



Registration of a Charge

Company name: **BIOCHROM LIMITED**

Company number: **03526954**



X6ZB8DYZ

Received for Electronic Filing: **07/02/2018**

Details of Charge

Date of creation: **31/01/2018**

Charge code: **0352 6954 0008**

Persons entitled: **CERBERUS BUSINESS FINANCE, LLC**

Brief description: **THE PATENTS AS DEFINED IN THE CHARGE AND INCLUDING THE PATENTS ISSUED OR APPLIED FOR IN THE UNITED STATES PATENT AND TRADEMARK OFFICE AND THE CANADIAN INTELLECTUAL PROPERTY OFFICE. SEE THE CHARGE FOR MORE DETAILS.**

Contains fixed charge(s).

Authentication of Form

This form was authorised by: **a person with an interest in the registration of the charge.**

Authentication of Instrument

Certification statement: **I CERTIFY THAT SAVE FOR MATERIAL REDACTED PURSUANT TO S.859G OF THE COMPANIES ACT 2006 THE ELECTRONIC COPY INSTRUMENT DELIVERED AS PART OF THIS APPLICATION FOR REGISTRATION IS A CORRECT COPY OF THE ORIGINAL INSTRUMENT.**

Certified by:

HERBERT SMITH FREEHILLS LLP



CERTIFICATE OF THE REGISTRATION OF A CHARGE

Company number: 3526954

Charge code: 0352 6954 0008

The Registrar of Companies for England and Wales hereby certifies that a charge dated 31st January 2018 and created by BLOCHROM LIMITED was delivered pursuant to Chapter A1 Part 25 of the Companies Act 2006 on 7th February 2018 .

Given at Companies House, Cardiff on 9th February 2018

The above information was communicated by electronic means and authenticated
by the Registrar of Companies under section 1115 of the Companies Act 2006



Companies House



**THE OFFICIAL SEAL OF THE
REGISTRAR OF COMPANIES**

ASSIGNMENT FOR SECURITY - - PATENTS

WHEREAS, Hoefer, Inc., a Delaware corporation, Harvard Bioscience, Inc., a Delaware corporation, Warner Instruments LLC, a Delaware limited liability company, Biochrom Limited, a United Kingdom entity, Triangle Biosystems, Inc., a Delaware corporation and Data Sciences International, Inc., a Delaware corporation (individually and collectively, the "Assignor") holds all right, title and interest in the letter patents, design patents and utility patents listed on the attached Schedule A, which patents are issued or applied for in the United States Patent and Trademark Office or the Canadian Intellectual Property Office (the "Patents");

WHEREAS, each Assignor has entered into a Pledge and Security Agreement, dated January 31, 2018 (as amended, restated, supplemented, modified or otherwise changed from time to time, the "Security Agreement"), in favor of Cerberus Business Finance, LLC, as the Collateral Agent for itself and certain lenders (in such capacity, together with its successors and assigns, if any, the "Assignee"); and

WHEREAS, pursuant to the Security Agreement, each Assignor has assigned to the Assignee and granted to the Assignee for the benefit of the Secured Parties (as defined in the Security Agreement) a continuing security interest in all right, title and interest of each Assignor in, to and under the Patents and the applications and registrations thereof, and all proceeds thereof, including, without limitation, any and all causes of action which may exist by reason of infringement thereof and any and all damages arising from past, present and future violations thereof (the "Collateral"), to secure the payment, performance and observance of the Secured Obligations (as defined in the Security Agreement);

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each Assignor does hereby pledge, convey, sell, assign, transfer and set over unto the Assignee and grants to the Assignee for the benefit of the Assignee and the Secured Parties a continuing security interest in the Collateral to secure the prompt payment, performance and observance of the Secured Obligations.

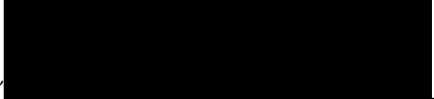
Each Assignor does hereby further acknowledge and affirm that the rights and remedies of the Assignee with respect to the Collateral are more fully set forth in the Security Agreement, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein.

IN WITNESS WHEREOF, each Assignor has caused this Assignment to be duly executed by its officer thereunto duly authorized as of January 31, 2018.

DATA SCIENCES INTERNATIONAL, INC.

By: Harvard Bioscience, Inc., its sole shareholder

By:


Name: Robert E. Gagnon
Title: Chief Financial Officer

HOEFER, INC.

By: Harvard Bioscience, Inc., its sole shareholder

By:


Name: Robert E. Gagnon
Title: Chief Financial Officer

HARVARD BIOSCIENCE, INC.


By:


Name: Robert E. Gagnon
Title: Chief Financial Officer

WARNER INSTRUMENTS LLC

By: Harvard Bioscience, Inc., its sole member

By:


Name: Robert E. Gagnon
Title: Chief Financial Officer

BIOCHROM LIMITED

By: 

Name: Robert E. Gagnon

Title: Director

TRIANGLE BIOSYSTEMS, INC.

By: Harvard Bioscience, Inc., its sole shareholder

By: 

Name: Robert E. Gagnon

Title: Chief Financial Officer

SCHEDULE A TO ASSIGNMENT FOR SECURITY

US Patents and Patent Applications

[See attached]

	Owner	Title	Country	Application No	Filing Date	Patent No.	Issue Date
1	Data Sciences International, Inc.	Plethysmograph With Animal Restraint	US	14/084,668	11/20/2013	8,827,921	9/9/2014
2	Data Sciences International, Inc.	Plethysmograph With Animal Restraint	US	12/589,332	10/22/2009	8,628,479	1/14/2014
3	Data Sciences International, Inc.	Integrated Ventilator With Calibration	US	12/103,074	4/15/2008	8,316,849	11/27/2012
4	Data Sciences International, Inc.	Large Diameter Plethysmograph	US	11/291,190	12/1/2005	8,066,646	11/29/2011
5	Data Sciences International, Inc.	Adjustable Table Plethysmograph	US	10/838,392	5/4/2004	7,402,137	7/22/2008
6	Data Sciences International, Inc.	Collapsible (Folding) Graph	US	10/995,584	11/23/2004	7,233,333	6/19/2007
7	Data Sciences International, Inc.	Reduced-Noise Plethysmograph	US	10/461,008	6/12/2003	6,902,532	6/7/2005
8	Data Sciences International, Inc.	Cough/Sneeze Analyzer And Method	US	10/872,255	6/18/2004	7,104,962	9/12/2006
9	Data Sciences International, Inc.	Respiration Measurements And Dosimetry Control In Inhalation	US	12/715,503	3/2/2010	8,491,491	7/23/2013
10	Data Sciences International, Inc.	Cardiac Rhythm Management Device	US	13/087,997	4/15/2011	8,321,036	11/27/2012

11	Data Sciences International, Inc.	Pressure Sensing Lead Systems For Implantable Stimulators	US	12/165,557	6/30/2008	7,945,324	5/17/2011
12	Data Sciences International, Inc.	Physiologic Signal Processing To Determine A Cardiac Condition	US	12/323,828	11/26/2008	8,086,304	12/27/2011
13	Data Sciences International, Inc.	Pressure Transmission Catheter With Sheath	US	11/479,932	6/30/2006	7,464,602	12/16/2008
14	Data Sciences International, Inc.	High Stability Fast Start Up Oscillator For Implants	US	11/409,224	4/20/2006	7,489,209	2/10/2009
15	Data Sciences International, Inc.	Implantable Housing	US	29/258,087	4/14/2006	5,572,364	7/1/2008
16	Data Sciences International, Inc.	Reference Sensor Correction For Implantable Sensors	US	10/984,111	11/8/2004	7,413,547	8/19/2008
17	Data Sciences International, Inc.	Wireless Communication With Implantable Medical Device	US	10/688,253	10/16/2003	7,280,872	10/9/2007
18	Data Sciences International, Inc.	Devices And Methods For Detecting And Treating Inadequate Tissue Perfusion	US	11/485,747	7/12/2006	7,967,758	6/28/2011
19	Data Sciences International, Inc.	Devices And Methods For Detecting And Treating Inadequate Tissue Perfusion	US	10/797,584	3/9/2004	7,097,618	8/29/2006
20	Data Sciences International, Inc.	Barriers And Methods For Pressure Measurement Catheters	US	10/272,489	10/15/2002	7,344,505	3/18/2008
21	Data Sciences International, Inc.	Vascular Access Port With Physiological Sensor	US	10/246,348	9/17/2002	7,070,591	7/4/2006

22	Data Sciences International, Inc.	Vascular Access Port With Needle Detector	US	11/190,789	7/26/2005	7,347,843	3/25/2008
23	Data Sciences International, Inc.	Assessing Noise On A Communication Channel	US	12/198,681	8/26/2008	8,996,124	3/31/2015
24	Data Sciences International, Inc.	Frame Length Modulation And Pulse Position Modulation System	US	11/193,818	7/28/2005	7,418,297	8/26/2008
25	Data Sciences International, Inc.	Frame Length Modulation And Pulse Position Modulation For Telemetry Of Analog And Digital Data	US	09/968,644	10/1/2001	6,947,795	9/20/2005
26	Data Sciences International, Inc.	Adjustable Flow Probe	US	09/735,378	12/12/2000	6,709,430	3/23/2004
27	Data Sciences International, Inc.	Multiplexed Phase Detector	US	09/479,268	1/6/2000	6,435,037	08/20/2002
28	Data Sciences International, Inc.	Catheter With Physiological Sensor	US	09/825,130	4/3/2001	6,659,959	12/9/2003
29	Data Sciences International, Inc.	Catheter With Physiological Sensor	US	09/264,147	3/5/1999	6,296,615	10/2/2001
30	Triangle Biosystems, Inc.	Headstage	US	12/033,220	2/19/2008	7,639,983	12/29/2009

31	Triangle Biosystems, Inc.	Wireless Neural Data Acquisition System	US	10/971,915	10/23/2004	7,346,312	3/18/2008
32	Biochrom LTD	Sample Head For Spectrophotometer	US	29/483,490	2/28/2014	D729,662	5/19/2015
33	Biochrom LTD	Spectrophotometer	US	29/483,485	2/28/2014	D729,661	5/19/2015
34	Biochrom LTD	Spectrophotometer	US	29/483,483	2/28/2014	D729,660	5/19/2015
35	Biochrom Limited	Analytical Apparatus	US	12/304,225	6/30/2009	8,208,145	6/26/2012

36	Biochrom LTD	Cuvette	US	29/436,034	10/31/2012	D698,036	1/21/2014
37	Warner Instruments, Inc.	Apparatus For Effecting Transfer Of Fluid From Any One Of A Plurality Of Fluid Sources To A Single Fluid Outlet	US	09/339,509	6/24/1999	6,119,726	9/19/2000
38	Harvard Bioscience Inc. [Merger documents evidencing transfer from Harvard Apparatus Inc. to Harvard Bioscience Inc. have been filed 01-30-2018]	Staining, De-Staining And Quantification Of Proteins By Coomassie-Blue And Related Dyes	US	08/903,456	7/28/1997	5,922,186	7/13/1999
39	Harvard Bioscience Inc. [Merger documents evidencing transfer from Harvard Apparatus Inc. to Harvard Bioscience Inc. have been filed 01-30-2018]	Multi-Well Equilibrium Dialysis System	US	09/586,985	6/5/2000	6,458,275	10/1/2002

40	Harvard Bioscience Inc. [Merger documents evidencing transfer from Harvard Apparatus Inc. to Harvard Bioscience Inc. have been filed 01-30-2018]	Micro-Volume Spin Columns For Sample Preparation	US	08/908,931	8/8/1997	6,103,195	8/15/2000
41	Harvard Bioscience Inc. [Merger documents evidencing transfer from Harvard Apparatus Inc. to Harvard Bioscience Inc. have been filed 01-30-2018]	Microdialysis/Microelectrodialysis System	US	08/225,667	4/11/1994	5,733,442	3/31/1998
42	Harvard Bioscience Inc. [Merger documents evidencing transfer from Harvard Apparatus Inc. to Harvard Bioscience Inc. have been filed 01-30-2018]	Low Fluid Level Warning Device	US	08/201,793	2/25/1994	5,625,344	4/29/1997

43	Harvard Bioscience Inc. [Merger documents evidencing transfer from Harvard Apparatus Inc. to Harvard Bioscience Inc. have been filed 01-30-2018]	Hydrophobic Particle-Coated Aqueous Droplet Reaction Chamber	US	09/360,581	7/26/1999	6,114,153	9/5/2000
44	Harvard Bioscience Inc. [Merger documents evidencing transfer from Harvard Apparatus Inc. to Harvard Bioscience Inc. have been filed 01-30-2018]	Droplet Chemical Reaction Chamber	US	08/499,667	7/7/1995	5,773,238	6/30/1998
45	Harvard Bioscience, Inc.	Apparatus And Method For Drying A Solid Or Liquid Sample	US	12/038,405	2/27/2008	8,061,056	11/22/2011
46	Harvard Bioscience, Inc.	Centrifugal Fraction Collection System And Method	US	11/901,817	9/19/2017	7,909,993	3/22/2011
47	Hoefer, Inc.	Vertical Gel Sandwich For Use In Electrophoresis And Method Therefor	US	06/581,695	2/21/1984	4,560,459	12/24/1985

Matterid	Next Due Date		Title	Filed	Appln	Publ Date	Publ. No.	Issue	Patent No.
22570-0011001	N/A	Final fee paid by DSI	CATHETER WITH PHYSIOLOGICAL SENSOR	3/5/1999	09/264,147			10/2/2001	6,296,615
22570-0011002	N/A	Final fee paid by DSI	CATHETER WITH PHYSIOLOGICAL SENSOR	4/3/2001	09/825,130	5/30/2002	US 2002-0065472 A1	12/9/2003	6,659,959
22570-0020001	N/A	Final fee paid by DSI	MULTIPLEXED PHASE DETECTOR	1/6/2000	09/479,268			8/20/2002	6,435,037
22570-0021001	N/A	Final fee paid by DSI	ADJUSTABLE FLOW PROBE	12/12/2000	09/735,378	6/13/2002	US 2002-0072731 A1	3/23/2004	6,709,430
22570-0022001	N/A	Final fee paid by DSI	FRAME LENGTH MODULATION AND PULSE POSITION MODULATION FOR TELEMETRY OF ANALOG AND DIGITAL DATA	10/1/2001	09/968,644	4/17/2003	US 2003-0074034 A1	9/20/2005	6,947,795
22570-0022002	2/26/2020	3rd Maint fee due	FRAME LENGTH MODULATION AND PULSE POSITION MODULATION SYSTEM	7/28/2005	11/193,818	11/24/2005	US 2005-0261749 A1	8/26/2008	7,418,297
22570-0022003	9/30/2022	2nd Maint fee due	ASSESSING NOISE ON A COMMUNICATION CHANNEL	8/26/2008	12/198,681	4/30/2009	US-2009-0110131-A1	3/31/2015	8,996,124
22570-0024002	9/25/2019	3rd Maint fee due	VASCULAR ACCESS PORT WITH NEEDLE DETECTOR	7/26/2005	11/190,789	11/17/2005	US 2005-0256451 A1	3/25/2008	7,347,843
22570-0025001	1/4/2018	3rd Maint fee due	VASCULAR ACCESS PORT WITH PHYSIOLOGICAL SENSOR	9/17/2002	10/246,348	3/18/2004	US 2004-0054352 A1	7/4/2006	7,070,591
22570-0026001	9/18/2019	3rd Maint fee due	BARRIERS AND METHODS FOR PRESSURE MEASUREMENT CATHETERS	10/15/2002	10/272,489	4/15/2004	US 2004-0073122 A1	3/18/2008	7,344,505
22570-0027001	2/28/2018	3rd Maint fee due	DEVICES AND METHODS FOR DETECTING AND TREATING INADEQUATE TISSUE PERFUSION	3/9/2004	10/797,584			8/29/2006	7,097,618
22570-0027002	12/28/2018	2nd Maint fee due	DEVICES AND METHODS FOR DETECTING AND TREATING INADEQUATE TISSUE PERFUSION	7/12/2006	11/485,747	11/9/2006	US 2006-0253160 A1	6/28/2011	7,967,758
22570-0028001	4/9/2019	3rd Maint fee due	WIRELESS COMMUNICATION WITH IMPLANTABLE MEDICAL DEVICE	10/16/2003	10/688,253			10/9/2007	7,280,872
22570-0039001	2/19/2020	3rd Maint fee due	REFERENCE SENSOR CORRECTION FOR IMPLANTABLE SENSORS	11/8/2004	10/984,111			8/19/2008	7,413,547
22570-0045001	N/A	Design / no fees due	IMPLANTABLE HOUSING	4/14/2006	29/258,087			7/1/2008	D572,364
22570-0047001	8/10/2020	3rd Maint fee due	HIGH STABILITY FAST START UP OSCILLATOR FOR IMPLANTS	4/20/2006	11/409,224	10/25/2007	us-2007-0247247 a1	2/10/2009	7,489,209
22570-0049001	6/16/2020	3rd Maint fee due	PRESSURE TRANSMISSION CATHETER WITH SHEATH	6/30/2006	11/479,932	1/3/2008	US-2008-0000303-A1	12/16/2008	7,464,602
22570-0058001	6/27/2019	3rd Maint fee due	PHYSIOLOGIC SIGNAL PROCESSING TO DETERMINE A CARDIAC CONDITION	11/26/2008	12/323,828	6/4/2009	US-2009-0143692-A1	12/27/2011	8,086,304
22570-0108001	11/17/2018	3rd Maint fee due	PRESSURE SENSING LEAD SYSTEMS FOR IMPLANTABLE STIMULATORS	6/30/2008	12/165,557	12/31/2009	US 2009-0326598 A1	5/17/2011	7,945,324
22570-0113002	5/27/2020	3rd Maint fee due	CARDIAC RHYTHM MANAGEMENT DEVICE	4/15/2011	13/087,997	8/4/2011	US-2011-0190835-A1	11/27/2012	8,321,036
22570-0118001	1/23/2021	2nd Maint fee due	RESPIRATION MEASUREMENTS AND DOSIMETRY CONTROL IN INHALATION TESTING SYSTEMS	3/2/2010	12/715,503	9/8/2011	US-2011-0218450-A1	7/23/2013	8,491,491
22570-0123001	3/12/2018	3rd Maint fee due	COUGH/SNEEZE ANALYZER AND METHOD	6/18/2004	10/872,255	12/30/2004	US-2004-0267150-A1	9/12/2006	7,104,962
22570-0124001	N/A	Final fee paid by DSI	REDUCED-NOISE PLETHYSMOGRAPH	6/12/2003	10/461,008	12/16/2004	US-2004-0254489-A1	6/7/2005	6,902,532
22570-0125001	12/19/2018	3rd Maint fee due	COLLAPSIBLE (FOLDING) GRAPH	11/23/2004	10/995,584	5/25/2006	US-2006-0109271-A1	6/19/2007	7,233,333
22570-0126001	1/22/2020	3rd Maint fee due	ADJUSTABLE TABLE PLETHYSMOGRAPH	5/4/2004	10/838,392	11/10/2005	US-2005-0251053-A1	7/22/2008	7,402,137
22570-0127001	5/29/2019	3rd Maint fee due	LARGE DIAMETER PLETHYSMOGRAPH	12/1/2005	11/291,190	8/2/2007	US-2007-0179394-A1	11/29/2011	8,066,646

22570-0128001	5/27/2024	3rd Maint fee due	INTEGRATED VENTILATOR WITH CALIBRATION	4/15/2008	12/103,074	10/30/2008	US-2008-0264419-A1	11/27/2012	8,316.849
22570-0129001	7/14/2021	2nd Maint fee due	PLETHYSMOGRAPH WITH ANIMAL RESTRAINT	10/22/2009	12/589,332	4/28/2011	US-2011-0098581-A1	1/14/2014	6,628.479
22570-0129002	3/9/2018	1st Maint fee due	PLETHYSMOGRAPH WITH ANIMAL RESTRAINT	11/20/2013	14/084,668	3/20/2014	US 2014-0081167 A1	9/9/2014	8,827.921

Canadian Patents and Patent Applications

[See attached]

	Owner	Title	Country	Application No.	Filing Date	Patent No.	Issue Date
1	Data Sciences International	REDUCED-NOISE PLETHYSMOGRAPH	CANADA	2524315	5/26/2004	2524315	11/24/2015