

PATENT ASSIGNMENT

Electronic Version v1.1
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SUBMISSION TYPE:	NEW ASSIGNMENT																		
NATURE OF CONVEYANCE:	ASSIGNMENT																		
CONVEYING PARTY DATA																			
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Paul G. Krause</td> <td>03/30/2009</td> </tr> <tr> <td>John E. Burnes</td> <td>04/08/2009</td> </tr> <tr> <td>William T. Donofrio</td> <td>03/30/2009</td> </tr> <tr> <td>David J. Peichel</td> <td>03/30/2009</td> </tr> <tr> <td>Gerald P. Arne</td> <td>03/30/2009</td> </tr> <tr> <td>Xiaohong Zhou</td> <td>03/30/2009</td> </tr> <tr> <td>James D. Reinke</td> <td>03/30/2009</td> </tr> <tr> <td>Timothy Davis</td> <td>04/02/2009</td> </tr> </tbody> </table>		Name	Execution Date	Paul G. Krause	03/30/2009	John E. Burnes	04/08/2009	William T. Donofrio	03/30/2009	David J. Peichel	03/30/2009	Gerald P. Arne	03/30/2009	Xiaohong Zhou	03/30/2009	James D. Reinke	03/30/2009	Timothy Davis	04/02/2009
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RECEIVING PARTY DATA																			
Name:	Medtronic, Inc.																		
Street Address:	710 Medtronic Parkway NE																		
City:	Minneapolis																		
State/Country:	MINNESOTA																		
Postal Code:	55432																		
PROPERTY NUMBERS Total: 1																			
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>12362809</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	12362809														
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Application Number:	12362809																		
CORRESPONDENCE DATA																			
Fax Number:	(651)735-1102																		
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>																			
Email:	thom@ssiplaw.com																		
Correspondent Name:	Shumaker & Sieffert, P.A.																		
Address Line 1:	1625 Radio Drive, Suite 300																		
Address Line 4:	Woodbury, MINNESOTA 55125																		
ATTORNEY DOCKET NUMBER:	1111-073US01																		

CH \$40.00 12362809

NAME OF SUBMITTER:

Jessica H. Kwak

Total Attachments: 18

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ASSIGNMENT

WHEREAS, WE, Paul G. Krause of 5946 Royal Oaks Drive, Shoreview, Minnesota 55126; John E. Burnes of 12823 Bluebird Street NW, Coon Rapids, Minnesota 55448; William T. Donofrio of 15608 Avocet Street NW, Andover, Minnesota 55304; David J. Peichel of 4217 Garfield Avenue, Minneapolis, Minnesota 55409; Gerald P. Arne of 940 Dakota Avenue, Long Lake, Minnesota 55356; Xiaohong Zhou of 10748 Hawthorn Trail, Woodbury, Minnesota 55129; James D. Reinke of 7731 Ranchview Lane, Maple Grove, Minnesota 55311; and Timothy Davis of 3764 115th Avenue NW, Coon Rapids, Minnesota 55433 are the inventors of the invention entitled IMPLANTABLE MEDICAL DEVICE CROSSTALK EVALUATION AND MITIGATION, and have executed a nonprovisional patent application based thereon, said nonprovisional application having been filed with the United States Patent and Trademark Office on January 30, 2009, and bearing application no. 12/362,809, and the above-referenced attorney docket number, as well as a provisional patent application based thereon, said provisional application having been filed with the United States Patent and Trademark Office on October 31, 2008, and bearing provisional application no. 61/110,328;

WHEREAS, MEDTRONIC, INC., a corporation organized and existing under the laws of the State of Minnesota and having a principal place of business at 710 Medtronic Parkway N.E., Minneapolis, Minnesota 55432-5640, hereinafter referred to as "Corporation," is desirous of acquiring the entire right, title and interest in and to said invention for the United States and for all foreign countries and in and to any and all foreign and domestic Letters Patent which may be granted therefor;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, we have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto Corporation, its successors and assigns, the entire right, title and interest in and to said invention and the entire right, title and interest in and to any and all Letters Patent of the United States and any foreign countries which may be granted therefor including our rights under the International Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Letters Patent that may be granted, the same to be held and enjoyed by Corporation for its own use and benefit and use and benefit of its successors and assigns to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made, and also hereby authorize Corporation and its employees to fill in the serial number and filing date above after this document has been executed;

AND, for the consideration aforesaid, we materially represent to Corporation, its successors and assigns, that at the time of the execution and delivery of these presents, we are the sole lawful owners of the entire right, title and interest in and to the invention, application and Letters Patent above mentioned, and that the same are unencumbered, and that we have good right and lawful authority to sell and convey the same in the manner herein set forth;

AND, for the consideration aforesaid, we hereby individually covenant and agree to and with Corporation, its successors and assigns, that whenever its counsel or the counsel of its successors or assigns, learned in the law, shall advise that an amendment or division of, or continuation or any continuation-in-part thereof, or any other proceeding in connection with the filing or prosecution of said domestic or foreign patent applications, including interference proceedings, is lawful and desirable, or that a reissue of extension of said Letters Patent is lawful and desirable, we, or our executors, administrators or assigns will sign all papers and drawings, take all rightful oaths, and do all acts necessary or required to be done for the procurement of valid Letters Patent for said invention, or for the reissue or extension of the same, without charge to Corporation, its successors or assigns, but at Corporation's expense.

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this 30 day of March, 2009.

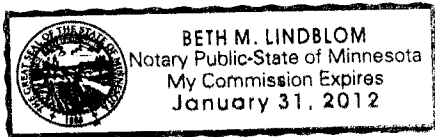
Paul G. Krause
Paul G. Krause

STATE OF MINNESOTA

COUNTY OF Washington

On this 30 day of March, 2009, before me personally appeared Paul G. Krause, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.



Beth M. Lindblom
Notary Public

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this 8th day of April, 2009.

John E Burnes
John E. Burnes

STATE OF MINNESOTA

COUNTY OF Washington

On this 8th day of April, 2009, before me personally appeared John E. Burnes, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.



Beth M. Lindblom
Notary Public

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this 30 day of MARCH, 2009.

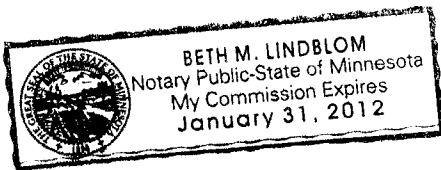
William T. Donofrio
William T. Donofrio

STATE OF MINNESOTA

COUNTY OF Washington

On this 30 day of March, 2009, before me personally appeared William T. Donofrio, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.



Beth M. Lindblom
Notary Public

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this 30th day of March, 2009.

David J. Peichel
David J. Peichel

STATE OF MINNESOTA

COUNTY OF Washington

On this 30 day of March, 2009, before me personally appeared David J. Peichel, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.

Beth M. Lindblom
Notary Public



I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this 30 day of March, 2009.



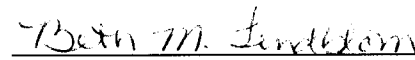
Gerald P. Arne

STATE OF MINNESOTA

COUNTY OF Washington

On this 30 day of March, 2009, before me personally appeared Gerald P. Arne, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.



Notary Public



I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this 30th day of March, 2009.

Xiaohong Zhou
Xiaohong Zhou

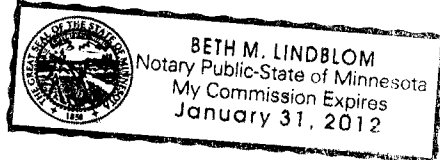
STATE OF MINNESOTA

COUNTY OF Washington

On this 30 day of March, 2009, before me personally appeared Xiaohong Zhou, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.

Beth M. Lindblom
Notary Public



I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this 30th day of March, 2009.

James D. Reinke
James D. Reinke

STATE OF MINNESOTA

COUNTY OF Washington

On this 30 day of March, 2009, before me personally appeared James D. Reinke, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.



Beth M. Lindblom
Notary Public

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this _____ day of _____, 2009.

Timothy Davis

STATE OF MINNESOTA

COUNTY OF

On this _____ day of _____, 2009, before me personally appeared Timothy Davis, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.

Notary Public

ASSIGNMENT

WHEREAS, WE, Paul G. Krause of 5946 Royal Oaks Drive, Shoreview, Minnesota 55126; John E. Burnes of 12823 Bluebird Street NW, Coon Rapids, Minnesota 55448; William T. Donofrio of 15608 Avocet Street NW, Andover, Minnesota 55304; David J. Peichel of 4217 Garfield Avenue, Minneapolis, Minnesota 55409; Gerald P. Arne of 940 Dakota Avenue, Long Lake, Minnesota 55356; Xiaohong Zhou of 10748 Hawthorn Trail, Woodbury, Minnesota 55129; James D. Reinke of 7731 Ranchview Lane, Maple Grove, Minnesota 55311; and Timothy Davis of 3764 115th Avenue NW, Coon Rapids, Minnesota 55433 are the inventors of the invention entitled IMPLANTABLE MEDICAL DEVICE CROSSTALK EVALUATION AND MITIGATION, and have executed a nonprovisional patent application based thereon, said nonprovisional application having been filed with the United States Patent and Trademark Office on January 30, 2009, and bearing application no. 12/362,809, and the above-referenced attorney docket number, as well as a provisional patent application based thereon, said provisional application having been filed with the United States Patent and Trademark Office on October 31, 2008, and bearing provisional application no. 61/110,328;

WHEREAS, MEDTRONIC, INC., a corporation organized and existing under the laws of the State of Minnesota and having a principal place of business at 710 Medtronic Parkway N.E., Minneapolis, Minnesota 55432-5640, hereinafter referred to as "Corporation," is desirous of acquiring the entire right, title and interest in and to said invention for the United States and for all foreign countries and in and to any and all foreign and domestic Letters Patent which may be granted therefor;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, we have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto Corporation, its successors and assigns, the entire right, title and interest in and to said invention and the entire right, title and interest in and to any and all Letters Patent of the United States and any foreign countries which may be granted therefor including our rights under the International Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Letters Patent that may be granted, the same to be held and enjoyed by Corporation for its own use and benefit and use and benefit of its successors and assigns to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made, and also hereby authorize Corporation and its employees to fill in the serial number and filing date above after this document has been executed;

AND, for the consideration aforesaid, we materially represent to Corporation, its successors and assigns, that at the time of the execution and delivery of these presents, we are the sole lawful owners of the entire right, title and interest in and to the invention, application and Letters Patent above mentioned, and that the same are unencumbered, and that we have good right and lawful authority to sell and convey the same in the manner herein set forth;

AND, for the consideration aforesaid, we hereby individually covenant and agree to and with Corporation, its successors and assigns, that whenever its counsel or the counsel of its successors or assigns, learned in the law, shall advise that an amendment or division of, or continuation or any continuation-in-part thereof, or any other proceeding in connection with the filing or prosecution of said domestic or foreign patent applications, including interference proceedings, is lawful and desirable, or that a reissue of extension of said Letters Patent is lawful and desirable, we, or our executors, administrators or assigns will sign all papers and drawings, take all rightful oaths, and do all acts necessary or required to be done for the procurement of valid Letters Patent for said invention, or for the reissue or extension of the same, without charge to Corporation, its successors or assigns, but at Corporation's expense.

ASSIGNMENT

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P0033517.01/1111-073US01

PATENT

REEL: 022568 FRAME: 0146

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this _____ day of _____, 2009.

Paul G. Krause

STATE OF MINNESOTA

COUNTY OF

On this _____ day of _____, 2009, before me personally appeared Paul G. Krause, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.

Notary Public

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this _____ day of _____, 2009.

John E. Burnes

STATE OF MINNESOTA

COUNTY OF

On this _____ day of _____, 2009, before me personally appeared John E. Burnes, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.

Notary Public

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this _____ day of _____, 2009.

William T. Donofrio

STATE OF MINNESOTA

COUNTY OF

On this _____ day of _____, 2009, before me personally appeared William T. Donofrio, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.

Notary Public

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this _____ day of _____, 2009.

David J. Peichel

STATE OF MINNESOTA

COUNTY OF

On this _____ day of _____, 2009, before me personally appeared David J. Peichel, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.

Notary Public

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IN WITNESS WHEREOF, I have hereunto set my hand on this _____ day of _____, 2009.

Gerald P. Arne

STATE OF MINNESOTA

COUNTY OF

On this _____ day of _____, 2009, before me personally appeared Gerald P. Arne, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.

Notary Public

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IN WITNESS WHEREOF, I have hereunto set my hand on this _____ day of _____, 2009.

Xiaohong Zhou

STATE OF MINNESOTA

COUNTY OF

On this _____ day of _____, 2009, before me personally appeared Xiaohong Zhou, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.

Notary Public

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this _____ day of _____, 2009.

James D. Reinke

STATE OF MINNESOTA

COUNTY OF

On this _____ day of _____, 2009, before me personally appeared James D. Reinke, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.

Notary Public

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this 2nd day of April, 2009.

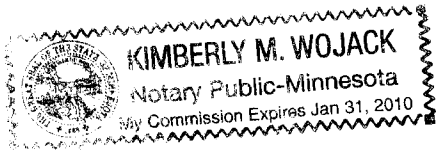
Timothy Davis
Timothy Davis

STATE OF MINNESOTA

COUNTY OF

On this 2nd day of April, 2009, before me personally appeared Timothy Davis, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.



Kimberly M. Wojack
Notary Public