#### 505523719 06/13/2019

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 EPAS ID: PAT5570524 Stylesheet Version v1.2

**SUBMISSION TYPE: NEW ASSIGNMENT NATURE OF CONVEYANCE: ASSIGNMENT** 

### **CONVEYING PARTY DATA**

Name	Execution Date
PETER N. BRAIDO	08/08/2016
KENT J. SMITH	08/08/2016
ANDREA L. MCCARTHY	08/08/2016

# **RECEIVING PARTY DATA**

Name:	ST. JUDE MEDICAL, CARDIOLOGY DIVISION, INC.
Street Address:	177 EAST COUNTY ROAD B
City:	ST. PAUL
State/Country:	MINNESOTA
Postal Code:	55117

### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16299969

# CORRESPONDENCE DATA

Fax Number: (908)654-7866

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: (908) 654-6340

Email: assignment@lernerdavid.com

LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK, LLP **Correspondent Name:** 

Address Line 1: 600 SOUTH AVENUE WEST

Address Line 4: WESTFIELD, NEW JERSEY 07090

ATTORNEY DOCKET NUMBER:	ABTSJM 3.3F-323 CON CON
NAME OF SUBMITTER:	KATHLEEN REYNOLDS
SIGNATURE:	/Kathleen Reynolds/
DATE SIGNED:	06/13/2019

# **Total Attachments: 3**

source=ABTSJM 3.3F-323 CON CON (2647) #page1.tif source=ABTSJM 3.3F-323 CON CON (2647) #page2.tif source=ABTSJM 3.3F-323 CON CON (2647) #page3.tif

> **PATENT** REEL: 049459 FRAME: 0987

505523719

<b>ASSIGNMENT O</b>	F UTILITY	<b>APPLICATION</b>
---------------------	-----------	--------------------

Docket Number (Optional)
STJUDE 3.3F-323

WHEREAS, I. Pater N. Braido of 21460 Heidelbarra St. NE: Wyoming, Minnesota, 55092, have invented or discovered inventions or discoveries, the subject matter of which is described in the patent application entitled "BOWED RUNNERS AND CORRESPONDING VALIVE ASSEMBLIES FOR PARAVAL VULAR LEAK PROTECTION" (hereafter "Patent Application").    WHEREAS (if the left box is checked), the International Patent Application was filed on February 12, 2015 PCT/2015/015533	3 · · · · · · · · · · · · · · · · · · ·		0.000000000	
discovered inventions or discoveries, the subject matter of which is described in the patent application entitled "BOWED RUNNERS AND CORRESPONDING VALVE ASSEMBLIES FOR PARAVALVULAR LEAK PROTECTION" (hereafter "Patent Application").    WHEREAS (if the left box is checked), the International Patent Application was filed on February 12, 2015 PC172015/015533	WHEREAS, I. Peter N. Braido of 21460 Heidelbarg St	NE: Wyomina Mir	nnesota 55092 have	invented or
PCT/2015/015533 , designating the United States.  WHEREAS (if the left box is checked), the Patent Application names the following inventors:  Peter N. Bradio, Kent J. Smith, and Andrea L. McCarthy (and whereas) hereby authorize Lemer, David, Littenberg, Krumhotz. & Mentlik, LLP, to insert in here in brackets [Application No. 15/118, 991, filed on 8/15/16] the application number and filing date of the application when known), and  WHEREAS, St. Jude Medical, Cardiology Division, Inc., incorporated or otherwise formed in Delaware and having a place of business at 177. East County Road B; St. Paul. Minnesota. 55117 (hereafter, the "assignee") is desirous of acquiring, or has acquired and is desirous of memorializing its acquisition further herein, the entire right, title and interest in same;  NOW, THEREFORE, for good and valuable consideration the receipt of which is hereby acknowledged, I agree as follows. I agree to assign, and hereby do assign, to the assignee my entire right, title and interest in and to the Assigned Applications in the United States of America and all other ocurruties, where "Assigned Applications" means the Patent Application, including any and all inventions, discoveries and other subject matter described therein, any divisional, continuation—har-part, substitute, reissue, re-examination or other application claiming priority or benefit. In have not one previously conveyed, nor an ware of an obligation to convey, my rights in the Assigned Applications to a third party. I hereby authorize the U.S. Patent and Trademark Office, and any other governmental agency in the world, to issue to assignee all patents resulting from the Assignee Applications and to record assignee's ownership thereof. At assignee's reasonable request I agree, without a ware of an obligation to convey, my rights in the Assignee's womership thereof. At assignee's reasonable request I agree, without the value of the provision sent of the right is acceptance of the provisions hereof. If any provision hereof is a provision h	discovered inventions or discoveries, the subject matter of which RUNNERS AND CORRESPONDING VALVE ASSEMBLIES FO	n is described in the	patent application e	ntitled "BOWED
MINDY LEE SVOBODA			vas filed on Febru	ary 12, 2015
Peter N. Braido, Kent J. Smith, and Andrea L. McCarthy (and whereas) hereby authorize Lemer, David, Littenberg, Krumhotz & Mentilk, LLP, to insert in here in brackets (Application No. 15/118, 5,91, filed on 8/15/16] the application number and filing date of the application when known), and  WHEREAS, St. Jude Medical, Cardiology Division, Inc., incorporated or otherwise formed in Delaware and having a place of business at 177 East County, Road B: St. Paul, Minnesota 55117 (hereafter, the "assigneer") side disciplination of acquiring, or has acquired and is desirous of memorializing its acquisition further herein, the entire right, title and interest in same;  NOW, THEREFORE, for good and valuable consideration the receipt of which is hereby acknowledged, I agree as follows. I agree to assign, and hereby do assign, to the assigneer eyn entire right, title and interest in and to the Assigned Applications in the United States of America and all other countries, where "Assigned Applications" means the Patent Application, including any and all inventions, discoveries and other subject matter described therein, any divisional, continuation-in-part, substitute, reissue, re-examination or other application daining priority or benefit to the Patent Application pursuant to any law or treaty, and any patent issuing from the foregoing. I agree to assign, and hereby do assign, to be right to claim such priority or benefit. I have not previously conveyed, nor am I aware of an obligation to corivey, my rights in the Assigned Applications to a third party. I hereby authorize the U.S. Patent and Trademark Office, and any other governmental agency in the world, to issue to assignee all patents resulting from the Assigned Applications and to record assignee's ownership thereof. At assignee's reasonable request agree, without further remuneration, to execute and deliver documents prepared at assignee's reasonable request agree, without further remuneration, to execute and deliver documents prepared at assignee's reasonable reque				
having a place of business at 177 East County Road B: St Paul, Minnesota. 55112 (hereafter, the "assignee") is desirous of acquiring, or has acquired and is desirous of memorializing its acquisition further herein, the entire right, title and interest in same;  NOW, THEREFORE, for good and valuable consideration the receipt of which is hereby acknowledged, I agree as follows. I agree to assign, and hereby do assign, to the assignee my entire right, title and interest in and to the Assigned Applications in the United States of America and all other countries, where "Assigned Applications" means the Patent Application, including any and all inventions, discoveries and other subject matter described therein, any divisional, continuation, continuation-in-part, substitute, reissue, re-examination or other application claiming priority or benefit to the Patent Application pursuant to any law or treaty, and any patent issuing from the foregoing. I agree to assign, and hereby do assign, to assignee the right to claim such priority or benefit. I have not previously conveyed, nor am I aware of an obligation to convey, my rights in the Assigned Applications to a third party. I hereby authorize the U.S. Patent and Trademark Office, and any other governmental agency in the world, to issue to assignee all patents resulting from the Assigned Applications and to record assignee's ownership thereof. At assignee's reasonable request I agree, without further remuneration, to execute and deliver documents prepared at assignee's expense and to provide other cooperation, such as testimony, as may be reasonably required to evidence or protect assignee's registed the requirements of the provision shall remain to the full extent permissible by law and the offending portions thereof shall be deemed replaced, to the extent possible, with a provision breat of rolling officer).  **State of Minnespta**  (County) of The France Countries of the provision shall remain to the full extent permissible by law and the offending officer).  **And Cou	Peter N. Braido, Kent J. Smith, and Andrea L. McCarthy (and who & Mentlik, LLP, to insert in here in brackets [Application No. 15)			ttenberg, Krumholz
as follows. I agree to assign, and hereby do assign, to the assignee my entire right, title and interest in and to the Assigned Applications in the United States of America and all other countries, where "Assigned Applications" means the Patent Application, including any and all inventions, discoveries and other subject matter described therein, any divisional, continuation, continuation-in-part, substitute, relissue, re-examination or other application claiming printly or benefit to the Patent Application pursuant to any law or treaty, and any patent issuing from the foregoing. I agree to assign, and hereby do assign, to assignee the right to claim such priority or benefit. I have not previously conveyed, nor am I aware of an obligation to convey, my rights in the Assigned Applications to a third party. I hereby authorize the U.S. Patent and Trademark Office, and any other governmental agency in the world, to issue to assignee all patents resulting from the Assigned Applications and to record assignee's ownership thereof. At assignee's expense and to provide other cooperation such as testimory, as may be reasonably required to evidence or protect assignee's expense and to provide other cooperation. Assignee may assign or transfer all or part of its rights set forth herein in its sole discretion. I agree that the assignee may affix its signature to this document as well as any other indica of its acceptance of the provision herein is unenforceable, the requirements of the provision shall remain to the full extent permissible by law and the offending provision.  **State of Minnasota** (County) of **Next House of the provision** (Signature) (Signature)  **State of Minnasota** (County) of **Next House of the provision most closely reflecting the purpose of the offending provision.  **Signature of rotating officer)** (Signature of rotating offi	having a place of business at 177 East County Road B; St. Pau of acquiring, or has acquired and is desirous of memorializing its	il, Minnesota 5511	7 (hereafter, the "assi	gnee") is desirous
as follows. I agree to assign, and hereby do assign, to the assignee my entire right, title and interest in and to the Assigned Applications in the United States of America and all other countries, where "Assigned Applications" means the Patent Application, including any and all inventions, discoveries and other subject matter described therein, any divisional, continuation, continuation-in-part, substitute, relissue, re-examination or other application claiming printly or benefit to the Patent Application pursuant to any law or treaty, and any patent issuing from the foregoing. I agree to assign, and hereby do assign, to assignee the right to claim such priority or benefit. I have not previously conveyed, nor am I aware of an obligation to convey, my rights in the Assigned Applications to a third party. I hereby authorize the U.S. Patent and Trademark Office, and any other governmental agency in the world, to issue to assignee all patents resulting from the Assigned Applications and to record assignee's ownership thereof. At assignee's expense and to provide other cooperation such as testimory, as may be reasonably required to evidence or protect assignee's expense and to provide other cooperation. Assignee may assign or transfer all or part of its rights set forth herein in its sole discretion. I agree that the assignee may affix its signature to this document as well as any other indica of its acceptance of the provision herein is unenforceable, the requirements of the provision shall remain to the full extent permissible by law and the offending provision.  **State of Minnasota** (County) of **Next House of the provision** (Signature) (Signature)  **State of Minnasota** (County) of **Next House of the provision most closely reflecting the purpose of the offending provision.  **Signature of rotating officer)** (Signature of rotating offi	NOW THEREFORE for good and valuable considera	tion the receipt of v	vhich is hereby ackno	wledged Lagree
State of Minnaspta (County) of	as follows. I agree to assign, and hereby do assign, to the assign Assigned Applications in the United States of America and all of Patent Application, including any and all inventions, discoveries continuation, continuation-in-part, substitute, reissue, re-examine Patent Application pursuant to any law or treaty, and any patent do assign, to assignee the right to claim such priority or benefit, obligation to convey, my rights in the Assigned Applications to a Trademark Office, and any other governmental agency in the work Assigned Applications and to record assignee's ownership there further remuneration, to execute and deliver documents prepare such as testimony, as may be reasonably required to evidence of Assignee may assign or transfer all or part of its rights set forth I affix its signature to this document as well as any other indicia o herein is unenforceable, the requirements of the provision shall offending portions thereof shall be deemed replaced, to the external	nee my entire right her countries, when and other subject ration or other applicissuing from the following here ond, to issue to assigned to issue to assigned at assigned sexpor protect assigned herein in its sole disfits acceptance of remain to the full each possible, with a	t, title and interest in a "Assigned Applicati natter described there cation claiming priority regoing. I agree to as sly conveyed, nor am by authorize the U.S. ignee all patents result easonable request I a bense and to provide s rights in the Assign scretion. I agree that the provisions hereof ktent permissible by later to the provisions hereof to the provisions to the provisions hereof to the provisions hereof to the provisions hereof to the provisions	and to the lons" means the sin, any divisional, y or benefit to the ssign, and hereby I aware of an Patent and liting from the agree, without other cooperation, ed Applications, he assignee may. If any provision aw and the
State of Minnespta (County) of	8 A. 2014	De-	27)	
This instrument was acknowledged before me on Avg. 8th (a) O'LL by Peter N. Braido.    Signature of rotating officer).   Signature of rotating officer).	(Date)	On the state of th	(Signature)	PRATECTION OF THE PROPERTY OF
This instrument was acknowledged before me on Avg. 8th (a) O'LL by Peter N. Braido.    Signature of rotating officer).   Signature of rotating officer).			•	
My commission expires: 0 1312017  MINDY LEE SVOBODA	State of Minnespta (County) of Sherburn &			Astronomic Section (1997)
My commission expires: 0 1312017  MINDY LEE SVOBODA	This instrument was acknowledged before me on Hvg. 8th	OIL by Pete	er N. Braido.	n wil was to be the
My commission expires: 0   31   2 01 )  Mindy LEE SVOBODA	Minorii VIORDOPA (SEAL)			
My commission expires: 0 13/2017  MINDY LEE SVOBODA	(Signature of notation officer)			
MINDY LEE SVOBODA	Title (and Rank)			WAY THE
	My commission expires: 0 3 2017			
		VINDY LEE SVO		

**REEL: 049459 FRAME: 0988** 

Docket Number (Optional)

# ASSIGNMENT OF UTILITY APPLICATION

STJUDE 3,3F-323

WHEREAS, I, Kent J. Smith of 680 White Birch Drive: Shoreview, Minnesota 55126, have invented or

discovered inventions or discoveries, the subject matter of which is described in the patent application entitled "BOWED RUNNERS AND CORRESPONDING VALVE ASSEMBLIES FOR PARAVALVULAR LEAK PROTECTION" (hereafter "Patent Application"),
WHEREAS (if the left box is checked), the International Patent Application was filed on February 12, 2015  PCT/2015/015533 , designating the United States,  WHEREAS (if the left box is checked), the Patent Application names the following inventors:  Peter N. Braido, Kent J. Smith, and Andrea L. McCarthy (and whereas I hereby authorize Lemer, David, Littenberg, Krumholz & Mentlik, LLP, to insert in here in brackets [Application No. 15/118,991], filed on 8/15/16 ] the application number and filing date of the application when known), and
WHEREAS, St. Jude Medical, Cardiology Division, Inc., incorporated or otherwise formed in <u>Delaware</u> and having a place of business at <u>177 East County Road B; St. Paul, Minnesota 55117</u> (hereafter, the "assignee") is desirous of acquiring, or has acquired and is desirous of memorializing its acquisition further herein, the entire right, title and interest in same;
NOW, THEREFORE, for good and valuable consideration the receipt of which is hereby acknowledged, I agree as follows. I agree to assign, and hereby do assign, to the assignee my entire right, title and interest in and to the Assigned Applications in the United States of America and all other countries, where "Assigned Applications" means the Patent Application, including any and all inventions, discoveries and other subject matter described therein, any divisional, continuation, continuation-in-part, substitute, reissue, re-examination or other application claiming priority or benefit to the Patent Application pursuant to any law or treaty, and any patent issuing from the foregoing. I agree to assign, and hereby do assign, to assignee the right to claim such priority or benefit. I have not previously conveyed, nor am I aware of an obligation to convey, my rights in the Assigned Applications to a third party. I hereby authorize the U.S. Patent and Trademark Office, and any other governmental agency in the world, to issue to assignee all patents resulting from the Assigned Applications and to record assignee's ownership thereof. At assignee's reasonable request I agree, without further remuneration, to execute and deliver documents prepared at assignee's expense and to provide other cooperation, such as testimony, as may be reasonably required to evidence or protect assignee's rights in the Assigned Applications. Assignee may assign or transfer all or part of its rights set forth herein in its sole discretion. I agree that the assignee may affix its signature to this document as well as any other indicia of its acceptance of the provisions hereof. If any provision herein is unenforceable, the requirements of the provision shall remain to the full extent permissible by law and the offending portions thereof shall be deemed replaced, to the extent possible, with a provision most closely reflecting the purpose of the offending provision.
State of Minnesota (County) of Rams This instrument was acknowledged before me on Purify 20/6 by Kent J. Smith.  (Signature of notarial officer)  (SEAL)
Title (and Rank)  JASWINDER K SIKKA  NOTARY PUBLIC - MINNESOTA  MY 99MM/99ION EXPIRES 01/31/10

Docket Number (Optional)

ASSIGNMENT OF UTILITY APPLICATION	STJUDE 3.3F-323	
	\$1JUDE 3.3F-323	
WHEREAS, I, <u>Andrea L. McCarthy</u> of <u>425 Springhill Road; Vadnais Height</u>	is. Minnesota 55127, have invented or	
discovered inventions or discoveries, the subject matter of which is described in the RUNNERS AND CORRESPONDING VALVE ASSEMBLIES FOR PARAVALVULAR "Patent Application"),	patent application entitled "BOWFD	
X WHEREAS (if the left box is checked), the International Patent Application w	as filed on February 12, 2015	
PCT/2015/015533 , designating the United States.  X WHEREAS (if the left box is checked), the Patent Application names the for	- N J	
Peter N. Braido, Kent J. Smith, and Andrea L. McCarthy (and whereas I hereby autho & Mentlik, LLP, to insert in here in brackets [Application No. 15/118,991, filed number and filing date of the application when known), and	rize Lemer David Littenhera Krumholz	
WHEREAS, <u>St. Jude Medical, Cardiology Division, Inc.</u> , incorporated or oth having a place of business at <u>177 East County Road B; St. Paul, Minnesota 55117</u> of acquiring, or has acquired and is desirous of memorializing its acquisition further in same;	(hereafter, the "assignee") is desirous	
NOW, THEREFORE, for good and valuable consideration the receipt of which is hereby acknowledged, I agree as follows. I agree to assign, and hereby do assign, to the assignee my entire right, title and interest in and to the Assigned Applications in the United States of America and all other countries, where "Assigned Applications" means the Patent Application, including any and all inventions, discoveries and other subject matter described therein, any divisional, continuation, continuation-in-part, substitute, reissue, re-examination or other application claiming priority or benefit to the Patent Application pursuant to any law or treaty, and any patent issuing from the foregoing. I agree to assign, and hereby do assign, to assignee the right to claim such priority or benefit. I have not previously conveyed, nor am I aware of an obligation to convey, my rights in the Assigned Applications to a third party. I hereby authorize the U.S. Patent and Trademark Office, and any other governmental agency in the world, to issue to assignee all patents resulting from the Assigned Applications and to record assignee's ownership thereof. At assignee's reasonable request I agree, without further remuneration, to execute and deliver documents prepared at assignee's expense and to provide other cooperation, such as testimony, as may be reasonably required to evidence or protect assignee's rights in the Assigned Applications. Assignee may assign or transfer all or part of its rights set forth herein in its sole discretion. I agree that the assignee may affix its signature to this document as well as any other indicia of its acceptance of the provisions hereof. If any provision herein is unenforceable, the requirements of the provision shall remain to the full extent permissible by law and the offending portions thereof shall be deemed replaced, to the extent possible, with a provision most closely reflecting the purpose of the offending provision.		
08 Aug 16 Ahra Mc	Carre	
(Date)	(Signature)	
State of Minnesota (County) of <u>harvey</u> This instrument was acknowledged before me on <u>August 8, 2016</u> by Andre (Signature of notarial officer). <u>Natary</u> Title (and Rank)	ea L. McCarthy.	
My commission expires: fanuary 31,2018		
	MARY ANN KAUFHOLD Notary Public State of Minnesota My Commission Expires January 31, 2018	

PATENT

**REEL: 049459 FRAME: 0990**