

## TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

ETAS ID: TM511909

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT		
<b>NATURE OF CONVEYANCE:</b>	SECURITY INTEREST		
<b>CONVEYING PARTY DATA</b>			
<b>Name</b>	<b>Formerly</b>	<b>Execution Date</b>	<b>Entity Type</b>
APDN (B.V.I.) Inc.		10/19/2018	Corporation: VIRGIN ISLANDS, BRITISH
<b>RECEIVING PARTY DATA</b>			
<b>Name:</b>	DELAWARE TRUST COMPANY		
<b>Street Address:</b>	251 LITTLE FALLS DRIVE		
<b>City:</b>	WILMINGTON		
<b>State/Country:</b>	DELAWARE		
<b>Postal Code:</b>	19808		
<b>Entity Type:</b>	Corporation: DELAWARE		
<b>PROPERTY NUMBERS Total: 13</b>			
<b>Property Type</b>	<b>Number</b>	<b>Word Mark</b>	
<b>Serial Number:</b>	87078346	GEOTYPING	
<b>Serial Number:</b>	86593696	BEACON	
<b>Serial Number:</b>	86593862	BEACON	
<b>Serial Number:</b>	86677227	SIGNIFY	
<b>Serial Number:</b>	76978843	APPLIED DNA	
<b>Serial Number:</b>	85207192	CASHIELD DEGRADATION INK C 5 354	
<b>Serial Number:</b>	85524990	DIGITALDNA	
<b>Serial Number:</b>	85207229	DNANET	
<b>Serial Number:</b>	77728511	FIBERTYPING	
<b>Serial Number:</b>	77728499	PIMATYPING	
<b>Serial Number:</b>	78871967	SIGNATURE	
<b>Serial Number:</b>	85105993	SMARTDNA	
<b>Serial Number:</b>	87343172	BEACON	
<b>CORRESPONDENCE DATA</b>			
<b>Fax Number:</b>	4124545060		
<i>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.</i>			
<b>Phone:</b>	(412) 454-5000		
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<b>TRADEMARK</b>			

OP \$340.00 87078346

**Correspondent Name:** PEPPER HAMILTON LLP  
**Address Line 1:** 501 GRANT STREET  
**Address Line 2:** SUITE 300, UNION TRUST BUILDING  
**Address Line 4:** PITTSBURGH, PENNSYLVANIA 15219-4429

**NAME OF SUBMITTER:** RHODA MBATO

**SIGNATURE:** /RHODA MBATO/

**DATE SIGNED:** 02/27/2019

**Total Attachments: 21**

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**INTELLECTUAL PROPERTY SECURITY AGREEMENT**

This INTELLECTUAL PROPERTY SECURITY AGREEMENT (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “IP Security Agreement”) dated October 19, 2018, is made by APDN (B.V.I.) Inc., a corporation formed under the laws of the British Virgin Islands (the “Grantor”), in favor of DELAWARE TRUST COMPANY, a Delaware corporation, as collateral agent (the “Collateral Agent”) for the Secured Parties (as defined in the Guaranty and Security Agreement referred to below).

WHEREAS, Grantor is a wholly owned subsidiary of APPLIED DNA SCIENCES, a Delaware corporation (the “Company”) and the Company is party to the Securities Purchase Agreement dated as of August 31, 2018 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Securities Purchase Agreement”) with the Buyers party thereto.

WHEREAS, pursuant to the Securities Purchase Agreement, the Grantor has executed and delivered that certain Guaranty and Security Agreement, dated as of the date hereof, made by the Grantor to the Collateral Agent for the benefit of the Secured Parties (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Security Agreement”; the capitalized terms defined therein and not otherwise defined herein being used herein as therein defined).

WHEREAS, under the terms of the Security Agreement, the Grantor has granted to the Collateral Agent, for the ratable benefit of the Secured Parties, a security interest in, among other property, certain intellectual property of the Grantor, and have agreed as a condition thereof to execute this IP Security Agreement for recording with the U.S. Patent and Trademark Office, the United States Copyright Office and other governmental authorities.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Grantor agrees as follows:

SECTION 1. Grant of Security. Grantor hereby grants to the Collateral Agent for the ratable benefit of the Secured Parties a security interest in all of Grantor’s right, title and interest in and to the following (the “Collateral”):

(i) all patents, patent applications, utility models and statutory invention registrations, all inventions claimed or disclosed therein and all improvements thereto, including, without limitation, those set forth in Schedule A hereto (the “Patents”);

(ii) all trademarks, service marks, domain names, trade dress, logos, designs, slogans, trade names, business names, corporate names and other source identifiers, whether registered or unregistered (provided that no security interest shall be granted in United States intent-to-use trademark applications to the extent that, and solely during the period in which, the grant of a security interest therein would impair the validity or enforceability of such intent-to-

use trademark applications under applicable federal law), together, in each case, with the goodwill symbolized thereby, including, without limitation, those set forth in Schedule B hereto (the "Trademarks");

(iii) all copyrights, including, without limitation, copyrights in Computer Software (as hereinafter defined), internet web sites and the content thereof, whether registered or unregistered, including, without limitation, the copyright registrations and applications and exclusive copyright licenses set forth in Schedule C hereto (the "Copyrights");

(iv) all reissues, divisions, continuations, continuations-in-part, extensions, renewals and reexaminations of any of the foregoing, all rights in the foregoing provided by international treaties or conventions, all rights corresponding thereto throughout the world and all other rights of any kind whatsoever of Grantor accruing thereunder or pertaining thereto;

(v) any and all claims for damages and injunctive relief for past, present and future infringement, dilution, misappropriation, violation, misuse or breach with respect to any of the foregoing, with the right, but not the obligation, to sue for and collect, or otherwise recover, such damages; and

(vi) any and all proceeds of, collateral for, income, royalties and other payments now or hereafter due and payable with respect to, and supporting Obligations (as defined in the Security Agreement) relating to, any and all of the Collateral of or arising from any of the foregoing.

SECTION 2. Security for Obligations. The grant of a security interest in the Collateral by Grantor under this IP Security Agreement secures the payment of all Secured Obligations now or hereafter existing under or in respect of the Transaction Documents, whether direct or indirect, absolute or contingent, and whether for principal, reimbursement obligations, interest, premiums, penalties, fees, indemnifications, contract causes of action, costs, expenses or otherwise. Without limiting the generality of the foregoing, this IP Security Agreement secures, as to Grantor, the payment of all amounts that constitute part of the Secured Obligations and that would be owed by Grantor to any Secured Party under the Transaction Documents but for the fact that such Secured Obligations are unenforceable or not allowable due to the existence of a bankruptcy, reorganization or similar proceeding involving Grantor.

SECTION 3. Recordation. Grantor authorizes and requests that the Register of Copyrights, the Commissioner for Patents and the Commissioner for Trademarks and any other applicable government officer record this IP Security Agreement.

SECTION 4. Execution in Counterparts. This IP Security Agreement may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement.

SECTION 5. Grants, Rights and Remedies. This IP Security Agreement has been entered into in conjunction with the provisions of the Security Agreement. Grantor does hereby acknowledge and confirm that the grant of the security interest hereunder to, and the rights and remedies of, the Collateral Agent with respect to the Collateral are more fully set forth

in the Security Agreement, the terms and provisions of which are incorporated herein by reference as if fully set forth herein.

**SECTION 6. GOVERNING LAW. THIS IP SECURITY AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO CONFLICTS OF LAWS.**

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IN WITNESS WHEREOF, Grantor has caused this IP Security Agreement to be duly executed and delivered by its officer thereunto duly authorized as of the date first above written.

APDN (B.V.I.) INC.,

a corporation formed under the laws of the British  
Virgin Islands

By: 

Name: James A. Hayward

Title: Authorized Signatory

Address for Notices:

50 Health Sciences Drive  
Stony Brook, NY 11790  
Attn: Beth Jantzen, CPA  
Facsimile: 631-240-8900

with a copy to:

Pepper Hamilton LLP  
The New York Times Building  
37<sup>th</sup> Floor  
620 Eighth Avenue  
New York, NY 10018-1405  
Attention: Merrill M. Kraines  
E-mail: [krainesm@pepperlaw.com](mailto:krainesm@pepperlaw.com)

SCHEDULE A

Patents

Country	Status	Application No.	Application Date	Title	Patent Number	Grant Date
Australia	Filed	2013329256	10/10/2013	USE OF PERTURBANTS TO FACILITATE INCORPORATION AND RECOVERY OF TAGGANTS FROM POLYMERIZED COATINGS		
Australia	Granted	2013331402	10/16/2013	SECURITY SYSTEM AND METHOD OF MARKING AN INVENTORY ITEM AND/OR PERSON IN THE VICINITY	2013331402	02/08/2018
Canada	Filed	2,903,728	10/16/2013	SECURITY SYSTEM AND METHOD OF MARKING AN INVENTORY ITEM AND/OR PERSON IN THE VICINITY		
Canada	Filed	2,926,436	10/07/2014	MULTIMODE IMAGE AND SPECTRAL READER		
Canada	Filed	2,940,655	03/18/2015	ENCRYPTED OPTICAL MARKERS FOR SECURITY APPLICATIONS		
Canada	Granted	2,945,710	04/14/2015	CONTOUR ENCRYPTION AND DECRYPTION	2,945,710	07/11/2017
Canada	Granted	2,886,472	10/10/2013	USE OF PERTURBANTS TO FACILITATE INCORPORATION AND RECOVERY OF TAGGANTS FROM POLYMERIZED COATINGS	2,886,472	04/18/2017

Country	Status	Application No.	Application Date	Title	Patent Number	Grant Date
Canada	Granted	2,713,101	10/04/2007	METHOD FOR A CONTINUOUS RAPID THERMAL CYCLE SYSTEM	2,713,101	09/13/2016
Canada	Granted	CA2480069	3/21/2003	Marking Apparatus for Nucleic Acid Marking of Items	480069	7/24/2012
China P.R.	Filed	PCT/US2015/025734	04/15/2015	CONTOUR ENCRYPTION AND DECRYPTION		
China P.R.	Filed	201580014368.6	03/18/2015	ENCRYPTED OPTICAL MARKERS FOR SECURITY APPLICATIONS		
China P.R.	Granted	3155949.2	08/27/2003	METHOD OF DISSOLVING NUCLEIC ACID IN WATER INSOLUBLE MEDIUM AND ITS APPLICATION		
China P.R.	Granted	ZL 200780045281 .0	10/04/2007	METHOD FOR A CONTINUOUS RAPID THERMAL CYCLE SYSTEM	101589157	04/02/2014
China P.R.	Granted	31559492	08/27/2003	METHOD FOR MIXING RIBONUCLEIC ACID IN WATER-INSOLUBLE MEDIUM AND UTILIZATION THEREOF	356065	08/27/2003
China P.R.	Granted	00107580.2	05/18/2000	A METHOD FOR UTILIZING RIBONUCLEIC ACID AS MARKERS FOR PRODUCT ANTI-COUNTERFEITING LABELS	193957	05/18/2000



Country	Status	Application No.	Application Date	Title	Patent Number	Grant Date
European Patent Convention	Granted	03007023.9	03/27/2003	METHOD FOR MIXING RIBONUCLEIC ACID IN WATER-INSOLUBLE MEDIUM AND UTILIZATION THEREOF	1394544	03/27/2003
European Patent Convention	Granted	4018374.1	08/03/2004	METHOD FOR CONCEALING A SECRET INFORMATION CARRIED WITHIN A DNA MOLECULE AND METHOD FOR DECODING A SECRET INFORMATION THAT HAVE BEEN CONCEALED BY SAID CONCEALING METHOD	156878.3	08/03/2004
European Patent Convention	Filed	14852842.5	10/07/2014	MULTIMODE IMAGE AND SPECTRAL READER		
European Patent Convention	Filed	15780179.6	04/15/2015	CONTOUR ENCRYPTION AND DECRYPTION		
European Patent Convention	Filed	07852534.2	10/04/2007	METHOD FOR A CONTINUOUS RAPID THERMAL CYCLE SYSTEM		
European Patent Convention	Filed	15765671.1	03/18/2015	ENCRYPTED OPTICAL MARKERS FOR SECURITY APPLICATIONS		
European Patent Convention	Filed	16783711.1	09/28/2017	HYDROPHOBIC NUCLEIC ACID SALTS AS SECURITY MARKERS		
European Patent Convention	Filed	13776001.3	04/05/2013	PLASMA TREATMENT FOR DNA BINDING		

Country	Status	Application No.	Application Date	Title	Patent Number	Grant Date
European Patent Convention	Filed	13845351.9	10/10/2013	USE OF PERTURBANTS TO FACILITATE INCORPORATION AND RECOVERY OF TAGGANTS FROM POLYMERIZED COATINGS		
European Patent Convention	Filed	14784907.9	04/18/2014	LASER MARKING FOR AUTHENTICATION AND TRACKING		
European Patent Convention	Filed			SECURITY SYSTEM AND METHOD OF MARKING AN INVENTORY ITEM AND/OR PERSON IN THE VICINITY		
European Patent Convention	Granted	13847647.8	10/16/2013	SECURITY SYSTEM AND METHOD OF MARKING AN INVENTORY ITEM AND/OR PERSON IN THE VICINITY		
European Patent Convention	Granted	12152848.3	01/27/2012	MARKING COMPOSITION	2482262	09/06/2017
France	Granted	12152848.3	01/27/2012	MARKING COMPOSITION	2482262	09/06/2017
France	Granted	4018374.1	08/03/2004	A NUCLEIC ACID BASED STEGANOGRAPHY SYSTEM AND APPLICATION THEREOF	1568783	07/11/2007
France	Granted	03007023.9	03/27/2003	METHOD FOR MIXING RIBONUCLEIC ACID IN WATER-INSOLUBLE MEDIUM AND UTILIZATION THEREOF	1394544	02/04/2009

Country	Status	Application No.	Application Date	Title	Patent Number	Grant Date
Germany	Granted	4018374.1	08/03/2004	A NUCLEIC ACID BASED STEGANOGRAPHY SYSTEM AND APPLICATION THEREOF	04018374	07/11/2007
Germany	Granted	03007023.9	03/27/2003	METHOD FOR MIXING RIBONUCLEIC ACID IN WATER-INSOLUBLE MEDIUM AND UTILIZATION THEREOF	603 26 065.9	02/04/2009
Germany	Granted	12152848.3	01/27/2012	MARKING COMPOSITION	2482262	09/06/2017
Great Britain	Granted	12152848.3	01/27/2012	MARKING COMPOSITION	2482262	09/06/2017
Great Britain	Granted	613626.1	07/08/2006	MARKING MATERIAL	613626.1	07/08/2006
Great Britain	Granted	4018374.1	08/03/2004	A NUCLEIC ACID BASED STEGANOGRAPHY SYSTEM AND APPLICATION THEREOF	1568783	07/11/2007
Great Britain	Granted	03007023.9	03/27/2003	METHOD FOR MIXING RIBONUCLEIC ACID IN WATER-INSOLUBLE MEDIUM AND UTILIZATION THEREOF	1394544	02/04/2009
Great Britain	Granted	GB2390055	3/21/2003	Marking Apparatus for Nucleic Acid Marking of Items	GB2390055	8/9/2005

Country	Status	Application No.	Application Date	Title	Patent Number	Grant Date
Hong Kong	Granted	10105127.3	10/04/2007	METHOD FOR A CONTINUOUS RAPID THERMAL CYCLE SYSTEM	1139184	11/14/2014
India	Granted	P 002 004 00374	08/04/2004	A NUCLEIC ACID BASED STEGANOGRAPHY SYSTEM AND APPLICATION THEREOF	IDO 0026764	08/04/2004
India	Filed	#####	07/13/2017	METHOD AND DEVICE FOR MARKING FIBROUS MATERIALS		
Indonesia	Granted	P-002004/00374	08/04/2004	METHOD FOR CONCEALING A SECRET INFORMATION CARRIED WITHIN A DNA MOLECULE AND METHOD FOR DECODING A SECRET INFORMATION THAT HAVE BEEN CONCEALED BY SAID CONCEALING METHOD	IDO 0026764	08/04/2004
Ireland	Granted	12152848.3	01/27/2012	MARKING COMPOSITION	2482262	09/06/2017
Israel	Granted	198028	10/04/2007	METHOD FOR PERFORMING PCR IN A CONTINUOUS RAPID THERMAL CYCLE SYSTEM	198028	07/06/2015
Italy	Granted	4018374.1	08/03/2004	A NUCLEIC ACID BASED STEGANOGRAPHY SYSTEM AND APPLICATION THEREOF	31679 BE/2007	07/11/2007
Italy	Granted	03007023.9	03/27/2003	METHOD FOR MIXING RIBONUCLEIC ACID IN WATER-INSOLUBLE MEDIUM AND UTILIZATION THEREOF	1394544	02/04/2009

Country	Status	Application No.	Application Date	Title	Patent Number	Grant Date
Japan	Filed	2017-501090	03/18/2015	ENCRYPTED OPTICAL MARKERS FOR SECURITY APPLICATIONS		
Japan	Granted	2016-562831	10/14/2016	CONTOUR ENCRYPTION AND DECRYPTION	6273379	01/12/2018
Japan	Granted	2004-225987	08/04/2004	METHOD FOR ENCRYPTING AND DECRYPTING SPECIFIC MESSAGE BY USING NUCLEIC ACID MOLECULE	4452947	08/04/2004
Japan	Granted	2002/294229	08/30/2002	METHOD FOR MIXING RIBONUCLEIC ACID IN WATER-INSOLUBLE MEDIUM AND UTILIZATION THEREOF	3930794	08/30/2002
Malaysia	Granted	PI2004/3145	08/04/2004	METHOD FOR CONCEALING A SECRET INFORMATION CARRIED WITHIN A DNA MOLECULE AND METHOD FOR DECODING A SECRET INFORMATION THAT HAVE BEEN CONCEALED BY SAID CONCEALING METHOD	MY-135976-A	07/31/2008
Patent Cooperation Treaty	Filed	PCT/US2015/025734	04/14/2015	CONTOUR ENCRYPTION AND DECRYPTION		
Patent Cooperation Treaty	Filed	PCT/US2015/021165	03/18/2015	ENCRYPTED OPTICAL MARKERS FOR SECURITY APPLICATIONS		
Patent Cooperation Treaty	Filed	PCT/US18/13549	01/12/2018	TRACEABLE NUCLEIC ACID MARKED FERTILIZER		

Country	Status	Application No.	Application Date	Title	Patent Number	Grant Date
Patent Cooperation Treaty	Filed	PCT/US17/17049		IDENTIFYING MARKED ARTICLES IN THE INTERNATIONAL STREAM OF COMMERCE		
Patent Cooperation Treaty	Filed	PCT/US17/23579	03/22/2017	METHOD OF MARKING CELLULOSIC PRODUCTS		
Peru	Filed			METHOD AND DEVICE FOR MARKING FIBROUS MATERIALS		
Republic of Korea	Granted	61387/2004	08/04/2004	METHOD FOR CONCEALING A SECRET INFORMATION CARRIED WITHIN A DNA MOLECULE AND METHOD FOR DECODING A SECRET INFORMATION THAT HAVE BEEN CONCEALED BY SAID CONCEALING METHOD	4452947	08/04/2004
Switzerland	Granted	4018374.1	08/03/2004	A NUCLEIC ACID BASED STEGANOGRAPHY SYSTEM AND APPLICATION THEREOF	1568783	07/11/2007
Switzerland	Granted	03007023.9	03/27/2003	METHOD FOR MIXING RIBONUCLEIC ACID IN WATER-INSOLUBLE MEDIUM AND UTILIZATION THEREOF	337023	02/04/2009
Taiwan	Filed	104110480	03/31/2015	IN-FIELD DNA EXTRACTION, DETECTION AND AUTHENTICATION METHODS AND SYSTEMS THEREFOR		
Taiwan	Filed	92119302	07/15/2003	A TRANSFER METHOD OF REWARD FUND CAPABLE FOR IDENTIFYING MULTIPLE TARGETS		

Country	Status	Application No.	Application Date	Title	Patent Number	Grant Date
Taiwan	Granted	2003-0121490	08/06/2003	METHOD FOR CONCEALING A SECRET INFORMATION CARRIED WITHIN A DNA MOLECULE AND METHOD FOR DECODING A SECRET INFORMATION THAT HAVE BEEN CONCEALED BY SAID CONCEALING METHOD	1326308	02/16/2005
Taiwan	Granted	89108443	03/17/2000	NUCLEIC ACID AS MARKER FOR PRODUCT ANTI-COUNTERFETING AND IDENTIFICATION		
Taiwan	Granted	89111477	06/12/2000	A DEVICE FOR MULTIPLE PCR IN A CLOSED CONTAINER AND METHOD OF USING THERFOR	1231311	06/12/2000
Thailand	Granted	92819	08/04/2004	METHOD FOR CONCEALING A SECRET INFORMATION CARRIED WITHIN A DNA MOLECULE AND METHOD FOR DECODING A SECRET INFORMATION THAT HAVE BEEN CONCEALED BY SAID CONCEALING METHOD	156878.3	08/04/2004
Turkey	Filed	2018/03030	3/1/2018	TRACEABLE NUCLEIC ACID MARKED FERTILIZER		
United States	Filed	14/695,228	04/24/2015	METHODS AND SYSTEMS FOR THE GENERATION OF A PLURALITY OF SECURITY MARKERS AND THE DETECTION THEROF		
United States	Filed	14/570,242	12/15/2014	SECURITY SYSTEM AND METHOD OF MARKING AN INVENTORY ITEM AND/OR PERSON IN THE VICINITY		

Country	Status	Application No.	Application Date	Title	Patent Number	Grant Date
United States	Filed	14/969,582	12/15/2015	INCORPORATING SOLUBLE SECURITY MARKERS INTO CYANOACRYLATE SOLUTIONS		
United States	Filed	14/572,552	12/16/2014	METHOD AND DEVICE FOR MARKING FIBROUS MATERIALS		
United States	Filed	PCT/US2015/066074	12/16/2015	METHOD AND DEVICE FOR MARKING FIBROUS MATERIALS		
United States	Filed	16/028,176	07/05/2018	ENCRYPTED OPTICAL MARKERS FOR SECURITY APPLICATIONS		
United States	Filed	15/562,495	09/28/2017	HYDROPHOBIC NUCLEIC ACID SALTS AS SECURITY MARKERS		
United States	Filed	PCT/US2016/022532	03/16/2016	METHOD FOR AUTHENTICATING ACTIVE PHARMACEUTICAL INGREDIENTS		
United States	Filed	15/427,983	02/08/2017	IDENTIFYING MARKED ARTICLES IN THE INTERNATIONAL STREAM OF COMMERCE		
United States	Filed	15/212,429	07/18/2016	PLASMA TREATMENT FOR DNA BINDING		



Country	Status	Application No.	Application Date	Title	Patent Number	Grant Date
United States	Filed	15/722,157	10/02/2017	COMPOSITION AND METHOD OF DNA MARKING ELASTOMERIC MATERIAL		
United States	Filed	62/575,926	10/20/2017	SYSTEM AND METHOD OF TAGGING OBJECTS WITH DETECTABLE NUCLEIC ACID MARKERS VIA AERIAL DELIVERY		
United States	Filed	15/870,035	01/12/2018	TRACEABLE NUCLEIC ACID MARKED FERTILIZER		
United States	Filed	15/868,510	01/11/2018	MULTIMODE IMAGE AND SPECTRAL READER		
United States	Filed	15/466,016	03/22/2017	METHOD OF MARKING CELLULOSIC PRODUCTS		
United States	Filed	62/524,186	06/23/201	RAPID AUTHENTICATION OF PHARMACEUTICALS VIA DNA TAGGING AND IN-FIELD DETECTION		
United States	Filed	62/660,158	04/19/2018	SYSTEM AND METHOD FOR PRODUCING PATIENT-SPECIFIC ANTIBODIES VIA LINEAR DNA AMPLICONS		
United States	Filed	62/625,702	02/02/2018	SYSTEM AND METHOD FOR TRACKING ORIGIN OF CANNABIS PRODUCTS AND CANNABIS DERIVATIVE PRODUCTS		

Country	Status	Application No.	Application Date	Title	Patent Number	Grant Date
United States	Filed	62/684,142	06/12/2018	SYSTEMS AND METHODS FOR PRODUCING PATIENT-SPECIFIC TUMOR ANTIGENS VIA LINEAR DNA AMPLICONS		
United States	Filed	16/028,176	07/05/2018	ENCRYPTED OPTICAL MARKERS FOR SECURITY APPLICATIONS		
United States	Filed	62/700,021	07/18/2018	PLANT MATERIAL SPRAYING SYSTEM		
United States	Granted	15/027,454	04/06/2016	MULTIMODE IMAGE AND SPECTRAL READER	9,904,734	02/27/2018
United States	Granted	10/748,412	12/29/2003	METHOD OF MARKING SOLID OR LIQUID SUBSTANCES WITH NUCLEIC ACID FOR ANTI-COUNTERFEITING AND AUTHENTICATION	7,115,301	10/03/2006
United States	Granted	11/954,038	12/11/2007	METHODS FOR AUTHENTICATING ARTICLES WITH OPTICAL REPORTERS	8,426,216	04/23/2013
United States	Granted	11/954,044	12/11/2007	SYSTEM AND METHOD FOR SECURE DOCUMENT PRINTING AND DETECTION	8,415,164	04/09/2013
United States	Granted	11/954,051	12/11/2007	SYSTEM AND METHOD FOR AUTHENTICATING SPORTS IDENTIFICATION GOODS	8,415,165	04/09/2013

Country	Status	Application No.	Application Date	Title	Patent Number	Grant Date
United States	Granted	11/954,030	12/11/2007	OPTICAL REPORTER COMPOSITIONS	8,372,648	02/12/2013
United States	Granted	13/761,447	02/07/2013	OPTICAL REPORTER COMPOSITIONS	9,005,985	04/14/2015
United States	Granted	14/253,641	04/15/2014	CONTOUR ENCRYPTION AND DECRYPTION	9,412,284	08/09/2016
United States	Granted	11/954,009	12/11/2007	METHODS FOR COVALENT LINKING OF OPTICAL REPORTERS	8,124,333	02/28/2012
United States	Granted	12/307,488	10/26/2009	MARKING MATERIAL	9,171,443	10/27/2015
United States	Granted	13/648,594	10/10/2012	USE OF PERTURBANTS TO FACILITATE INCORPORATION AND RECOVERY OF TAGGANTS FROM POLYMERIZED COATINGS	9,297,032	03/29/2016
United States	Granted	14/497,614	09/26/2014	METHOD AND DEVICE FOR MARKING ARTICLES	9,963,740	05/08/2018
United States	Granted	15/079,214	03/24/2016	USE OF PERTURBANTS TO FACILITATE INCORPORATION AND RECOVERY OF TAGGANTS FROM POLYMERIZED COATINGS		

Country	Status	Application No.	Application Date	Title	Patent Number	Grant Date
United States	Granted	14/661,489	03/18/2015	ENCRYPTED OPTICAL MARKERS FOR SECURITY APPLICATIONS	10,047,282	08/14/2018
Various EU Members	Granted	312388.2	3/21/3003	Marking Apparatus for Nucleic Acid Marking of Items	EP1488039	3/9/2006
Vietnam	Granted	1-2004-00742	08/04/2004	METHOD FOR CONCEALING A SECRET INFORMATION CARRIED WITHIN A DNA MOLECULE AND METHOD FOR DECODING A SECRET INFORMATION THAT HAVE BEEN CONCEALED BY SAID CONCEALING METHOD	9182	08/04/2004

SCHEDULE B

Trademarks

Bocket Number	Client Ref No.	Country	Application Date	Application No	Registration Date	Registration No.	Status
2542-10 AUSTRALIA	8251-8 AUSTRALIA	Australia	10/27/2006	1143760	09/29/2008	1143760	Registered
2542-10 CANADA	8251-8 CANADA	Canada	10/26/2006	1321773	11/28/2012	837149	Registered
2542-89 Intl/EU		Community Trademark	8/16/2017	1368527	8/7/2017	1368527	Registered
2542-75 EU		Community Trademark	6/9/2017	16828287	9-Jun-17	16828287	Registered
2542-72 EU		Community Trademark	12/20/2016	16189961	04/24/2017	16189961	Registered
2542-46 EU	8251-59 EPO	Community Trademark	11/09/2009	1022396	11/09/2009	1022396	Registered
2542-54 INTL/EU	8251-70 MP EU	Community Trademark	10/09/2015	1277705	10/09/2015	1277705	Registered
2542-55 INTL/EU	8251-71 MP EU	Community Trademark	10/09/2015	1,280,146	10/09/2015	1,280,146	Registered
2542-33 EU	8251-16 CTM	Community Trademark	07/19/2012	011054285	12/14/2012	011054285	Registered
2542-62 INTL/EU	8251-72 MP EU	Community Trademark	10/09/2015	1,277,538	10/09/2015	1,277,538	Registered
2542-63 INTL/EU	8251-73 MP EU	Community Trademark	10/09/2015	1,282,810	10/09/2015	1,282,810	Registered
2542-42 EU	8251-52 CTM	Community Trademark	05/09/2011	009948258	10/13/2011	009948258	Registered
2542-59 EU	8251-66 CTM	Community Trademark	04/16/2010	009034349	09/28/2010	009034349	Registered
2542-58 EU	8251-65 CTM	Community Trademark	05/06/2011	00948258	10/13/2011	00948258	Registered
2542-41 EU	8251-51 CTM	Community Trademark	12/07/2007	006537047	11/21/2008	006537047	Registered
2542-57 EU	8251-64 CTM	Community Trademark	05/06/2011	009948092	10/13/2011	009948092	Registered
2542-29 EU	8251-10 EPO	Community Trademark	08/12/2010	1048621	08/12/2010	1048621	Registered
2542-47 EU	8251-61 EU	Community Trademark	12/07/2007	006536999	11/06/2008	006536999	Registered
2542-56 EU	8251-62 CTM	Community Trademark	05/06/2011	009948118	10/13/2011	009948118	Registered
2542-60 EU	8251-67 CTM	Community Trademark	05/06/2011	009948308	10/13/2011	009948308	Registered
2542-61 EU	8251-68 CTM	Community Trademark	05/06/2011	009948423	10/13/2011	009948423	Registered
2542-10 EU	8251-8 EPO	Community Trademark	10/26/2006	005419031	09/28/2007	005419031	Registered
2542-30 INTL/EU	8251-12 MP EU	Community Trademark	11/22/2013	1,186,977	11/22/2013	1,186,977	Registered
2542-58 UNITED KINGDOM	8251-65	Great Britain	11/09/2009	2531080	05/18/2012	00002531080	Registered
2542-30 INTL/ICELAND	8251-12 MP ICELAND	Iceland	12/19/2013	3594/2013	11/22/2013	1,186,977	Registered

Docket Number	Client Ref No.	Country	Application Date	Application No.	Registration Date	Registration No.	Status
2542-89 Intl		International	8/7/2017	A0069009			Registered
2542-54 INTL	8251-70 MP	International	10/09/2015	A0053765	10/09/2015	1277705	Registered
2542-55 INTL	8251-71 MP	International	10/09/2015	1,280,146	10/09/2015	1/280,146	Registered
2542-62 INTL	8251-72 MP	International	10/09/2015	1277538	10/09/2015	1277538	Registered
2542-63 INTL	8251-73 MP	International	10/09/2015	1,282,810	10/09/2015	1,282,810	Registered
2542-30 INTL	8251-12 MP	International	11/22/2013	A0039418	11/22/2013	1,186,977	Registered
2542-89 Intl/UK		UK	3/6/2017	WE00001368527	1/9/2018	1368527	Registered
2542-84UK		UK	06/22/2017	UK00003238912	09/08/2017	UK00003238912	Registered
2542-72		United States	06/21/2016	87/078,346			Filed
2542-54	8251-70	United States	04/10/2015	86/593,696	04/11/2017	5,182,183	Registered
2542-55	8251-71	United States	04/10/2015	86/593,862	04/11/2017	5,182,184	Registered
2542-70		United States	06/29/2015	86/677,227	02/14/2017	5,142,544	Registered
2542-9		United States	09/22/2003	76/978,843	08/19/2008	3,489,209	Registered
2542-31	8251-14	United States	12/29/2010	85/207,192	04/03/2012	4,120,445	Registered
2542-33	8251-16	United States	01/25/2012	85/524,990	03/04/2014	4,491,643	Registered
2542-32	8251-15	United States	12/29/2010	85/207,229	11/22/2011	4,058,892	Registered
2542-11	8251-11	United States	05/04/2009	77/728,511	10/12/2010	3,862,228	Registered
2542-12	8251-13	United States	05/04/2009	77/728,499	01/10/2012	4,085,298	Registered
2542-10	8251-8	United States	04/28/2006	78/871,967	08/05/2008	3,482,366	Registered
2542-30	8251-12	United States	08/12/2010	85/105,993	05/22/2012	4,147,273	Registered
2542-88		United States	2/21/2017	87/343,172			Filed

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None.