

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5051581

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JENNIFER G. MEDINA	06/19/2018
JAMES BRITTON HISSONG	06/06/2018
MATTHEW F. MYNTTI	06/08/2018
DANA A. OLIVER	06/07/2018
BRIAN J. VACCARO	06/08/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	MEDTRONIC, INC.
<b>Street Address:</b>	710 MEDTRONIC PARKWAY
<b>City:</b>	MINNEAPOLIS
<b>State/Country:</b>	MINNESOTA
<b>Postal Code:</b>	55402
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15389430
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(612)349-9266
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Phone:</b>	6123495740
<b>Email:</b>	thompson@ptslaw.com
<b>Correspondent Name:</b>	PATTERSON THUENTE PEDERSEN, P.A.
<b>Address Line 1:</b>	80 S 8TH STREET
<b>Address Line 2:</b>	4800 IDS
<b>Address Line 4:</b>	MINNEAPOLIS, MINNESOTA 55402
<b>ATTORNEY DOCKET NUMBER:</b>	4944.192US04
<b>NAME OF SUBMITTER:</b>	RALYNN THOMPSON
<b>SIGNATURE:</b>	/Ralynn Thompson/
<b>DATE SIGNED:</b>	07/16/2018
<b>Total Attachments: 6</b>	

source=4944.192US04 Assignment#page1.tif  
source=4944.192US04 Assignment#page2.tif  
source=4944.192US04 Assignment#page3.tif  
source=4944.192US04 Assignment#page4.tif  
source=4944.192US04 Assignment#page5.tif  
source=4944.192US04 Assignment#page6.tif

ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I/we, as the undersigned named inventor(s), have sold, assigned and transferred, and/or by these presents do hereby sell, assign and transfer my/our entire right, title and interest for all countries in and to all inventions disclosed in the application entitled

POLYSACCHARIDE PARTICLE MIXTURE

of

Application No.: 15/389,430

Filing Date: 12/22/2016

by

Jennifer G. Medina, James Britton Hissong, Matthew F. Myntti, Dana A. Oliver and Brian J. Vaccaro

unto the following Assignee:

Medtronic, Inc.

with a principal place of business at

710 Medtronic Parkway, Minneapolis, MN 55432

For purposes of this assignment, Assignee shall include successors and assigns.

Such assignment in and to the application shall include any utility applications, design applications, divisional applications, continuation applications, continuation-in-part applications or any other applications entitled to claim priority thereto, all Letters Patent which may be granted therefrom, and all reissues, reexaminations, reviews, oppositions, certificates and/or extensions of such Letters Patent, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the inventions including an assignment of all rights under the provisions of the Paris Convention for the Protection of Industrial Property and further including the right to sue, counterclaim and recover for past, present and future infringement of the rights assigned or to be assigned, as fully and entirely as the same would have been held by the undersigned if this assignment had not been made, and I/we do hereby authorize and request the Commissioner of Patents to issue the Letters Patent to Assignee.

I/We further authorize Assignee, or anyone it may properly designate, to apply for Letters Patent, in its own name if desired, in the U.S. and any and all foreign countries, and additionally to claim priority to the filing date of the applications and otherwise take advantage of the provisions of the Paris Convention, and request the issuance of any and all Letters Patent for the inventions to the Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the Assignee.

I/We do hereby covenant and agree with Assignee, that I/we will not execute in writing or do any act whatsoever conflicting with these presents, and that I/we or my/our executors or administrators will at any time upon request, without further or additional consideration, but at the expense of Assignee, make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to Assignee and its representatives all facts known to us relating to the inventions and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in Assignee, the entire right, title and interest in and to the improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

I/We covenant and agree with Assignee that no assignment, grant, mortgage, license, option or other agreement affecting the rights and property herein conveyed has been made to others by me/us and that full right to convey the same as herein expressed is possessed by me/us.

I/We hereby authorize Assignee, or anyone it may properly designate, to insert the filing date, application number, title and any other indicia identifying the application herein when ascertained.

Delivery of this Assignment by copy, however transmitted, constitutes valid and effective delivery. This Assignment may be executed in one or more counterparts, each of which when so executed and delivered shall be an original, and such counterparts shall together constitute one and the same instrument.

ASSIGNMENT  
(EXECUTION PAGE)

Patent Application Title:  
POLYSACCHARIDE PARTICLE MIXTURE

Country (or "PCT"):  
Application No.:  
Filing Date:

U.S.  
15/389,430  
12/22/2016

*Inventor/Assignor:*  
Legal Name of Inventor:

JENNIFER G. MEDINA

Inventor Signature:

Date:

Inventor Address:  
c/o Medtronic Inc., 710 Medtronic Parkway, Minneapolis, MN, USA 55432

Inventor Citizenship: JACKSONVILLE, FLORIDA

*Witnesses:*

Executed in my presence on this 19 day of June, 2018 by the aforementioned individual known to me to be the person named in this assignment.

Inez Anderson  
First Witness (Signature)

Inez Anderson  
First Witness Name (Typed or Printed)

Cheryl Sprague  
Second Witness (Signature)

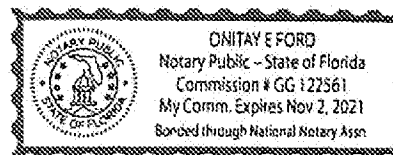
Cheryl Sprague  
Second Witness Name (Typed or Printed)

*Notary:*

Subscribed to and sworn to before  
me this 19 day of June, 2018

Onitay E Ford  
Notary Public

Notary Seal



ASSIGNMENT  
(EXECUTION PAGE)

Patent Application Title:  
POLYSACCHARIDE PARTICLE MIXTURE


Country (or "PCT"):  
Application No.:  
Filing Date:

U.S.  
15/389,430  
12/22/2016

Inventor/Assignor:  
Legal Name of Inventor:

JAMES BRITTON HISSONG

Inventor Signature:



Date:

Jun 6, 2018

Inventor Address:

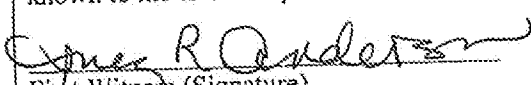
c/o Medtronic Inc., 710 Medtronic Parkway, Minneapolis, MN, USA 55432

Inventor Citizenship:

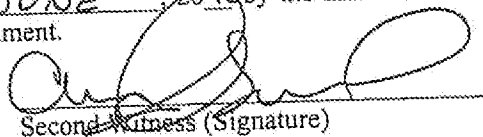
JACKSONVILLE, FL

Witnesses:

Executed in my presence on this 6<sup>th</sup> day of JUNE, 2018 by the aforementioned individual known to me to be the person named in this assignment.

  
First Witness (Signature)

Inez Anderson  
First Witness Name (Typed or Printed)

  
Second Witness (Signature)

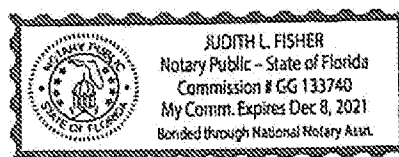
Cheryl Sprague  
Second Witness Name (Typed or Printed)

Notary:

Subscribed to and sworn to before  
me this 6<sup>th</sup> day of JUNE, 2018.

  
Notary Public

Notary Seal

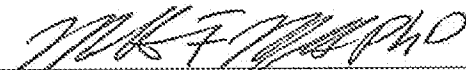


ASSIGNMENT  
(EXECUTION PAGE)

Patent Application Title:  
POLYSACCHARIDE PARTICLE MIXTURE

Country (or "PCT"): U.S.  
Application No.: 15/389,430  
Filing Date: 12/22/2016

**Inventor/Assignor:**  
Legal Name of Inventor: Matthew F. Myntti

Inventor Signature: 


Date: June 8, 2018

Inventor Address:  
c/o Medtronic Inc., 710 Medtronic Parkway, Minneapolis, MN, USA 55432

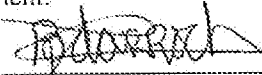
Inventor Citizenship: ST. AUGUSTINE, FLORIDA

**Witnesses:**

Executed in my presence on this 8th day of June, 2018 by the aforementioned individual known to me to be the person named in this assignment.

  
First Witness (Signature)

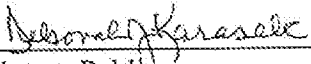
Ethan Sherman, PhD.  
First Witness Name (Typed or Printed)

  
Second Witness (Signature)

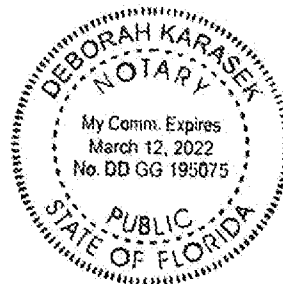
BYRON DARROCH  
Second Witness Name (Typed or Printed)

**Notary:**

Subscribed to and sworn to before  
me this 8th day of June, 2018.

  
Notary Public

Notary Seal



ASSIGNMENT  
(EXECUTION PAGE)

Patent Application Title:  
POLYSACCHARIDE PARTICLE MIXTURE

Country (or "PCT"):  
Application No.:  
Filing Date:

U.S.  
15/389,430  
12/22/2016

*Inventor/Assignor:*  
Legal Name of Inventor:

DANA A. OLIVER

Inventor Signature:

*Dana A. Oliver*

Date:

*June 7, 2018*

Inventor Address:  
c/o Medtronic Inc., 710 Medtronic Parkway, Minneapolis, MN, USA 55432

Inventor Citizenship: JACKSONVILLE, FLORIDA

*Witnesses:*  
Executed in my presence on this 7 day of June, 2018 by the aforementioned individual known to me to be the person named in this assignment.

First Witness (Signature)

*Judith L. Fisher*  
First Witness Name (Typed or Printed)

Second Witness (Signature)

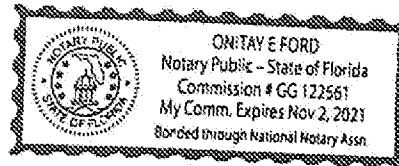
*Cheryl Sprague*  
Second Witness Name (Typed or Printed)

*Notary:*

Subscribed to and sworn to before  
me this 7 day of June, 2018.

Notary Public

Notary Seal



ASSIGNMENT  
(EXECUTION PAGE)

Patent Application Title:  
POLYSACCHARIDE PARTICLE MIXTURE

Country or "PCT": U.S.  
Application No.: 15/389,430  
Filing Date: 12/22/2016

Inventor/Assignor:  
Legal Name of Inventor: BRIAN J. VACCARO

Inventor Signature: Brian Vaccaro

Date: 6-8-18

Inventor Address:  
c/o Medtronic Inc., 710 Medtronic Parkway, Minneapolis, MN, USA 55432

Inventor Citizenship: ATHENS, GA

Witnesses:

Executed in my presence on this 8<sup>th</sup> day of June, 2018 by the aforementioned individual known to me to be the person named in this assignment.

M S Grapp  
First Witness (Signature)

Mary S Grapp  
First Witness Name (Typed or Printed)

Lisa H. VanMeerbeek  
Second Witness (Signature)

Lisa H. VanMeerbeek  
Second Witness Name (Typed or Printed)

Notary:

Subscribed to and sworn to before  
me this 8<sup>th</sup> day of June, 2018

Lisa H. VanMeerbeek  
Notary Public

Notary Seal

LISA H VANMEERBEECK  
Notary Public, State of Michigan  
County of Wayne  
My Commission Expires 02-24-2020  
Acting in the County of Washtenaw