - (RU)	Compounds and Methods for Improving Plant Performance	8/8/2014	2016103898/ 2652187
S133037.011	Peru - (PE)	Compounds and Methods for Improving Plant Performance	8/8/2014	000235-2016/DIN
S133037.012	Philippines - (PH)	Compounds and Methods for Improving Plant Performance	8/8/2014	1-2016-500222
S133037.013	Republic of Korea - (KR)	Compounds and Methods for Improving Plant Performance	8/8/2014	10-2016-7003429/ 10-1875800
S133037.014	China P.R. - (CN)	Compounds and Methods for Improving Plant Performance	8/8/2014	201480044595.9
S133037.015	Japan - (JP)	Compounds and Methods for Improving Plant Performance	8/16/2013	2016-534620/ 2016534620
S133037.017	Australia - (AU)	Compounds and Methods for Improving Plant Performance	8/8/2014	2014306883/ 2014306883

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S133037.018	India - (IN)	Compounds and Methods for Improving Plant Performance	2/8/2016	201637004440/ 201637004440
S133037.019	Chile - (CL)	Compounds and Methods for Improving Plant Performance	8/8/2014	308-2016
S133037.020	Mexico - (MX)	Compounds and Methods for Improving Plant Performance	8/8/2014	MX/a/2016/001739
S133037.021	Panama - (PA)	Compounds and Methods for Improving Plant Performance	8/8/2014	91021
S133037.022	South Africa - (ZA)	Compounds and Methods for Improving Plant Performance	8/8/2014	2016/00855
S133037.023	Costa Rica - (CR)	Compounds and Methods for Improving Plant Performance	2/9/2016	20160066
S133037.024	European Patent Convention - (EP)	Compounds and Methods for Improving Plant Performance	8/8/2014	14836713.9
S133037.025	Morocco - (MA)	Compounds and Methods for Improving Plant Performance	2/8/2016	38833/ 38833
S133037.026	Israel - (IL)	Compounds and methods for improving plant performance	2/8/2016	24401016
S133037.027	Canada - (CA)	Compounds and Methods for Improving Plant Performance	8/8/2014	2920770
S133037.028	Ukraine - (UA)	Compounds and Methods for Improving Plant Performance	8/8/2014	2016 01082/ 117372
S133037.029	Ecuador - (EC)	Compounds and Methods for Improving Plant Performance	8/8/2014	IEPI-2016-5516
S133037.030	Thailand - (TH)	Compounds and Methods for Improving Plant Performance	8/8/2014	PCT/US2014/050274
S133037.031	Brazil - (BR)	Compounds and Methods for Improving Plant Performance	8/8/2014	BR 112016002520.2
S133037.032	Indonesia - (ID)	Compounds and Methods for Improving Plant Performance	8/8/2014	P00201600796
S100556.003	European Patent Convention - (EP)	THROUGH-THE-EARTH RADIO	6/8/2004	20040776406.3/ EP 1636972
S100556.004	Australia - (AU)	THROUGH-THE-EARTH RADIO	6/8/2004	2004253118/ 2004253118
S100556.005	Israel - (IL)	THROUGH-THE-EARTH RADIO	6/8/2004	172827/ 172827
S100556.006	Canada - (CA)	THROUGH-THE-EARTH RADIO	6/8/2004	2531036/ 2531036

Matter ID	Country	Title	Filing Date	Application No./ Patent No.
S100556.007	Mexico - (MX)	THROUGH-THE-EARTH RADIO.	6/8/2004	PA06000254/270527
S100556.008	China P.R. - (CN)	THROUGH-THE-EARTH RADIO	6/8/2004	200480021653.2/ZL200480021653
S100556.009	New Zealand - (NZ)	THROUGH-THE-EARTH RADIO	6/8/2004	NZ20040544992/544992
S100556.010	Mexico - (MX)	THROUGH-THE-EARTH RADIO	6/8/2004	MX/a/2009/001753/286863
S100556.011	Hong Kong - (HK)	THROUGH-THE-EARTH RADIO	6/8/2004	7101256/1094293