

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4196660

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
Name		Execution Date
DNA ELECTRONICS, INC.		08/05/2016
RECEIVING PARTY DATA		
Name:	DNAE GROUP HOLDINGS LIMITED	
Street Address:	56 WOOD LANE	
Internal Address:	UGLI CAMPUS, BLOCK C CENTRE HOUSE	
City:	LONDON	
State/Country:	ENGLAND	
Postal Code:	W12 7SB	
PROPERTY NUMBERS Total: 41		
Property Type	Number	
Application Number:	61326588	
Application Number:	12850203	
Application Number:	13720771	
Application Number:	15206751	
Application Number:	13091506	
Patent Number:	9389225	
Patent Number:	8841104	
Application Number:	14478692	
Application Number:	13091518	
Application Number:	13091527	
Application Number:	13091534	
Application Number:	13091548	
Application Number:	61739647	
Application Number:	14102861	
Application Number:	61739577	
Application Number:	14104164	
Application Number:	61739644	
Application Number:	14107315	
Application Number:	61739612	

PATENT

Property Type	Number
Application Number:	14133022
Application Number:	61739511
Application Number:	14132099
Application Number:	61739616
Application Number:	13952130
Application Number:	61739567
Application Number:	14107335
Application Number:	61739593
Application Number:	14107253
Application Number:	61739575
Application Number:	14132770
Application Number:	61739619
Application Number:	14132399
Application Number:	61739618
Application Number:	14132244
PCT Number:	US2011033184
PCT Number:	US2011033186
PCT Number:	US2011048447
PCT Number:	US2011048452
PCT Number:	US2011033411
PCT Number:	US2011033410
PCT Number:	US2013076649

CORRESPONDENCE DATA

Fax Number: (617)856-8201

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: 6178568200

Email: IP@brownrudnick.com

Correspondent Name: BROWN RUDNICK LLP

Address Line 1: 1 FINANCIAL CENTER

Address Line 4: BOSTON, MASSACHUSETTS 02111

NAME OF SUBMITTER:	THOMAS C. MEYERS
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SIGNATURE:	/Thomas C. Meyers/
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DATE SIGNED:	12/21/2016
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Total Attachments: 12

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(1) DNA ELECTRONICS, INC.

AND

(2) DNAE GROUP HOLDINGS LIMITED

INTELLECTUAL PROPERTY RIGHTS SALE AND ASSIGNMENT DEED



199 Bishopsgate
London EC2M 3UT

Tel: 020 7031 3700
Fax: 020 7031 3799
www.dorsey.com

THIS AGREEMENT is made as a deed on the 5th day of August 2016

BETWEEN:

- (1) **DNA ELECTRONICS, INC.**, a company incorporated and registered in the State of Delaware, United States of America whose principal place of business is at 5741 Midway Park Blvd NE, Albuquerque, NM 87109 (the "**Seller**"), and
- (2) **DNAE GROUP HOLDINGS LIMITED**, a company incorporated under the laws of England and Wales (registered no. 04821572), having a registered address at Ughl Campus, Block C, Centre House, 56 Wood Lane, London W12 7SB, England (the "**Buyer**").

INTRODUCTION

- (A) The Seller is a wholly owned subsidiary of the Buyer.
- (B) It is the intention of the Buyer to develop and make products (or to have such products developed and manufactured) that combine the Business IP with other IPRs (each as defined below) owned by or licensed to the Buyer and its subsidiaries and for such products to be sold.
- (C) The Seller wishes to sell and assign the Business IP (as defined below) to the Buyer and the Buyer wish to buy the Business IP on the terms of this Agreement.

THE PARTIES AGREE as follows:

1. DEFINITIONS AND INTERPRETATION

- 1.1 In this Agreement (unless the context requires otherwise):

"**Business IP**" means all the Patent Rights and the Unregistered IP set out in Schedule 1;

"**Business Know-How**" means all technical information, data, knowledge, expertise, inventions and discoveries, used or held for use by the Seller in its business of developing a sample preparation system for the rapid isolation of bacterial and fungal pathogens directly from blood, whether patentable or not, whether or not reduced to writing, including information in people's heads and information conveyed orally or by demonstration, and including, but not limited to, information comprised in formulae, concepts, techniques, designs, specifications, drawings and associated data, design manuals, design rules, design standards, masks, mask works, components, prototypes, models, samples, lists, manuals, instructions, catalogues, computation models, process descriptions, process manuals, software (including object and source codes), show-how, trials, experiments, research, trial and testing results, statistics and any related data, relating to (without limitation) the composition, production, manufacture, fabrication, design, development, use, performance, packaging, repair, maintenance, monitoring, recording and controlling of any product, process or service, including any such information relating to tooling design and quality control;

"**Effective Date**" means 1 July 2016;

"**IPRs**" means all intellectual and industrial property rights including patents, petty patents, utility models, copyright, database rights, design rights, registered and unregistered designs, semiconductor topography rights (mask lay-out rights), trade marks, trading names, internet domain names, email addresses and other indications of origin and rights in Business Know-How,

trade secrets and confidential information, in each case whether now existing or coming into existence at some future date, and including pending applications and the right to apply for any of the foregoing, and other industrial and intellectual property rights of the same or similar effect anywhere in the world;

"Patents" means patents, petty patents, utility models, registered designs, design patents and other equivalent registered rights and applications for registration anywhere in the world.

"Patent Rights" means:

- (a) the Patents and Patent applications listed in the Schedule and any divisional applications, reissues, re-examinations, continuations and continuations-in-part of such Patents and Patent applications, any territorial extensions of the same and any equivalent derivative rights in any jurisdiction;
- (b) any other Patents or Patent applications in the Seller's name claiming the same priority or the same inventions or designs as any of the Patents or Patent application listed in the Schedule; and
- (c) the right to file Patent applications in respect of any of the inventions or designs referred to above or in respect of any inventions or designs included in the Unregistered IP; and

"Unregistered IP" means any IPRs (other than Patent Rights) owned, held or that may be claimed by the Seller on the Effective Date in or relating to the Business Know-How.

1.2 Any reference in this Agreement to:

- 1.2.1 clauses, sub-clauses and schedules are, unless otherwise stated, references to clauses and sub-clauses of and schedules to this Agreement;
- 1.2.2 a "person" shall include bodies corporate, unincorporated associations, partnerships and individuals;
- 1.2.3 a "subsidiary" means a subsidiary as defined in section 1159 of the Companies Act 2006;
- 1.2.4 "include" or "including" shall be construed without limitation;
- 1.2.5 the singular shall include the plural and the plural shall include the singular, as the context may require;
- 1.2.6 one gender shall include a reference to the other gender;
- 1.2.7 a particular law including a statutory provision is a reference to it as is in force for the time being taking account of any amendment, modification, extension, or re-enactment and includes any subordinate legislation for the time being in force made under it; and
- 1.2.8 any English legal term for any action, remedy, method of judicial proceeding, legal document, legal status, court, official or any legal concept or thing shall, in respect of any jurisdiction other than England, be deemed to include what most nearly approximates in that jurisdiction to the English legal term and a reference to any English statute shall be construed so as to include equivalent or analogous laws of any other jurisdiction.

1.3 The headings to the clauses are for convenience only and shall not affect the construction or interpretation of this Agreement.

2. SALE AND PURCHASE

- 2.1 On the terms and subject to the conditions of this Agreement, with effect from the Effective Date, the Seller hereby sells and assigns the Business IP to the Buyer, absolutely, and the Buyer purchases and accepts the assignment of the Business IP (free from any and all Encumbrances (as defined below)), including:
- 2.1.1 all rights, title and interest of the Seller in the Business IP, including all legal and beneficial rights and immunities (howsoever derived) attaching thereto, anywhere in the world;
 - 2.1.2 the right to sue for and to recover damages and other remedies in respect of any infringement or misuse of the Business IP which may have occurred before the Effective Date (or at any time after the Effective Date and before the date of this Agreement); and
 - 2.1.3 the right to claim priority from any of the Business IP and to file applications to register any IPRs anywhere in the world for and based on the Business IP.

3. WARRANTIES AND REPRESENTATIONS

- 3.1 The Seller warrants and represents to the Buyer that, as of the Effective Date and for the period from the Effective Date up to the date of this Agreement,:
- 3.1.1 the Seller has all right, power and authority to grant the rights purported to be granted by the Seller to the Buyer under clause 2.
 - 3.1.2 except to the extent the Buyer or any of its subsidiaries can claim any right, title or interest in or to the Business IP, the Seller is the sole legal and beneficial owner of the Business IP.
 - 3.1.3 the Business IP is sold to the Buyer free from any interest or equity of any person (including any right to acquire, option or right of pre-emption) or any mortgage, charge, pledge, lien, assignment, hypothecation, security interest, title retention or any other security agreement or arrangement ("Encumbrances").
 - 3.1.4 the Seller has taken all actions necessary to maintain the Business IP and there has been no attack or challenge on any grounds in respect of the Business IP. There has also been no actual or alleged infringement of any of the Business IP.
 - 3.1.5 no licences or registered user or other rights over the Business IP have been granted or agreed to be granted to any third party in respect thereof.

4. CONSIDERATION

- 4.1 In consideration of the sale of the Business IP under this Agreement, the parties agree that the Buyer shall pay the Seller an amount of United States Dollars Thirteen Million Nine Hundred and Forty Eight Thousand (US Dollars 13,948,000) (the "**Consideration**"), to be satisfied in a manner to be mutually agreed between the parties within ninety (90) days from the date of this Agreement ("**Due Date**"), failing which an interest of five percent (5%) per annum shall accrue on the outstanding Consideration amount, for every day that such amounts remain outstanding and the accrued interest (calculated according to the number of actual days elapsed from the Due Date and a year of 365 days) shall be due and payable to the Seller together with the outstanding Consideration amount.

- 4.2 The Consideration amount is inclusive of all taxes that may be applicable and any such taxes which may be assessed on the payment of the Consideration shall be borne and paid by the Seller.

5. FURTHER ASSURANCE

- 5.1 The Seller shall on request by the Buyer do and execute each act, document and thing within his power which are reasonably necessary in order to fully vest in the Buyer the rights sold and assigned under clause 2 and to record such assignment in any relevant registry, including executing confirmatory assignments in such form as may be required to transfer the Business IP to the Buyer's name.
- 5.2 The Buyer acknowledges that the Seller may be required to utilise the Business IP to perform its obligations pursuant to Contract No. HHSO100201400015C by and between the Seller and the United States Government, United States Department of Health and Human Services ("HHS"), Office of Acquisitions Management, Contracts, and Grants and the Biomedical Advanced Research and Development Authority ("BARDA"), a contract grant previously obtained on 29 September 2014 and any further contract, grants and/or cooperative agreements to be obtained moving forward from the HHS, Office of Acquisitions Management, Contracts, and Grants and/or BARDA (collectively the "BARDA Grants"). The Buyer undertakes that it shall, upon a request by the Seller, do and execute each act, document and thing within its power which is reasonably necessary in order to enable the Seller to perform its obligations involving the utilisation of the Business IP (including the granting of a non-exclusive licence to the Seller to use the Business IP) under the BARDA Grants.

6. RATIFICATION AND POWER OF ATTORNEY

- 6.1 The Buyer hereby ratifies all acts taken by the Seller in relation to the Business IP after the Effective Date and before the date of this Agreement, including any action taken before any intellectual property registry office in relation to the Business IP, as if such acts were carried out by the Seller as an agent on behalf of the Buyer.
- 6.2 The Seller hereby grants the Buyer power of attorney to do on the Seller's behalf all acts and things and to execute all documents, deeds and forms necessary solely in order to give full effect to this Agreement, including to do the acts that the Seller is required to do under clause 5. Such power of attorney shall be irrevocable for as long as (in the Buyer's reasonable opinion) any of the Seller's obligations under this Agreement remain to be discharged.

7. THIRD PARTIES

- 7.1 A person who is not a party to this Agreement shall have no rights to enforce the provisions of this Agreement under the Contracts (Rights of Third Parties) Act 1999.

8. MODIFICATIONS AND WAIVERS

- 8.1 No modification, alteration or waiver of any of the provisions of this Agreement shall be effective unless in writing and signed on behalf of each of the parties. A waiver, express or implied, by either party of any right under this Agreement or of any failure to perform or breach hereof by the other party hereto shall not constitute or be deemed to be a waiver of any other right hereunder or of any other failure to perform or breach hereof by such other party, whether of a similar or dissimilar nature thereto.

9. SEVERENCE

- 9.1 If at any time any provision of this Agreement is or is held to be illegal, invalid or unenforceable in any respect under the law of any jurisdiction, that shall not affect the legality, validity or enforceability in that jurisdiction or any other jurisdiction of any other provision of this Agreement.

10. ENTIRE AGREEMENT

- 10.1 This Agreement including the Schedule shall constitute the entire agreement between the Parties and supersede any and all prior and contemporaneous negotiations, representations, agreements, and understandings with respect to the subject matter hereof. Each party acknowledges that it has not relied on or been induced to enter this Agreement by a representation other than those expressly set out in this Agreement.

11. GOVERNING LAW

- 11.1 This Agreement and all matters arising from or connected with it (including non-contractual disputes or claims) are governed by English law. The courts of England shall have exclusive jurisdiction to settle any dispute arising from or connected with this Agreement.

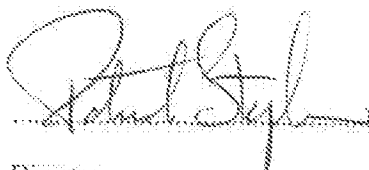
12. COUNTERPARTS

- 12.1 This Agreement may be executed in any number of counterparts, each of which is an original and all of which together evidence the same instrument. Facsimile and electronic (i.e., PDF) signature pages shall have the same force and effect as original signature pages.

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IN WITNESS WHEREOF this Agreement has been executed as a deed by the Seller and signed by the Buyer and is intended to be and is hereby delivered by the parties on the date specified above.

SIGNED as a DEED by DNA
ELECTRONICS, INC.

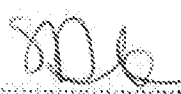
} 

Director

} 5th August 2016

Date

SIGNED by and on behalf of
DNAE GROUP HOLDINGS LIMITED

} 

Director

} 5 August 2016

Date

SCHEDULE 1

4279-9600-9268.1

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Matter List

Docket Reference	Title	Application Number	Filing Date	Status	Patent Number	Issue Date
NANO-001/00US	APPARATUS, METHOD AND ASSOCIATED TECHNOLOGY CONCERNING MAGNETIC SEPARATION OF TARGETED MATERIAL	61/336588	21/04/2010	Expired		
NANO-001/01CA	ISOLATING A TARGET ANALYTE FROM A BODY FLUID	2796767	20/04/2011	Published		
NANO-001/01EP	ISOLATING A TARGET ANALYTE FROM A BODY FLUID	11772606.7	20/04/2011	Published		
NANO-001/01IN	ISOLATING A TARGET ANALYTE FROM A BODY FLUID	9639/CHEMP/2012	20/04/2011	Pending		
NANO-001/01JP	ISOLATING A TARGET ANALYTE FROM A BODY FLUID	2013-506262	20/04/2011	Granted	5814344	02/10/2015
NANO-001/01US	ISOLATING A TARGET ANALYTE FROM A BODY FLUID	12/850203	04/08/2010	Published		
NANO-001/01WO	ISOLATING A TARGET ANALYTE FROM A BODY FLUID	US11/33184	20/04/2011	NAT PHASE		
NANO-001/02US	ISOLATING A TARGET ANALYTE FROM A BODY FLUID	13/720771	19/12/2012	Published		
NANO-002/00US	SEPARATING TARGET ANALYTES USING ALTERNATING MAGNETIC FIELDS	12/835147	12/08/2010	Granted	9389235	12/07/2016
NANO-002/01CA	SEPARATING TARGET ANALYTES USING ALTERNATING MAGNETIC FIELDS	2796897	20/04/2011	Published		
NANO-002/01EP	SEPARATING TARGET ANALYTES USING ALTERNATING MAGNETIC FIELDS	11772608.3	20/04/2011	Allowed		
NANO-002/01US	SEPARATING TARGET ANALYTES USING ALTERNATING MAGNETIC FIELDS	15/206751	11/07/2016	Pending		
NANO-002/01WO	SEPARATING TARGET ANALYTES USING ALTERNATING MAGNETIC FIELDS	PCT/US2011/033186	20/04/2011	NAT PHASE		
NANO-003/00US	COMPOSITIONS FOR ISOLATING A TARGET ANALYTE FROM A HETEROGENEOUS SAMPLE	13/091506	21/04/2011	Allowed		

Matter List

Docket Reference	Title	Application Number	Filing Date	Status	Patent Number	Issue Date
NANO-003/01EP	COMPOSITIONS FOR ISOLATING A TARGET ANALYTE FROM A HETEROGENEOUS SAMPLE	11864030.9	19/08/2011	Published		
NANO-003/01WO	COMPOSITIONS FOR ISOLATING A TARGET ANALYTE FROM A HETEROGENEOUS SAMPLE	PCT/US2011/048447	19/08/2011	NAT PHASE		
NANO-004/01EP	METHODS FOR ISOLATING A TARGET ANALYTE FROM A HETEROGENEOUS SAMPLE	11863742	19/08/2011	Published		
NANO-004/01US	METHODS FOR ISOLATING A TARGET ANALYTE FROM A HETEROGENEOUS SAMPLE	13/091510	21/04/2011	Granted	8941104	23/09/2014
NANO-004/01WO	METHODS FOR ISOLATING A TARGET ANALYTE FROM A HETEROGENEOUS SAMPLE	PCT/US2011/048452	19/08/2011	NAT PHASE		
NANO-004/02US	METHODS FOR ISOLATING A TARGET ANALYTE FROM A HETEROGENEOUS SAMPLE	14/478692	05/09/2014	Published		
NANO-005/00US	COMPOSITIONS	13/091518	21/04/2011	Published		
NANO-006/00US	COMPOSITIONS AND METHOD FOR ISOLATING MID-LOG PHASE BACTERIA	13/091527	21/04/2011	Published		
NANO-006/00WO	COMPOSITIONS AND METHOD FOR ISOLATING MID-LOG PHASE BACTERIA	US11/33411	21/04/2011	NAT PHASE		
NANO-006/01CA	COMPOSITIONS AND METHODS FOR ISOLATING MID-LOG PHASE BACTERIA	2796912	21/04/2011	Published		
NANO-006/01EP	COMPOSITIONS AND METHODS FOR ISOLATING MID-LOG PHASE BACTERIA	11772699.2	21/04/2011	Published		
NANO-007/00US	EXTRACTING LOW CONCENTRATIONS OF BACTERIA FROM A SAMPLE	13/091534	21/04/2011	Published		
NANO-007/00WO	EXTRACTING LOW CONCENTRATIONS OF BACTERIA FROM A SAMPLE	PCT/US2011/033410	21/04/2011	NAT PHASE		

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Docket Reference	Title	Application Number	Filing Date	Status	Patent Number	Issue Date
NANO-007/01CA	EXTRACTING LOW CONCENTRATIONS OF BACTERIA FROM A SAMPLE	2796900	21/04/2011	Published		
NANO-007/01EP	EXTRACTING LOW CONCENTRATIONS OF BACTERIA FROM A SAMPLE	11772698.4	31/04/2012	Published		
NANO-007/01IN	EXTRACTING LOW CONCENTRATIONS OF BACTERIA FROM A SAMPLE	9637/CHEN/2012	21/04/2011	Pending		
NANO-007/01JP	EXTRACTING LOW CONCENTRATIONS OF BACTERIA FROM A SAMPLE	2013-506301	21/04/2011	Published		
NANO-008/00US	ANALYZING BACTERIA WITHOUT CULTURING	13/091548	21/04/2011	Published		
NANO-016/00US	ISOLATION AND CHARACTERIZATION OF PATHOGENS	61/739647	19/12/2012	Expired		
NANO-016/01US	ISOLATION AND CHARACTERIZATION OF PATHOGENS	14/102861	11/12/2013	Published		
NANO-017/00US	TARGET DETECTION	61/739577	19/12/2012	Expired		
NANO-017/01US	TARGET DETECTION	14/104154	12/12/2013	Published		
NANO-018/00US	TARGET CAPTURE SYSTEM	61/739644	19/12/2012	Expired		
NANO-018/01CA	TARGET CAPTURE SYSTEM	2895945	19/12/2013	Published		
NANO-018/01EP	TARGET CAPTURE SYSTEM	13864616.1	19/12/2013	Published		
NANO-018/01US	TARGET CAPTURE SYSTEM	14/107315	16/12/2013	Published		
NANO-018/01WO	TARGET CAPTURE SYSTEM	PCT/US2013/078649	19/12/2013	NAT PHASE		
NANO-019/00US	METHODS FOR AMPLIFYING NUCLEIC ACID FROM A TARGET	61/739612	19/12/2012	Expired		
NANO-019/01US	METHODS FOR AMPLIFYING NUCLEIC ACID FROM A TARGET	14/133022	18/12/2013	Published		
NANO-020/00US	METHODS FOR RAISING ANTIBODIES	61/739511	19/12/2012	Expired		
NANO-020/01US	METHODS FOR RAISING ANTIBODIES	14/132099	18/12/2013	Published		
NANO-021/00US	COMPOSITIONS FOR ANALYZING MULTIPLE ANALYTES IN A HETEROGENEOUS SAMPLE	61/739616	19/12/2012	Expired		

Matter List

Docket Reference	Title	Application Number	Filing Date	Status	Patent Number	Issue Date
NANO-021/01US	METHODS FOR ISOLATING A TARGET ANALYTE FROM A HETEROGENEOUS SAMPLE	13/952130	26/07/2013	Allowed		
NANO-022/00US	METHODS FOR UNIVERSAL TARGET CAPTURE	61/739567	19/12/2012	Expired		
NANO-022/01US	METHODS FOR UNIVERSAL TARGET CAPTURE	14/107335	16/12/2013	Allowed		
NANO-023/00US	METHODS FOR DEGRADING NUCLEIC ACID	61/739593	19/12/2012	Expired		
NANO-023/01US	METHODS FOR DEGRADING NUCLEIC ACID	14/107253	16/12/2013	Published		
NANO-024/00US	DEVICES FOR TARGET DETECTION AND METHODS OF USE THEREOF	61/739575	19/12/2012	Expired		
NANO-024/01US	DEVICES FOR TARGET DETECTION AND METHODS OF USE THEREOF	14/132770	18/12/2013	Published		
NANO-027/00US	AFFINITY MEDIUM USING FIXED WHOLE CELLS	61/739619	19/12/2012	Expired		
NANO-027/01US	AFFINITY MEDIUM USING FIXED WHOLE CELLS	14/132399	18/12/2013	Published		
NANO-028/00US	SAMPLE ENTRY	61/739618	19/12/2012	Expired		
NANO-028/01US	SAMPLE ENTRY	14/132344	18/12/2013	Published		