

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT5830481

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT

**CONVEYING PARTY DATA**

Name	Execution Date
ADVANCED BIONICS, LLC	11/30/2011

**RECEIVING PARTY DATA**

<b>Name:</b>	Advanced Bionics AG
<b>Street Address:</b>	Laubisruetistrasse 28
<b>City:</b>	Staeafa
<b>State/Country:</b>	SWITZERLAND
<b>Postal Code:</b>	CH-8712

**PROPERTY NUMBERS Total: 12**

Property Type	Number
Patent Number:	6067474
Patent Number:	6125302
Patent Number:	6129753
Patent Number:	6119044
Patent Number:	6011993
Patent Number:	6266568
Patent Number:	6275736
Patent Number:	6144883
Patent Number:	6178353
Patent Number:	6249704
Patent Number:	6304787
Patent Number:	6212431

**CORRESPONDENCE DATA**

Fax Number: (661)362-1966

*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: 661-362-1832

Email: janice.gainer@advancedbionics.com

Correspondent Name: ADVANCED BIONICS, LLC

Address Line 1: 28515 WESTINGHOUSE PLACE

Address Line 2: INTELLECTUAL PROPERTY DEPT.

**PATENT**

**Address Line 4:** VALENCIA, CALIFORNIA 91355

**NAME OF SUBMITTER:** MARY ELIZABETH BUSH

**SIGNATURE:** /Liz Bush/

**DATE SIGNED:** 11/20/2019

**Total Attachments: 16**

source=IP Transfer LLC to AG signed 2.12#page1.tif  
source=IP Transfer LLC to AG signed 2.12#page2.tif  
source=IP Transfer LLC to AG signed 2.12#page3.tif  
source=IP Transfer LLC to AG signed 2.12#page4.tif  
source=OwnedIP-Sch4.13(a)(1)(i)#page1.tif  
source=OwnedIP-Sch4.13(a)(1)(i)#page2.tif  
source=OwnedIP-Sch4.13(a)(1)(i)#page3.tif  
source=OwnedIP-Sch4.13(a)(1)(i)#page4.tif  
source=OwnedIP-Sch4.13(a)(1)(i)#page5.tif  
source=OwnedIP-Sch4.13(a)(1)(i)#page6.tif  
source=OwnedIP-Sch4.13(a)(1)(i)#page7.tif  
source=OwnedIP-Sch4.13(a)(1)(i)#page8.tif  
source=OwnedIP-Sch4.13(a)(1)(i)#page9.tif  
source=OwnedIP-Sch4.13(a)(1)(i)#page10.tif  
source=OwnedIP-Sch4.13(a)(1)(i)#page11.tif  
source=OwnedIP-Sch4.13(a)(1)(i)#page12.tif

## IP PURCHASE AGREEMENT

THIS IP PURCHASE AGREEMENT (this "Agreement") is made between Advanced Bionics AG ("AB AG") and Advanced Bionics, LLC ("AB LLC").

### RECITALS

WHEREAS, AB LLC manufactures cochlear implants and owns patents, copyrights and know-how related thereto as further detailed in Appendix A ("IP");

WHEREAS, AB LLC is indirectly wholly owned by AB AG; and

WHEREAS, the managing member of AB LLC has determined that it is in the best interests of AB LLC to sell the IP to AB AG on the terms and conditions set forth herein and the board of directors of AB AG has determined that it is in the best interests of AB AG and its shareholders to purchase the IP on the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the mutual commitments and promises set forth below, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, AB LLC and AB AG hereby agree as follows:

### AGREEMENT

1. **Sale and Purchase of IP.** AB LLC hereby sells to AB AG, and AB AG hereby purchases from AB LLC, the IP for an aggregate purchase price of USD 34,400,000 net of any taxes that may be applicable. The purchase price is to be settled by AB AG within 10 days upon receipt of a respective invoice from AB LLC. AB LLC, upon request, will execute and deliver any additional documents deemed by AB AG to be necessary or desirable to complete the sale, assignment and transfer of the IP purchased by AB AG hereby. As between the parties, all benefits and risks in relation to the IP is transferred to AB AG with effect as of November 30, 2011.

2. **Representations and Warranties.** AB LLC hereby represents and warrants to AB AG that (i) the IP is either owned by AB LLC, free and clear of all liens, encumbrances or rights of third parties of any kind, or that AB LLC co-owns the IP or has a transferrable right to use the IP as the case may be; (ii) AB LLC has full corporate power and authority to enter into this Agreement and to perform its obligations hereunder and that all necessary corporate proceedings have been taken to authorize the execution, delivery and performance of this Agreement; and (iii) this Agreement constitutes a valid and binding agreement of AB LLC and is enforceable against AB LLC in accordance with its terms, except as limited by applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally.

3. **Representations and Warranties of AB AG.** AB AG hereby represents and warrants to AB LLC that (i) AB AG has full corporate power and authority to enter into this Agreement and to perform its obligations hereunder and that all necessary corporate proceedings have been taken to authorize the execution, delivery and performance of this Agreement; and (ii) this Agreement constitutes a valid and binding agreement of AB AG and is enforceable against

AB AG in accordance with its terms, except as limited by applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally.

**4. Miscellaneous.**

(a) This Agreement constitutes the entire agreement, written, oral and implied, between AB LLC and AB AG, and supersedes and replaces all prior negotiations, prior agreements, or proposed agreements regarding the subject matter therein.

(b) This Agreement shall be governed by the laws of the Switzerland without regard to conflict of laws provisions.

(c) In the event that any provision of this Agreement becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, this Agreement shall continue in full force and effect without said provision, which shall be replaced with an enforceable provision closest in intent and economic effect as the severed provision; provided that no such severability shall be effective if it materially changes the economic benefit of this Agreement to any party.

(d) This Agreement may be executed in multiple counterparts, each of which shall be deemed to be an original and both of which together shall constitute one and the same instrument. Delivery of an executed counterpart of this Agreement by facsimile transmission shall be equally as effective as delivery of an executed hard copy of the same.


(e) This Agreement may not be amended or modified in any respect, except by a writing duly executed by AB LLC and AB AG.

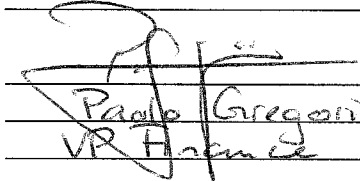
(f) This Agreement shall not confer any rights or remedies upon any person or entity other than the parties and their respective successors and permitted assigns.

*[Signature page follows]*


IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the date first above written.

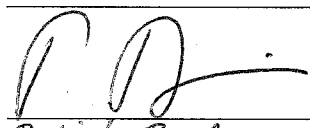
**ADVANCED BIONICS, LLC**

By:   
Name: Gerald Roehlein  
Title: CEO  
Date: \_\_\_\_\_

By:   
Name: Paolo Gregorini  
Title: VP Finance  
Date: \_\_\_\_\_

**ADVANCED BIONICS AG**

By:   
Name: Alessandro Perigo  
Title: Director Corporate Tax  
Date: \_\_\_\_\_

By:   
Name: Patrick Bachli  
Title: Director Corporate Op. Affairs  
Date: \_\_\_\_\_

**Appendix A**  
**List and description of IP**

1. Patents

All patents and patent applications listed in Schedule 4.13(a)(1) of the transaction documents delivered in connection with the merger of Omega Merger Sub, Inc. and Advanced Bionics Corporation (“Merger Agreement”) as well as any patents and patent applications of AB LLC created after December 30, 2009 (“Closing Date”).

2. Know-how

All information that is secret, significant and useful for the production and distribution of cochlear implants (externals and internals) and related accessories.

3. Copyrights, Mask Works, Domain Name Registrations

All copyrights, mask works and domain name registrations listed in Schedule 4.13(a)(1) of the Merger Agreement as well as all copyrights, mask works and domain name registrations created by AB LLC after the Closing Date.

**SCHEDULE 4.13(a)(1)  
Owned IP  
(i) Patents and Patent Applications**

Date Printed: 9/30/2009

A	B	C	D	E	F	G	I	J	K	L	M	N	O	
Docket No.	File No.	Cntry	Case Type	Retn Type	Filing Type	Status	Appl No.	Filing Date	Patent No.	Issue Date	Next Tax	Expires	Title	
1	05-00444	2	US	Regular	ORF	National	Granted	09/323,594	6/1/1999	6,208,882	3/27/2001	9/27/2012	6/1/2019	Shapedus Reflex Electrode and Connector
2	05-00446	1	US	Regular	ORF	National	Granted	09/344,429	6/25/1999	6,195,585	2/27/2001	8/27/2012	6/25/2019	Remote Monitoring of Implantable Cochlear Stimulator
3	05-00448	1	US	Regular	ORF	National	Granted	09/338,700	6/23/1999	6,181,969	1/30/2001	7/30/2012	6/23/2019	Programmable Current Output Stimulus Stage for Implantable Device
4	05-00463	1	US	Regular	CIP	National	Granted	09/375,425	8/17/1999	6,309,410	10/30/2001	4/30/2013	8/26/2018	Cochlear Electrode With Drug Delivery Channel and Method of Making the Same
5	05-00468	2	US	Regular	ORF	National	Granted	09/492,735	1/27/2000	6,321,118	11/20/2001	5/20/2013	1/27/2020	Method and Apparatus for Power Link Detection with Implantable Medical Devices
6	05-00470	2	US	Regular	CIP	National	Granted	09/322,712	5/28/1999	6,289,247	9/11/2001	3/11/2013	2/18/2019	Strategy Selector for Multichannel Cochlear Prosthesis
7	05-00494	1	EPC	Regular	ORF	PCT/EPC	Filed	928976	5/12/2000		5/31/2010			Hybrid Implantable Cochlear Stimulator-Hearing Aid System
8	05-00494	3	US	Regular	ORF	National	Granted	09/569,696	5/12/2000	6,259,951	7/10/2001	1/10/2013	5/12/2020	Implantable Cochlear Stimulator System Incorporating Combination Electrode/Transducer
9	05-00494	4	US	Regular	ORF	PCT	Granted	09/979,804	11/13/2001	6,754,537	6/22/2004	12/22/2011	11/13/2021	Hybrid Implantable Cochlear Stimulator-Hearing Aid System
10	05-00500	1	US	Regular	ORF	National	Granted	09/483,415	1/14/2000	6,415,186	7/2/2002	1/2/2010	1/14/2020	Active Feed Forward Power Control Loop
11	05-00501	2	US	Regular	ORF	National	Granted	09/785,629	2/16/2001	6,748,094	6/8/2004	12/8/2011	2/16/2021	Connector System for BTE Hearing Devices
12	05-00501	3	US	Regular	Cont	National	Granted	10/863,563	6/7/2004	7,020,298	3/28/2006	9/28/2013	2/16/2021	Connector System
13	05-00511	2	US	Regular	ORF	National	Granted	09/811,065	3/16/2001	6,658,124	12/2/2003	6/2/2011	2/7/2022	Rechargeable Hearing Aid
14	05-00528	1	US	Regular	ORF	National	Granted	10/301,026	11/20/2002	7,097,746	8/29/2006	2/28/2010	7/11/2024	Anodic Protection of Electrical Contacts
15	05-00538	2	US	Regular	ORF	National	Granted	09/866,096	5/25/2001	6,728,578	4/27/2004	10/27/2011	7/13/2022	Envelope-Based Amplitude Mapping For Cochlear Implant Stimulus
16	05-00538	3	US	Regular	DIV	National	Granted	10/684,863	10/14/2003	6,996,438	2/7/2006	8/7/2013	5/25/2021	Envelope-Based Amplitude Mapping For Cochlear Implant Stimulus
17	05-00538	4	US	Regular	Cont	National	Granted	11/346,067	2/2/2006	7,542,806	6/2/2009	12/2/2012	4/1/2025	Envelope-Based Amplitude Mapping For Cochlear Implant Stimulus
18	05-00538	5	US	Regular	DIV	National	Filed	12/430,894	4/28/2009					Envelope-Based Amplitude Mapping For Cochlear Implant Stimulus
19	05-00541	2	US	Regular	ORF	National	Granted	09/975,042	10/9/2001	6,745,077	6/1/2004	12/1/2011	11/13/2022	Electronic Impedance Transformer for Inductively-Coupled Load Stabilization
20	05-00541	2	US	Regular	ORF	National	Granted	10/651,653	8/29/2003	7,496,406	2/24/2009	8/24/2012	11/20/2024	System and Method for Fitting a Cochlear Implant Sound Processor Using Alternative Signals
21	05-00542	2	US	Regular	ORF	National	Granted	12/250,512	10/13/2008					System and Method for Fitting a Cochlear Implant Sound Processor Using Alternative Signals
22	05-00542	3	US	Regular	Cont	National	Filed							System and Method for Fitting a Cochlear Implant Sound Processor Using Alternative Signals
23	05-00544	2	US	Regular	ORF	National	Granted	10/763,843	1/23/2004	7,212,866	5/1/2007	11/1/2010	3/12/2025	Implantable Neurostimulator Having Data Repeater for Long Range Control and Data Streaming
24	05-00549	2	US	Regular	ORF	National	Granted	10/459,040	6/11/2003	7,519,428	4/14/2009	10/14/2012	9/27/2024	Dual-Range Compliance Voltage Supply for a Multi-Channel Stimulator
25	05-00549	3	US	Regular	DIV	National	Filed	12/057,891	3/28/2008					Dual-Range Compliance Voltage Supply for a Multi-Channel Stimulator
26	05-00549	4	US	Regular	DIV	National	Filed	12/057,911	3/28/2008					Dual-Range Compliance Voltage Supply for a Multi-Channel Stimulator
27	05-00561	1	EPC	Regular	ORF	PCT/EPC	Granted	1924495.3	3/30/2001	1267761	11/10/2004	3/30/2021		High Contact Count Sub-miniature Fully Implantable Cochlear Prosthesis
28	05-00561	3	US	Regular	ORF	National	Granted	09/823,271	3/30/2001	6,826,430	11/30/2004	5/30/2012	12/7/2021	High Contact Count Sub-miniature Fully Implantable Cochlear Prosthesis
29	05-00561	4	US	Regular	DIV	National	Granted	10/624,724	7/21/2003	6,980,864	12/27/2005	6/27/2013	3/30/2021	High Contact Count Sub-Miniature Fully Implantable Cochlear Prosthesis

**SCHEDULE 4.13(a)(1)  
Owned IP  
(i) Patents and Patent Applications**

Date Printed: 9/30/2009

A	B	C	D	E	F	G	I	J	K	L	M	N	O	
30	05-00561	5	US	Regular	Cont	National	Granted	11/23/2005	9/23/2005	7,444,185	10/28/2008	4/28/2012	5/13/2021	High Contact Count Sub-miniature Fully Implantable Cochlear Prosthesis
31	05-00565	2	US	Regular	ORG	National	Granted	10/418,984	4/18/2003	7,110,822	9/19/2006	3/19/2010	9/12/2024	Remote Status and Control Device for a Cochlear Implant System
32	05-00565	3	US	Regular	CIP	National	Filed	11/532,899	9/18/2006				9/12/2024	Remote Status and Control Device for a Cochlear Implant System
33	05-00566	2	US	Regular	ORG	National	Granted	09/854,420	5/11/2001	6,636,768	10/21/2003	4/21/2011	6/16/2021	Implantable Microphone System for Use with Cochlear Implants and Implantable Hearing Aids
34	05-00570	2	US	Regular	ORG	National	Granted	09/844,024	4/27/2001	6,628,991	9/30/2003	3/30/2011	4/27/2021	Minimally-Invasive Access into the Cochlea For Electrode Insertion And Fluid Delivery
35	05-00571	2	US	Regular	ORG	National	Granted	10/819,611	4/7/2004	7,103,417	9/5/2006	3/5/2010	3/23/2025	Adaptive Place-Pitch Ranking Procedure for Optimizing Performance of a Multi-Channel Neural Stimulator
36	05-00571	3	US	Regular	DIV	National	Granted	11/469,758	9/1/2006	7,493,170	2/17/2009	8/17/2012	2/28/2026	Adaptive Place-Pitch Ranking Procedure for Optimizing Performance of a Multi-Channel Neural Stimulator
37	05-00571	4	US	Regular	CIP	National	Granted	11/469,820	9/1/2006	7,571,005	8/4/2009	2/4/2013	2/20/2025	Performance of a Multi-Channel Neural Stimulator
38	05-00571	5	US	Regular	DIV	National	Filed	12/334,453	12/13/2008					Adaptive System and Method for Place-Pitch Ranking a Multi-Channel Neural Stimulator
39	05-00571	6	US	Regular	DIV	National	Filed	12/334,455	12/13/2008					Adaptive Place-Pitch Ranking Within a Multi-Channel Neural Stimulator
40	05-00576	2	US	Regular	ORG	National	Filed	11/121,756	5/4/2005					Speech Processor Cases
41	05-00576	3	US	Regular	ORG	National	Filed	11/121,700	5/4/2005					Methods of Converting a Behind-The-Ear Speech Processor Unit into a Body Worn Speech Processor Unit
42	05-00582	2	US	Regular	ORG	National	Granted	10/833,427	4/28/2004	7,039,466	5/2/2006	11/2/2009	9/23/2024	Spatial Declination Stimulation in an Implantable Neural Stimulator, Such as a Cochlear Implant
43	05-00584	1	US	Regular	ORG	National	Granted	09/766,290	1/19/2001	6,542,777	4/1/2003	10/1/2010	6/1/2021	Spiral Shield For a Flexible High-Q Implantable Inductively Coupled Device
44	05-00585	2	US	Regular	ORG	National	Granted	09/981,252	10/16/2001	6,842,647	1/11/2005	7/11/2012	5/14/2023	Implantable Neural Stimulator System Including Remote Control Unit for Use Therewith
45	05-00585	3	US	Regular	DIV	National	Granted	10/999,748	11/30/2004	7,043,304	5/9/2006	11/9/2009	10/16/2021	Method of Controlling an Implantable Neural Stimulator Control Unit for use with an Implantable Neural Stimulator System
46	05-00585	4	US	Regular	DIV	National	Granted	10/999,778	11/30/2004	7,092,763	8/15/2006	2/15/2010	12/12/2021	Blade Electrode Array For Insertion Under Soft Tissue of Lateral Wall of Cochlea
47	05-00591	3	US	Regular	ORG	National	Granted	09/876,882	6/7/2001	6,549,814	4/15/2003	10/15/2010	6/7/2021	Status Indicator for Implantable Systems
48	05-00603	2	US	Regular	ORG	National	Granted	10/651,652	8/29/2003	7,248,926	7/24/2007	1/24/2011	12/29/2024	Water-Resistant, Wideband Microphone Subassembly
49	05-00611	1	US	Regular	ORG	National	Granted	09/733,736	12/8/2000	6,505,076	1/7/2003	7/7/2010	4/17/2021	Shell for External Components of Hearing Aid Systems
50	05-00615	2	US	Regular	ORG	National	Filed	10/741,411	12/19/2003					Shell for External Components of Hearing Aid Systems
51	05-00615	3	US	Regular	Cont	National	Filed	12/328,270	12/4/2008					Shell for External Components of Hearing Aid Systems
52	05-00617	1	US	Regular	ORG	National	Granted	10/702,565	11/5/2003	7,127,078	10/24/2006	4/24/2010	11/5/2023	Implanted Outer Ear Canal Hearing Aid
53	05-00620	2	US	Regular	ORG	National	Granted	10/651,651	8/29/2003	7,142,926	11/28/2006	5/28/2010	1/26/2025	Enhanced Methods for Determining Iso-Loudness Contours for Fitting Cochlear Implant Sound Processors
54	05-00625	1	US	Regular	ORG	National	Granted	10/647,372	8/25/2003	7,043,303	5/9/2006	11/9/2009	4/11/2024	Forward Masking Method for Estimating Neural Response
55	05-00626	2	US	Regular	ORG	National	Granted	10/741,410	12/19/2003	7,171,261	1/30/2007	7/30/2010	7/21/2025	Cochlear Implant Sound Processor with Permanently Integrated Replenishable Power Source
56	05-00628	2	US	Regular	ORG	National	Granted	10/675,375	9/30/2003	7,349,741	3/25/2008	9/25/2011	1/19/2025	Cochlear Implant Sound Processor with Permanently Integrated Replenishable Power Source
57	05-00628	3	US	Regular	Cont	National	Filed	12/040,888	3/1/2008					Cochlear Implant Sound Processor with Permanently Integrated Replenishable Power Source



**SCHEDULE 4.13(a)(1)  
Owned IP  
(i) Patents and Patent Applications**

Date Printed: 9/30/2009

A	B	C	D	E	F	G	I	J	K	L	M	N	O	
58	05-00630	2	US	Regular	ORG	National	Granted	10/698,098	10/31/2003	7,206,640	4/17/2007	10/17/2010	3/23/2025	Method and System for Generating a Cochlear Implant Program Using Multi-Electrode Stimulation to Elicit the Electrically-Evoked Compound Action ...
59	05-00630	3	US	Regular	Cont	National	Filed	11/697,605	4/6/2007					Method and System for Generating a Cochlear Implant Program Using Multi-Electrode Stimulation to Elicit the Electrically-Evoked Compound Action ...
60	05-00631	2	US	Regular	ORG	National	Granted	10/771,819	2/4/2004	7,277,759	10/2/2007	4/2/2011	9/28/2025	Method of Rapid Neural Response Measurement without Amplitude Attenuation
61	05-00632	2	US	Regular	ORG	National	Granted	10/731,050	12/9/2003	7,251,530	7/31/2007	1/31/2011	6/25/2025	Optimizing Pitch and Other Speech Stimuli Allocation in a Cochlear Implant
62	05-00632	3	US	Regular	Cont	National	Filed	11/830,846	7/31/2007					Optimizing Pitch and Other Speech Stimuli Allocation in a Cochlear Implant
63	05-00633	2	US	Regular	ORG	National	Granted	10/741,409	12/19/2003	7,283,877	10/16/2007	4/16/2011	2/1/2026	Method of Measuring Neural Responses
64	05-00634	2	US	Regular	ORG	National	Granted	10/823,880	4/14/2004	7,599,508	10/6/2009	4/6/2013	11/8/2025	Listening Device Cap
65	05-00634	3	US	Prov.	ORG	National	Filed	61/113,675	11/12/2008				11/12/2009	Integrated Cochlear Implant Headpiece
66	05-00634	4	US	Prov.	ORG	National	Filed	61/113,708	11/12/2008				11/12/2009	Modular Speech Processor Headpiece
67	05-00634	5	US	Regular	CIP	National	Filed	12/397,982	3/4/2009					Modular Speech Processor Headpiece
68	05-00634	6	US	Regular	CIP	National	Filed	12/398,058	3/4/2009					Integrated Cochlear Implant Headpiece
69	05-00634	7	US	Regular	Cont	National	Filed	12/546,494	8/24/2009					Listening Device Cap
70	05-00634	8	US	Regular	Div	National	Filed	12/546,500	8/24/2009					Listening Device Cap
71	05-00642	2	US	Regular	ORG	National	Granted	10/819,609	4/7/2004	7,149,583	12/12/2006	6/12/2010	6/25/2024	Method of Using Non-Simultaneous Stimulation to Represent the Within-Channel Fine Structure
72	05-00643	2	US	Regular	ORG	National	Filed	10/783,291	2/19/2004					Change Normalization for Electrical Stimulation of Excitable Tissue to Facilitate the Comparison of Neural Responses to Behavioral Measurements Having Different Parameters
73	05-00656	1	AU	Regular	ORG	PCT	Filed	2004310690	11/18/2004	2004310690		11/18/2009		Methods and Systems for Fitting a Cochlear Implant to a Patient
74	05-00656	1	EPC	Regular	ORG	PCT/EPC	Filed	4811625.5	11/18/2004			11/30/2009		Methods and Systems for Fitting a Cochlear Implant to a Patient
75	05-00656	1	US	Regular	ORG	National	Granted	10/989,521	11/16/2004	7,292,892	11/6/2007	5/6/2011	4/1/2025	Systems for Fitting a Cochlear Implant to a Patient
76	05-00656	2	US	Regular	Cont	National	Filed	11/841,501	8/20/2007					Systems for Fitting a Cochlear Implant to a Patient
77	05-00663	2	US	Regular	ORG	National	Granted	10/886,801	7/8/2004	7,317,944	1/8/2008	7/8/2011	6/15/2025	System and Method for Using a Multi-Contact Electrode to Stimulate the Cochlear Nerve or Other Body Tissue
78	05-00664		CA	Regular	ORG	PCT	Granted	2381725	9/18/2000	2381725	1/22/2008	9/18/2010	9/18/2020	Cochlear Implant
79	05-00667	1	EPC	Regular	ORG	PCT/EPC	Granted	2757116.5	8/13/2002	1417001	1/16/2008		8/13/2022	Gradual Recruitment of Muscle/Neural Excitable Tissue Using High-Rate Electrical Stimulation Parameters
80	05-00667	1	FR	Regular	ORG	PCT/EPC	Granted	2757116.5	8/13/2002	1417001	1/16/2008	8/31/2010	8/13/2022	Gradual Recruitment of Muscle/Neural Excitable Tissue Using High-Rate Electrical Stimulation Parameters
81	05-00667	1	DE	Regular	ORG	PCT/EPC	Granted	2757116.5	8/13/2002	60224677.6	1/16/2008	8/31/2010	8/13/2022	Gradual Recruitment of Muscle/Neural Excitable Tissue Using High-Rate Electrical Stimulation Parameters
82	05-00667	1	GB	Regular	ORG	PCT/EPC	Granted	2757116.5	8/13/2002	1417001	1/16/2008	8/31/2010	8/13/2022	Gradual Recruitment of Muscle/Neural Excitable Tissue Using High-Rate Electrical Stimulation Parameters
83	05-00670	1	AU	Regular	ORG	PCT	Granted	2002364009	12/20/2002	2002364009	5/11/2007	12/20/2009	1/2/2022	Wideband Low-Noise Implantable Microphone Assembly
84	05-00670	2	US	Regular	DIV	National	Granted	10/324,183	12/20/2002	6,736,771	5/18/2004	11/18/2011	1/2/2022	Wideband Low-Noise Implantable Microphone Assembly
85	05-00670	3	US	Regular	CIP	National	Granted	10/346,482	1/17/2003	7,054,691	5/30/2006	11/30/2009	5/27/2023	Partitioned Implantable System
86	05-00672	1	EPC	Regular	ORG	PCT/EPC	Filed	3768935.3	11/13/2003			11/30/2009		Method and System to Convey the Within-Channel Fine Structure with a Cochlear Implant

**SCHEDULE 4.13(a)(1)  
Owned IP  
(i) Patents and Patent Applications**

Date Printed: 9/30/2009

A	B	C	D	E	F	G	I	J	K	L	M	N	O
87	05-00672	1	DE	Utility Model	ORG	PCT/EPC	Filed	DE60107062T2	11/13/2003	DE60107062T2	11/13/2003		Method and System to Convey the Within-Channel Fine Structure with a Cochlear Implant
88	05-00672	2	US	Regular	ORG	National	Granted	10/712,078	11/13/2003	7,317,945	1/8/2008	7/8/2011	5/15/2026
89	05-00673	2	US	Regular	ORG	National	Granted	10/666,465	9/19/2003	7,315,763	1/1/2008	7/1/2011	3/4/2025
90	05-00673	3	US	Regular	CIP	National	Granted	10/857,389	5/28/2004	7,319,906	1/15/2008	7/15/2011	2/5/2025
91	05-00673	4	US	Regular	Cort	National	Filed	11/870,301	10/10/2007				
92	05-00674	2	US	Regular	ORG	National	Granted	10/662,615	9/15/2003	7,117,038	10/3/2006	4/3/2010	11/6/2023
93	05-00677	1	US	Regular	ORG	National	Granted	09/766,292	1/19/2001	6,560,488	5/6/2003	11/6/2010	1/31/2021
94	05-00679	1	AU	Regular	ORG	PCT	Granted	2005304453	11/7/2005	2005304453	11/21/2008	11/7/2010	11/7/2025
95	05-00680	1	US	Regular	ORG	National	Filed	11/089,171	3/24/2005				
96	05-00698	1	US	Regular	ORG	National	Granted	10/209,054	7/31/2002	7,016,738	3/21/2006	9/21/2013	3/31/2024
97	05-00698	2	US	Regular	DIV	National	Filed	11/341,806	1/27/2006				
98	05-00698	3	US	Regular	DIV	National	Filed	11/341,831	1/27/2006				
99	05-00698	4	US	Regular	CIP	National	Granted	11/341,066	1/27/2006	7,254,449	8/7/2007	2/7/2011	7/31/2022
100	05-00729	1	US	Regular	ORG	National	Granted	08/319,580	10/7/1994	5,513,793	5/7/1996	10/7/2014	10/7/2014
101	05-00730		US	Regular	CIP	National	Granted	08/625,513	3/25/1996	5,738,270	4/14/1998	10/14/2009	10/7/2014
102	05-00732	2	US	Regular	ORG	National	Granted	08/807,534	2/28/1997	5,824,022	10/20/1998	4/20/2010	2/28/2017
103	05-00733	1	US	Regular	ORG	National	Granted	08/388,193	2/13/1995	5,584,869	12/17/1996	2/13/2015	2/13/2015
104	05-00734	1	US	Regular	ORG	National	Granted	08/516,758	8/18/1995	5,649,970	7/22/1997		8/18/2015
105	05-00737	3	US	Regular	CPA	National	Granted	08/951,893	3/24/1999	5,957,958	9/28/1999	3/28/2011	10/16/2017
106	05-00741	1	US	Regular	ORG	National	Granted	08/456,141	5/31/1995	5,626,629	5/6/1997		5/31/2015
107	05-00742	1	US	Regular	ORG	National	Granted	09/375,462	8/17/1999	6,216,040	4/10/2001	10/10/2012	8/17/2019
108	05-00743	1	EPC	Regular	ORG	PCT/EPC	Granted	97930107.4	6/19/1997	959943	3/17/2004		6/19/2017
109	05-00743	1	FR	Regular	ORG	PCT/EPC	Granted	959943	6/19/1997	959943	6/19/1997	6/30/2010	6/19/2017
110	05-00743	1	GB	Regular	ORG	PCT/EPC	Granted	97930107.4	6/19/1997	959943	3/17/2004	6/30/2010	6/19/2017
111	05-00743	1	US	Regular	ORG	National	Granted	09/202,751	6/19/1997	6,157,861	12/5/2000	6/5/2012	6/19/2017
112	05-00743		DE	Regular	ORG	PCT/EPC	Granted	97930107.4	6/19/1997	6928173.6-08	3/17/2004	6/30/2010	6/19/2017
113	05-00745	1	CA	Regular	ORG	National	Granted	2,218,846	4/23/1996	2,218,846	3/6/2007	4/23/2010	4/23/2016

**SCHEDULE 4.13(a)(1)  
Owned IP  
(i) Patents and Patent Applications**

Date Printed: 9/30/2009

A	B	C	D	E	F	G	I	J	K	L	M	N	O	
114	05-00745	1	EPC	Regular	ORG	PCT/EPC	Granted	96913206.7	11/22/1997	823188	7/25/2001		11/22/2017	Multichannel Cochlear Prosthesis With Flexible Control of Stimulus Waveforms
115	05-00745	1	DE	Regular	ORG	PCT/EPC	Granted	96913206.7	6/23/1996	69614103.5	3/21/2002	6/30/2010	6/23/2016	Multichannel Cochlear Prosthesis With Flexible Control of Stimulus Waveforms
116	05-00745	1	GB	Regular	ORG	PCT/EPC	Granted	96913206.7	4/23/1996	823188	7/25/2001	4/30/2010	4/23/2016	Multichannel Cochlear Prosthesis With Flexible Control of Stimulus Waveforms
117	05-00745	1	US	Regular	ORG	National	Granted	08/429,749	4/26/1995	5,601,617	2/11/1997		4/26/2015	Multichannel Cochlear Prosthesis With Flexible Control of Stimulus Waveforms
118	05-00745	2	US	Regular	CIP	National	Granted	08/945,661	10/24/1997	6,002,966	12/14/1999	6/14/2011	4/26/2015	Multichannel Cochlear Prosthesis With Flexible Control of Stimulus Waveforms
119	05-00745	3	US	Regular	CIP	National	Granted	09/322,711	5/28/1999	6,219,580	4/17/2001	10/17/2012	10/24/2017	Power Control Loop For Implantable Tissue Stimulator
120	05-00775		US	Regular	ORG	National	Granted	08/932,565	9/19/1997	5,876,425	3/2/1999	9/2/2010	9/19/2017	Efficient Integrated RF Telemetry Transmitter for Use With Implantable Device
121	05-00776		US	Regular	ORG	National	Granted	09/189,737	11/10/1998	6,073,050	6/6/2000	12/6/2011	11/10/2018	Modiolus-Hugging Cochlear Electrodes
122	05-00777	1	US	Regular	ORG	National	Granted	09/140,033	8/26/1998	6,070,105	5/30/2000	11/30/2011	8/26/2018	Precurved, Modiolus-Hugging Cochlear Electrode and Method of Making Same
123	05-00784	1	US	Regular	ORG	National	Granted	09/140,035	8/26/1998	6,125,302	9/26/2000	3/26/2012	8/26/2018	Method of Making Precurved, Modiolus-Hugging Cochlear Electrode
124	05-00784	2	US	Regular	DIV	National	Granted	09/519,015	3/3/2000	6,604,283	8/12/2003	2/12/2011	8/26/2018	Low Voltage Fast Sequential Stimulation to Elicit Stochastic Response Patterns that Enhance the Effectiveness of a Cochlear Implant
125	05-00787	1	US	Regular	ORG	National	Granted	09/371,725	8/10/1999	6,249,704	6/19/2001	12/19/2012	8/10/2019	Cochlear Electrode Array with Electrode Contacts on Medial Side
126	05-00789	7	CA	Regular	ORG	PCT	Granted	2362478	9/28/1999	2362478	11/18/2008	9/28/2010	9/28/2019	Cochlear Electrode Array with Electrode Contacts on Medial Side
127	05-00789	7	EPC	Regular	ORG	PCT/EPC	Filed	99951652.9	9/28/1999			9/30/2010		Cochlear Electrode Array with Electrode Contacts on Medial Side
128	05-00789	7	US	Regular	CIP	National	Granted	09/247,734	2/9/1999	6,129,753	10/10/2000	4/10/2012	8/26/2018	Method of Making A Cochlear Electrode Array with Electrode Contacts on Medial Side
129	05-00789	8	US	Regular	DIV	National	Granted	09/346,879	7/2/1999	6,144,883	11/7/2000	5/7/2012	2/9/2019	Cochlear Electrode Array Having Current-Focusing and Tissue Treating Features
130	05-00789	9	US	Regular	CIP	National	Granted	09/375,424	8/17/1999	6,304,787	10/16/2001	4/16/2013	2/9/2019	Method of Making a Cochlear Electrode Array Having Current-Focusing and Tissue-Treating Features
131	05-00789	10	US	Regular	DIV	National	Granted	09/945,304	8/31/2001	6,862,805	3/8/2005	9/8/2012	8/17/2019	Cochlear Electrode Array with Positioning Stylet
132	05-00789	11	US	Regular	CIP	National	Granted	09/259,199	3/1/1999	6,119,044	9/12/2000	3/12/2012	2/9/2019	Inflatable Cochlear Electrode Array and Method of Making the Same
133	05-00789	13	US	Regular	CIP	National	Granted	09/300,800	4/27/1999	6,266,568	7/24/2001	1/24/2013	2/9/2019	Method for Inserting Cochlear Electrode and Insertion Tool for Use Therewith
134	05-00789-C	12	US	Regular	Cont	National	Granted	10/635,768	8/5/2003	6,968,238	11/22/2005	5/22/2013	11/3/2020	Method of Making Implanted Ceramic Case with Enhanced Ceramic Case Strength
135	05-00829	1	US	Regular	ORG	National	Granted	09/280,179	3/29/1999	6,011,993	1/4/2000	7/4/2011	3/29/2019	Objective Programming and Operation of a Cochlear Implant Based on Measured Evoked Potentials that Precede the Stapedius Reflex
136	05-00839	1	US	Regular	ORG	National	Granted	09/376,882	8/18/1999	6,415,185	7/2/2002	1/2/2010	8/18/2019	Hair Clip Retention System for Headpiece of Cochlear Implant
137	05-00844	1	US	Regular	ORG	National	Granted	09/312,158	5/14/1999	6,275,736	8/14/2001	2/14/2013	5/14/2019	Laminated Magnet Keeper for Implant Device
138	05-00850	1	US	Regular	ORG	National	Granted	09/353,236	7/14/1999	6,178,353	1/23/2001	7/23/2012	7/14/2019	Power Transfer Circuit For Implanted Devices
139	05-00853	1	US	Regular	ORG	National	Granted	09/376,881	8/18/1999	6,212,431	4/3/2001	10/3/2012	8/18/2019	

**SCHEDULE 4.13(a)(1)  
Owned IP  
(i) Patents and Patent Applications**

Date Printed: 9/30/2009

A	B	C	D	E	F	G	I	J	K	L	M	N	O	
140	05-00855	1	AU	Regular	ORG	PCT	Granted	199886804	7/31/1998	7/31/1998	7/31/2010	7/31/2018	Implantable Device With Improved Battery Recharging and Powering Configuration	
141	05-00855	1	CA	Regular	ORG	National	Filed	2297022	7/31/1998		7/31/2010		Implantable Device With Improved Battery Recharging and Powering Configuration	
142	05-00855	1	EPC	Regular	ORG	PCT/EPC	Granted	98938233.8	7/31/1998	999874	9/29/2004	7/31/2018	Implantable Device With Improved Battery Recharging and Powering Configuration	
143	05-00855	1	FR	Regular	ORG	PCT/EPC	Granted	98938233.8	7/31/1998	999874	9/29/2004	7/31/2018	Implantable Device With Improved Battery Recharging and Powering Configuration	
144	05-00855	1	DE	Regular	ORG	PCT/EPC	Granted	98938233.8	7/31/1998	69826675.7	9/29/2004	7/31/2018	Implantable Device With Improved Battery Recharging and Powering Configuration	
145	05-00855	1	GB	Regular	ORG	National	Granted	98938233.8	7/31/1998	999874	7/31/1998	7/31/2018	Implantable Device With Improved Battery Recharging and Powering Configuration	
146	05-00855	1	IT	Regular	ORG	PCT/EPC	Granted	98938233.8	7/31/1998	999874	9/29/2004	7/31/2018	Implantable Device With Improved Battery Recharging and Powering Configuration	
147	05-00855	1	ES	Regular	ORG	PCT/EPC	Granted	98938233.8	7/31/1998	999874	9/29/2004	7/31/2018	Implantable Device With Improved Battery Recharging and Powering Configuration	
148	05-00855	1	US	Regular	ORG	National	Granted	09/126.615	7/31/1998	6,067,474	5/23/2000	11/23/2011	7/31/2018	Implantable Device With Improved Battery Recharging and Powering Configuration
149	05-00855	2	AU	Regular	DIV	PCT	Granted	200227631	3/25/2002	775343	11/18/2004	7/31/2010	7/31/2018	Implantable Device With Improved Battery Recharging and Powering Configuration
150	05-00855	2	US	Regular	CIP	National	Granted	09/404.966	9/24/1999	6,308,101	10/23/2001	4/23/2013	7/31/2018	Fully Implantable Cochlear Implant System
151	05-00857	1	US	Regular	ORG	National	Granted	09/585,848	6/1/2000	6,487,453	11/26/2002	5/26/2010	6/1/2020	Electrode Array for Hybrid Cochlear Stimulator
152	05-00858	1	US	Regular	ORG	National	Granted	09/758,104	1/10/2001	6,498,954	12/24/2002	6/24/2010	4/3/2021	Apex to Base Cochlear Implant Electrode
153	05-00860	1	US	Regular	ORG	National	Granted	09/514,100	2/28/2000	6,473,651	10/29/2002	4/29/2010	2/28/2020	Fluid Filled Microphone Balloon to be Implanted in the Middle Ear
154	05-00863	3	US	Regular	CIP	National	Granted	09/407,826	9/28/1999	6,272,382	8/7/2001	2/7/2013	7/31/2018	Fully Implantable Cochlear Implant System
155	05-00870	1	EPC	Regular	ORG	PCT/EPC	Filed	930682	5/12/2000			5/31/2010		Electrode Array for Hybrid Cochlear Stimulator
156	05-00870	3	US	Regular	ORG	PCT	Granted	09/979,800	11/13/2001	6,889,094	5/3/2005	11/3/2012	11/13/2021	BiNet for Bilateral Cochlear Implant Systems
157	05-00930	2	US	Regular	ORG	National	Granted	10/218,615	8/13/2002	7,292,891	11/6/2007	5/6/2011	8/13/2022	Network Interface Module for Bilateral Cochlear Implant Systems
158	05-00930	3	US	Regular	DIV	National	Filed	11/839,427	8/15/2007					Method for Establishing a Network in Bilateral Cochlear Implant Systems
159	05-00930	4	US	Regular	DIV	National	Filed	11/839,435	8/15/2007					BiNet for Bilateral Cochlear Implant Systems
160	05-00930	5	US	Regular	Cont	National	Filed	11/839,441	8/15/2007					Cochlear Implant
161	05-00935		US	Regular	ORG	National	Granted	10/088,194	4/18/2002	6,778,858	8/17/2004	2/17/2012	6/5/2022	Insertion Tool for Placement of Electrode System Inside the Cochlear Lumen
162	05-00936	1	US	Regular	ORG	National	Granted	10/116,464	4/3/2002	7,050,858	5/23/2006	11/23/2009	12/7/2023	Channel Interaction Cancellation Within a Multichannel Neural Stimulation System
163	05-00940	1	US	Regular	ORG	National	Granted	10/192,987	7/10/2002	7,110,821	9/19/2006	3/19/2010	3/28/2024	In the Ear Auxiliary Microphone for Hearing Prosthetic
164	05-00941	1	EPC	Regular	ORG	PCT/EPC	Filed	2753443.7	8/8/2002			8/31/2010		In the Ear Auxiliary Microphone for Hearing Prosthetic
165	05-00941	1	US	Regular	ORG	National	Granted	09/927,130	8/10/2001	6,775,389	8/10/2004	2/10/2012	8/10/2021	Ear Auxiliary Microphone for Behind The Ear Hearing Prosthetic
166	05-00941	2	US	Regular	DIV	National	Granted	10/731,049	12/9/2003	7,003,876	2/28/2006	8/28/2013	3/22/2022	Method of Constructing an In The Ear Auxiliary Microphone for Behind The Ear Hearing Prosthetic
167	05-00941	3	US	Regular	DIV	National	Granted	10/823,879	4/14/2004	7,167,572	1/23/2007	7/23/2010	11/3/2021	In The Ear Auxiliary Microphone System for Behind The Ear Hearing Prosthetic
168	05-00941	4	US	Regular	DIV	National	Granted	10/823,962	4/14/2004	7,106,873	9/12/2006	3/12/2010	11/3/2021	In The Ear Auxiliary Microphone for Behind The Ear Hearing Prosthetic
169	05-00941	5	US	Regular	DIV	National	Filed	11/530,867	9/11/2006				11/3/2021	In The Ear Auxiliary Microphone for Behind The Ear Hearing Prosthetic

**SCHEDULE 4.13(a)(1)  
Owned IP  
(i) Patents and Patent Applications**

Date Printed: 9/30/2009

A	B	C	D	E	F	G	I	J	K	L	M	N	O	
170	05-00941	6	US	Regular	DIV	National	Granted	11/530,869	9/11/2006	7,526,096	4/28/2009	10/28/2012	2/22/2022	In The Ear Auxiliary Microphone for Behind The Ear Hearing Prosthesis
171	05-00941	7	US	Regular	DIV	National	Filed	11/622,319	1/11/2007				11/3/2021	In The Ear Auxiliary Microphone System for Behind The Ear Hearing Prosthesis
172	05-00941	8	US	Regular	DIV	National	Filed	11/622,330	1/11/2007				11/3/2021	In The Ear Auxiliary Microphone System for Behind The Ear Hearing Prosthesis
173	05-00954	2	US	Regular	ORG	National	Filed	11/421,742	6/1/2006					Coated Electrode
174	05-00956	2	US	Regular	ORG	National	Granted	10/218,614	8/13/2002	7,155,289	12/26/2006	6/26/2010	6/29/2024	Auto-Referencing Mixed Mode Phase Locked Loop for Audio Playback Applications
175	05-00956	3	US	Regular	DIV	National	Filed	11/381,716	5/4/2006					Auto-Referencing Mixed Mode Phase Locked Loop for Audio Playback Applications
176	05-00956	4	US	Regular	DIV	National	Filed	11/381,719	5/4/2006					Auto-Referencing Mixed Mode Phase Locked Loop for Audio Playback Applications
177	05-00963	2	US	Regular	ORG	National	Granted	10/218,645	8/13/2002	7,076,308	7/11/2006	1/11/2010	7/26/2024	Cochlear Implant and Simplified Method of Fitting
178	05-00963	3	US	Regular	DIV	National	Filed	11/428,287	6/30/2006					Multi-channel Cochlear Implant and Simplified Method for Fitting Same
179	05-00963	4	US	Regular	DIV	National	Filed	11/428,302	6/30/2006					Bionic Ear Implant
180	05-00963	5	US	Regular	DIV	National	Granted	11/428,322	6/30/2006	7,574,265	8/11/2009	2/11/2013	3/17/2023	Cochlear Implant and Simplified Method for Fitting Same
181	05-00969	2	US	Regular	ORG	National	Granted	10/218,616	8/13/2002	7,107,101	9/12/2006	3/12/2010	1/9/2024	Bionic Ear Programming System
182	05-00971	2	US	Regular	ORG	National	Granted	11/097,611	3/31/2005	7,561,920	7/14/2009	1/14/2013	1/30/2027	Electric and Acoustic Stimulation Fitting Systems and Methods
183	05-00971	3	US	Regular	DIV	National	Filed	12/495,593	6/30/2009					Electric and Acoustic Stimulation Fitting Systems and Methods
184	05-00971	4	US	Regular	DIV	National	Filed	12/495,620	6/30/2009					Electric and Acoustic Stimulation Fitting Systems and Methods
185	05-00973	2	US	Regular	ORG	National	Granted	10/371,285	2/21/2003	7,136,706	11/14/2006	5/14/2010	7/10/2024	Distributed Compression Amplitude Mapping for Cochlear Implants
186	05-00973	3	US	Regular	DIV	National	Filed	11/552,466	10/24/2006					Distributed Compression Amplitude Mapping for a Neural Stimulation System
187	05-00973	4	US	Regular	DIV	National	Filed	11/552,475	10/24/2006					Distributed Compression Amplitude Mapping for a Cochlear Stimulation System
188	05-00975	2	US	Regular	ORG	National	Filed	10/625,360	7/23/2003					System and Method for Distributed Gain Control
189	05-00977	2	US	Regular	ORG	National	Granted	10/318,433	12/13/2002	7,130,694	10/31/2006	4/30/2010	1/18/2025	Pulse Skipping Strategy
190	05-00977	3	US	Regular	DIV	National	Filed	11/497,718	8/2/2006					Systems for Selecting Stimulation Channels
191	05-00977	4	US	Regular	DIV	National	Filed	11/498,023	8/2/2006					Stimulation Channel Selection Methods
192	05-00977	5	US	Regular	DIV	National	Filed	11/497,725	8/2/2006					Stimulation Channel Selection Methods
193	05-00977	6	US	Regular	DIV	National	Filed	11/497,719	8/2/2006					Stimulation Channel Selection Methods
194	05-00977	7	US	Regular	Cont	National	Filed	11/497,714	8/2/2006					Stimulation Channel Selection Methods
195	05-00990	3	US	Regular	ORG	National	Granted	10/264,962	10/3/2002	6,766,860	9/7/2004	3/7/2012	10/3/2022	Novel Hearing Aid Design
196	05-00990	4	US	Regular	Cont	National	Granted	10/932,813	9/1/2004	7,224,815	5/29/2007	11/29/2010	8/30/2023	Hearing Aid Design
197	05-00990	5	US	Regular	Cont	National	Filed	11/752,196	5/22/2007					Hearing Aid Design
198	05-00994	2	US	Regular	ORG	National	Granted	10/264,937	10/3/2002	6,879,695	4/12/2005	10/12/2012	1/19/2023	Personal Sound Link Module
199	05-00999	2	US	Regular	ORG	National	Filed	10/651,650	8/29/2003					Current Sensing Coil for Cochlear Implant Data Detection
200	05-01244	1	US	Regular	ORG	National	Filed	10/992,625	11/17/2004					Optimizing Pitch Allocation in a Cochlear Implant
201	05-01249	1	US	Regular	ORG	National	Filed	11/096,402	4/1/2005					Methods and Apparatus for Cochlear Implant Signal Processing
202	05-01251	2	US	Regular	ORG	National	Granted	10/993,991	11/19/2004	7,167,754	1/23/2007	7/23/2010	4/17/2025	Low Power Inverted Altrphasic Stimulation in a Cochlear Implant

**SCHEDULE 4.13(a)(1)  
Owned IP  
(i) Patents and Patent Applications**

Date Printed: 9/30/2009

A	B	C	D	E	F	G	I	J	K	L	M	N	O	
203	05-01254	1	US	Regular	ORG	National	Granted	11/016,604	12/16/2004	7,450,994	11/11/2008	5/11/2012	8/8/2026	Estimating Flap Thickness for Cochlear Implants
204	05-01254	2	US	Regular	Cont	National	Filed	12/244,082	10/2/2008					Estimating Flap Thickness for Cochlear Implants
205	05-01255	1	US	Regular	ORG	National	Granted	10/981,944	11/5/2004	7,277,760	10/2/2007	4/2/2011	9/27/2025	Encoding Fine Time Structure in Presence of Substantial Interaction Across an Electrode Array
206	05-01255	2	US	Regular	CIP	National	Filed	11/845,673	8/27/2007					Encoding Fine Time Structure in Presence of Substantial Interaction Across an Electrode Array
207	05-01256	1	US	Regular	ORG	National	Granted	11/003,155	12/3/2004	7,242,985	7/10/2007	1/10/2011	5/24/2025	Outer Hair Cell Stimulation Model for Use by an Intra-Cochlear Implant
208	05-01256	2	US	Regular	DIV	National	Filed	11/765,395	6/19/2007					Outer Hair Cell Stimulation Model for Use by an Intra-Cochlear Implant
209	05-01257	1	US	Regular	ORG	National	Granted	10/992,390	11/17/2004	7,522,961	4/21/2009	10/21/2012	9/28/2026	Inner Hair Cell Stimulation Model for the Use by an Intra-Cochlear Implant
210	05-01257	2	US	Regular	Cont	National	Filed	12/414,262	3/30/2009					Inner Hair Cell Stimulation Model for the Use by an Intra-Cochlear Implant
211	05-01258	1	US	Regular	ORG	National	Filed	11/008,869	12/9/2004					Processing Signals Representative of Sound Based on the Identity of an Input Element
212	05-01258	2	US	Regular	DIV	National	Filed	12/491,593	6/25/2009					Processing Signals Representative of Sound Based on the Identity of an Input Element
213	05-01265	2	US	Regular	ORG	National	Filed	11/387,206	3/23/2006					Cochlear Implant with Localized Fluid Transport
214	05-01277	1	US	Regular	ORG	National	Filed	11/261,432	10/28/2005					Hybrid Multi-Function Electrode Array
215	05-01279	3	US	Regular	CIP	National	Filed	11/379,777	4/21/2006					Cochlear Stimulation Device
216	05-01279	4	US	Regular	CIP	National	Filed	11/379,779	4/21/2006					Cochlear Stimulation Device
217	05-01284	2	US	Regular	ORG	National	Filed	11/138,146	5/26/2005					Cochlear Lead
218	05-01287	2	US	Regular	ORG	National	Granted	11/134,658	5/20/2005	7,225,028	5/29/2007	11/29/2010	7/1/2025	Dual Cochlear/Vestibular Stimulator with Control Signals Derived from Motion and Speech Signals
219	05-01287	3	US	Regular	CIP	National	Filed	11/744,640	5/4/2007					Dual Cochlear/Vestibular Stimulator with Control Signals Derived from Motion and Speech Signals
220	05-01290	1	US	Regular	ORG	National	Filed	11/058,848	2/15/2005					Integrated Phase-Shift Power Control Transmitter for Use with Implantable Device and Method for Use of Same
221	05-01291	1	US	Regular	ORG	National	Filed	11/122,648	5/5/2005					Implantable Device and Method for Use of Same
222	05-01292	2	US	Regular	DIV	National	Filed	12/437,861	5/8/2009					FSK Telemetry for Cochlear Implant
223	05-01294	1	US	Regular	ORG	National	Filed	11/262,055	10/28/2005					Autonomous Autoprogram Cochlear Implant
224	05-01296	1	US	Regular	ORG	National	Granted	11/080,214	3/14/2005	7,515,966	4/7/2009	10/7/2012	3/6/2027	Optimizing Pitch Allocation in a Cochlear Stimulation System
225	05-01296	2	US	Regular	Cont	National	Filed	12/418,428	4/3/2009					Sound Processing and Stimulation Systems and Methods for Use with Cochlear Implant Devices
226	05-01296	3	US	Regular	Cont	National	Filed	12/418,471	4/3/2009					Sound Processing and Stimulation Systems and Methods for Use with Cochlear Implant Devices
227	05-01296	4	US	Regular	Cont	National	Filed	12/418,473	4/3/2009					Sound Processing and Stimulation Systems and Methods for Use with Cochlear Implant Devices
228	05-01296	5	US	Regular	Cont	National	Filed	12/418,478	4/3/2009					Sound Processing and Stimulation Systems and Methods for Use with Cochlear Implant Devices
229	05-01297	1	US	Regular	ORG	National	Granted	11/080,196	3/14/2005	7,496,405	2/24/2009	8/24/2012	10/12/2025	Sound Processing and Stimulation Systems and Methods for Use with Cochlear Implant Devices
230	05-01298	1	US	Regular	ORG	National	Granted	11/080,935	3/14/2005	7,426,414	9/16/2008	3/16/2012	3/3/2026	Sound Processing and Stimulation Systems and Methods for Use with Cochlear Implant Devices
231	05-01299	1	US	Regular	ORG	National	Filed	11/449,056	6/7/2006					Systems and Methods for Providing Neural Stimulation with an Asynchronous Stochastic Strategy

**SCHEDULE 4.13(a)(1)  
Owned IP  
(i) Patents and Patent Applications**

Date Printed: 9/30/2009

A	B	C	D	E	F	G	I	J	K	L	M	N	O	
232	05-01312	1	US	Regular	ORG	National	Granted	11/141,824	6/1/2005	7,447,549	11/4/2008	5/4/2012	6/27/2026	Methods and Systems of Denoising a Neural Recording Signal
233	05-01313	1	US	Regular	ORG	National	Granted	11/141,825	6/1/2005	7,343,200	3/1/2008	9/11/2011	4/28/2026	Methods and Systems for Automatically Determining a Neural Response Threshold Current Level
234	05-01314	1	US	Regular	ORG	National	Filed	11/142,152	6/1/2005					Methods and Systems for Automatically Identifying Whether a Neural Recording Signal Includes a Neural Response Signal
235	05-01347		BE	Regular	ORG	PCT/EPC	Granted	9960240	9/18/2000	1216014	4/20/2005	9/30/2010	9/18/2020	Cochlear Implant
236	05-01347		EPC	Regular	ORG	PCT/EPC	Granted	9960240	9/18/2000	1216014	4/20/2005	9/30/2010	9/18/2020	Cochlear Implant
237	05-01347		FR	Regular	ORG	PCT/EPC	Granted	9960240	9/18/2000	1216014	4/20/2005	9/30/2010	9/18/2020	Cochlear Implant
238	05-01347		DE	Regular	ORG	PCT/EPC	Granted	9960240	9/18/2000	600196216	4/20/2005	9/30/2010	9/18/2020	Cochlear Implant
239	05-01347		GB	Regular	ORG	PCT/EPC	Granted	9960240	9/18/2000	1216014	4/20/2005	9/30/2010	9/18/2020	Cochlear Implant
240	05-01347		IT	Regular	ORG	PCT/EPC	Granted	9960240	9/18/2000	1216014	4/20/2005	9/30/2010	9/18/2020	Cochlear Implant
241	05-01347		NE	Regular	ORG	PCT/EPC	Granted	9960240	9/18/2000	1216014	4/20/2005	9/30/2010	9/18/2020	Cochlear Implant
242	06-00180	1	US	Regular	ORG	National	Filed	11/386,198	3/21/2006					Spectral Contrast Enhancement in a Cochlear Implant Speech Processor
243	06-00210	1	AU	Regular	ORG	PCT	Filed	2007248343	4/17/2007			4/17/2012		Information Processing and Storage in a Cochlear Stimulation System
244	06-00210	1	US	Regular	ORG	National	Filed	11/418,847	5/5/2006					Information Processing and Storage in a Cochlear Stimulation System
245	06-00211	1	US	Regular	ORG	National	Filed	11/535,004	9/25/2006					Auditory Front End Customization
246	06-00212	1	US	Regular	ORG	National	Filed	11/534,933	9/25/2006					Beamforming Microphone System
247	06-00214	1	US	Regular	ORG	National	Filed	11/859,676	9/21/2007					Implantable Stimulation System and Methods for Making a Housing for the System
248	06-00232	1	US	Regular	ORG	National	Filed	11/393,449	3/29/2006					Systems and Methods of Facilitating Communication Between a First and Second Device
249	06-00244	2	PCT	Regular	ORG	PCT	Filed	PCT/US2006/058830	3/31/2008					Systems and Methods for Determining a Threshold Current Level Required to Evoke a Stapedial Muscle Reflex
250	06-00244	2	US	Regular	ORG	National	Filed	11/779,265	7/17/2007					Systems and Methods for Determining a Threshold Current Level Required to Evoke a Stapedial Muscle Reflex
251	06-00244	3	US	Regular	CIP	National	Filed	12/236,961	9/24/2008					Systems and Methods for Determining a Threshold Current Level Required to Evoke a Stapedial Muscle Reflex
252	06-00245	1	US	Regular	ORG	National	Filed	11/580,498	10/13/2006					Systems and Methods for Determining a Threshold Current Level Required to Evoke a Stapedial Muscle Reflex
253	06-00246	2	US	Regular	ORG	National	Filed	11/775,182	7/9/2007					Systems and Methods for Detecting an Error Associated with an Implantable Device
254	06-00249	2	US	Regular	ORG	National	Filed	11/734,233	4/11/2007					Neural Response Imaging Methods and Systems
255	06-01373	2	US	Regular	ORG	National	Filed	11/858,649	9/20/2007					Removing Artifact in Evoked Compound Action Potential Recordings in Neural Stimulators
256	06-01374	2	US	Regular	ORG	National	Filed	11/933,861	11/1/2007					Methods and Systems for Presenting an Audio Signal to a Cochlear Implant Patient
257	06-01374	3	US	Regular	CIP	National	Filed	12/485,427	6/16/2009					Pre-curved Electrode Array Loading Tools
258	06-01375	1	US	Regular	ORG	National	Filed	11/599,004	11/13/2006					Pre-curved Electrode Array Loading Tools
259	06-01498	2	US	Regular	ORG	National	Filed	11/962,508	12/21/2007					Methods and Systems for Removing Accumulated Charge From One or More Electrodes
260	06-01616	2	US	Regular	ORG	National	Filed	12/022,968	1/30/2008					Systems and Methods for Detecting One or More Central Auditory Potentials
														Level-Dependent Stimulation Methods and Systems

**SCHEDULE 4.13(a)(1)  
Owned IP  
(i) Patents and Patent Applications**

Date Printed: 9/30/2009

A	B	C	D	E	F	G	I	J	K	L	M	N	O
261	06-01617	2	US	Regular	ORG	National	Filed	12/415,977	3/31/2009				Atraumatic High-Fretion Headpiece in Microcircuit Cochlear Electrode Array and Method of Manufacture
262	06-01618	2	US	Regular	ORG	National	Filed	12/338,758	12/18/2008				Pre-Curved Electrode Array Insertion Tools
263	07-00184	2	US	Regular	ORG	National	Filed	12/425,868	4/17/2009				Methods and Systems of Optimizing Stimulation Current Applied to a Cochlear Implant Patient
264	07-00377	2	US	Regular	ORG	National	Filed	12/059,358	3/31/2008				Methods and Systems of Compensating for a Disabled Electrode
265	07-00446	3	US	Regular	ORG	National	Filed	12/421,620	4/9/2009				Totally-Based Optimization of Sound Sensation for a Cochlear Implant Patient
266	07-00446	4	PCT	Regular	ORG	PCT	Filed	PCT/US2009/050212	7/10/2009				Totally-Based Optimization of Sound Sensation for a Cochlear Implant Patient
267	07-00446	4	US	Regular	ORG	National	Filed	12/172,869	7/14/2008				Totally-Based Optimization of Sound Sensation for a Cochlear Implant Patient
268	07-00458	2	US	Regular	ORG	National	Filed	12/175,151	7/17/2008				Spectral Contrast Enhancement in a Cochlear Implant Speech Processor
269	07-00524	1	PCT	Regular	ORG	PCT	Filed	PCT/US2008/074890	8/29/2008				Minimizing Trauma During and After Insertion of a Cochlear Lead
270	07-00524	2	US	Regular	ORG	National	Filed	12/202,134	8/29/2008				Minimizing Trauma During and After Insertion of a Cochlear Lead
271	07-00524	3	US	Regular	CIP	National	Filed	12/533,963	7/31/2009				Modular Drug Delivery System for Minimizing Trauma During and After Insertion of a Cochlear Lead
272	07-00829	1	PCT	Regular	ORG	PCT	Filed	PCT/US2009/056926	9/15/2009				Methods and Systems of Conveying Fine Structure Information to a Cochlear Implant Patient
273	07-00829	2	US	Regular	ORG	National	Filed	12/559,759	9/15/2009				Methods and Systems of Conveying Fine Structure Information to a Cochlear Implant Patient
274	07-00963	1	US	Prov.	ORG	National	Filed	61/116,261	11/19/2008				Hermetically Sealed Feedthrough Case
275	07-00963	2	US	Regular	ORG	National	Docketed	Drafting					Hermetically Sealed Feedthrough Case
276	07-01157	1	US	Regular	ORG	National	Filed	12/329,338	12/5/2008				Cochlear implant for an implantable cochlear stimulation system and method of assembly
277	07-01231	1	US	Prov.	ORG	National	Filed	61/139,566	12/20/2008				Methods and Systems of Adjusting One or More Perceived Attributes of an Audio Signal
278	07-01231	2	US	Prov.	ORG	National	Filed	61/160,297	3/14/2009				Methods and Systems of Adjusting One or More Perceived Attributes of an Audio Signal
279	08-00001	1	US	Prov.	ORG	National	Filed	61/140,458	12/23/2008				Compensation Current Optimization for Cochlear Implant Systems
280	08-00001	2	US	Prov.	ORG	National	Filed	61/224,844	7/10/2009				Compensation Current Optimization for Cochlear Implant Systems
281	08-00002	1	US	Regular	ORG	National	Filed	12/825,984	12/1/2008				Spectral Profile Adjustment of Incoming Audio Signals for Cochlear Implant Patients
282	08-00006	1	US	Prov.	ORG	National	Docketed	Drafting					Obstructive Sleep Apnea Stimulator
283	08-00007	1	PCT	Regular	ORG	PCT	Filed	PCT/US2009/056488	9/10/2009				Spectral Tilt Optimization for Cochlear Implant Patients
284	08-00007	2	US	Regular	ORG	National	Filed	12/556,972	9/10/2009				Spectral Tilt Optimization for Cochlear Implant Patients
285	08-00008	1	US	Prov.	ORG	National	Filed	61/148,648	1/30/2009				Sound Processing Assembly for Use in a Cochlear Implant System
286	08-00009	1	US	Regular	ORG	National	Filed	12/394,549	2/27/2009				Fixation devices for cochlear implant speech processors
287	08-00012	1	US	Regular	ORG	National	Filed	12/326,804	12/2/2008				Impact Resistant Implantable Antenna Coil Assembly
288	08-00013	1	US	Regular	ORG	National	Filed	12/342,859	12/23/2008				Methods and Systems of Automatically Detecting an Impedance of One or More Electrodes in a Cochlear Implant System



SCHEDULE 4.13(a)(1)  
Owned IP

Date Printed: 9/30/2009

(i) Patents and Patent Applications

A	B	C	D	E	F	G	I	J	K	L	M	N	O
289	08-00017	2	US	Regular	ORG	National	Filed	12/553,093	9/3/2009				Dual Microphone EAS System That Prevents Feedback
290	08-00017	3	US	Regular	ORG	National	Filed	12/584,306	9/3/2009				Dual Microphone EAS System That Prevents Feedback
291	08-00018	1	US	Prov.	ORG	National	Filed	61/180,737	5/22/2009				Cochlear Electrode Array
292	08-00019	1	US	Prov.	ORG	National	Filed	61/102,726	10/3/2008				Removable Module for Hearing Assistance System
293	08-00019	2	US	Regular	ORG	National	Filed	12/568,851	9/29/2009				Removable Module for Hearing Assistance System
294	08-00021	1	US	Prov.	ORG	National	Filed	61/139,567	12/20/2008				Cochlear Implant Systems Including Magnetic Flux Redirection Means
295	08-00024	1	US	Prov.	ORG	National	Filed	61/097,983	9/18/2008				Methods and Systems of Generating a Graphical Representation of an Intracochlear Trajectory of Electrodes
296	08-00024	2	US	Regular	ORG	National	Filed	12/560,626	9/16/2009				Methods and Systems of Generating a Graphical Representation of an Intracochlear Trajectory of Electrodes
297	08-00025	1	US	Prov.	ORG	National	Docketed	Drafting					Methods and Systems of Generating a Graphical Representation of an Intracochlear Trajectory of Electrodes
298	08-00026	1	PCT	Regular	ORG	PCT	Docketed	Drafting					Computationally Efficient EFIM Based Technique to Create Independent Stimulation Channels
299	08-00026	1	US	Prov.	ORG	National	Filed	61/148,660	1/30/2009				Modular Cochlear Implant Systems Including Implantable Sound Processors
300	08-00026	2	US	Regular	ORG	National	Docketed	Drafting					Automated Cochlear Electrode Insertion
301	08-00027	1	US	Prov.	ORG	National	Filed	61/110,463	10/31/2008				Systems and Methods of Facilitating Manual Adjustment of One or More Cochlear Implant System Control Parameters
302	08-00027	2	US	Regular	ORG	National	Docketed	Drafting					Composite Stylet
303	08-00028	1	US	Prov.	ORG	National	Filed	61/148,762	1/30/2009				Multi-Contact Connector System
304	08-00029	1	US	Regular	ORG	National	Filed	12/470,990	5/22/2009				External Acoustically Coupled Backup Microphone for a Fully Implantable Cochlear Implant System
305	08-00030	1	US	Prov.	ORG	National	Filed	61/175,451	5/4/2009				Audio/Acoustic Based Remote Control Device for Use with a Cochlear Implant System
306	08-00032	1	US	Prov.	ORG	National	Docketed	Drafting					Methods and Systems for Representing Different Spectral Components of an Audio Signal Presented to a Cochlear Implant Patient
307	08-00033	1	US	Prov.	ORG	National	Docketed	Drafting					Remote Audio Pre-Processor Device for Cochlear Implant Systems/Audio Pre-Processor Module For Cochlear Implant
308	08-00034	1	US	Regular	ORG	National	Filed	12/569,500	9/29/2009				Dynamic Noise Reduction in Cochlear Implant Systems
309	08-00035	1	US	Prov.	ORG	National	Docketed	Drafting					Dynamic Noise Reduction in Cochlear Implant Systems
310	08-00003	1	US	Prov.	ORG	National	Filed	61/241,471	9/11/2009				System for Protecting Patient Identification in Medical Software
311	08-00004	1	US	Regular	ORG	National	Filed	12/567,011	9/25/2009				Hearing Device Counseling Kit
312	08-00006	1	US	Design	ORG	National	Filed	29/337,847	5/29/2009				Hearing Device Counseling Kit
313	08-00006	2	US	Design	ORG	National	Filed	29/337,849	5/29/2009				Lead Insertion Tools
314	08-00009	1	US	Prov.	ORG	National	Filed	61/223,774	7/8/2009				Integrated Wire Carrier for Electrode Array
315	08-00012	1	US	Regular	ORG	National	Filed	12/506,964	7/21/2009				Dynamic Compliance Voltage Management for an Implantable Medical Device
316	08-00013	1	US	Regular	ORG	National	Docketed	Drafting					Percutaneous Cochlear Implant Systems and Methods
317	08-00016	1	US	Prov.	ORG	National	Filed	61/187,621	6/16/2009				Percutaneous Cochlear Implant Systems and Methods
318	08-00016	2	US	Prov.	ORG	National	Filed	61/224,211	7/9/2009				Modular Off-The-Ear Processor For Use with Cochlear Implant System
319	08-00018	1	US	Prov.	ORG	National	Docketed	Drafting					Modular Off-The-Ear Processor For Use with Cochlear Implant System

SCHEDULE 4.13(a)(1)  
Owned IP

Date Printed: 9/30/2009

(i) Patents and Patent Applications

A	B	C	D	E	F	G	I	J	K	L	M	N	O
320	09-00019	1	US	Prov.	ORG	National	Docketed	Drafting					Compliant Lateral Electrode with Deeper Insertability (more than 270 degrees) and with Low Insertion Forces
321	09-00021	1	US	Prov.	ORG	National	Docketed	Drafting					Novel Hermetic Feedthrough Fabrication
322	09-00022	1	US	Prov.	ORG	National	Docketed	Drafting					Waterproof Microphone
323	09-00023	1	US	Regular	ORG	National	Docketed	Drafting					Method for realizing modular submersible cochlear implant speech processor
324	09-00024	1	US	Prov.	ORG	National	Docketed	Drafting					Environmentally-protected Electrical Control Interface
325	09-00027	1	US	Prov.	ORG	National	Filed	6/1/24, 4/72	9/11/2009			9/11/2010	Methods and Systems for Reducing an Effect of Ambient Noise Within a Cochlear Implant System
326	09-00028	1	US	Prov.	ORG	National	Docketed	Drafting					Minimum Sized Coffred Feedthrough
327	09-00029	1	US	Prov.	ORG	National	Docketed	Drafting					Iridium Stimulating Surface for Hi-Focus Cochlear Implant Process and Architecture
328	09-00033	1	US	Prov.	ORG	National	Docketed	Drafting					Method for fitting and programming a cochlear implant system using stapedius muscle strain feedback
329	09-00035	1	US	Prov.	ORG	National	Docketed	Drafting					Two level detent latch for battery cover retention
330	09-00036	1	US	Prov.	ORG	National	Docketed	Drafting					Replaceable battery compartment seal for a waterproof device
331	09-00038	1	US	Prov.	ORG	National	Docketed	Drafting					Simple child resistant latch for battery cover
332	09-00039	1	US	Prov.	ORG	National	Docketed	Drafting					Light pipe/seal for circular connector

PATENT

REEL: 051065 FRAME: 0713