

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5570524

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
PETER N. BRAIDO	08/08/2016
KENT J. SMITH	08/08/2016
ANDREA L. MCCARTHY	08/08/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	ST. JUDE MEDICAL, CARDIOLOGY DIVISION, INC.
<b>Street Address:</b>	177 EAST COUNTY ROAD B
<b>City:</b>	ST. PAUL
<b>State/Country:</b>	MINNESOTA
<b>Postal Code:</b>	55117
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16299969
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(908)654-7866
<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>	(908) 654-6340
<b>Email:</b>	assignment@lernerdavid.com
<b>Correspondent Name:</b>	LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK, LLP
<b>Address Line 1:</b>	600 SOUTH AVENUE WEST
<b>Address Line 4:</b>	WESTFIELD, NEW JERSEY 07090
<b>ATTORNEY DOCKET NUMBER:</b>	ABTSJM 3.3F-323 CON CON
<b>NAME OF SUBMITTER:</b>	KATHLEEN REYNOLDS
<b>SIGNATURE:</b>	/Kathleen Reynolds/
<b>DATE SIGNED:</b>	06/13/2019
<b>Total Attachments: 3</b>	
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# ASSIGNMENT OF UTILITY APPLICATION

Docket Number (Optional)

STJUDE 3.3F-323

WHEREAS, I, Peter N. Braido of 21460 Heidelberg 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 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 Lerner, 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 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 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.

8 Aug 2016  
(Date)

[Signature]  
(Signature)

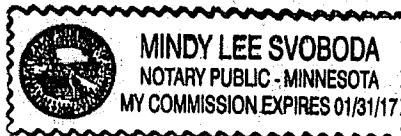
State of Minnesota  
(County) of Sherburne

This instrument was acknowledged before me on Aug 8th, 2016 by Peter N. Braido.

Mindy Lee Svo boda (SEAL)  
(Signature of notarial officer)

Notary Public  
Title (and Rank)

My commission expires: 01/31/2017



# ASSIGNMENT OF UTILITY APPLICATION

Docket Number (Optional)

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. Braidó, Kent J. Smith, and Andrea L. McCarthy (and whereas I hereby authorize Lerner, 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 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 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 2016  
(Date)

Kent J. Smith  
(Signature)

State of Minnesota  
(County) of Ramsey

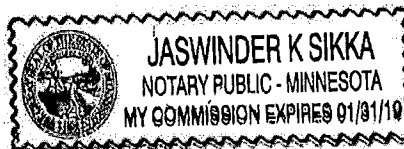
This instrument was acknowledged before me on Aug 8<sup>th</sup> 2016 by Kent J. Smith.

Jaswinder K Sikka  
(Signature of notarial officer)

(SEAL)

Title (and Rank) Notary

My commission expires: Jan 2019



# ASSIGNMENT OF UTILITY APPLICATION

Docket Number (Optional)

STJUDE 3.3F-323

WHEREAS, I, Andrea L. McCarthy of 425 Springhill Road; Vadnais Heights, Minnesota 55127, 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 Lerner, 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 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 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  
(Date)

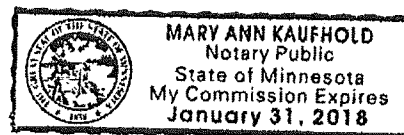
Andrea McCarthy  
(Signature)

State of Minnesota  
(County) of Hennepin

This instrument was acknowledged before me on August 8, 2016 by Andrea L. McCarthy.

Mary Ann Kaufhold (SEAL)  
(Signature of notarial officer)  
Notary Public  
Title (and Rank)

My commission expires: January 31, 2018



PATENT

RECORDED: 06/13/2019

REEL: 049459 FRAME: 0990