

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT4961474

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
KRISTEN T. MORIN	11/23/2015
ANDREA N. PARA	12/07/2015
PETER N. BRAIDO	11/25/2015
SOUNTHARA KHOUENGBOUA	11/20/2015
THOMAS M. BENSON	11/24/2015
SARAVANA B. KUMAR	12/11/2015
BRUCE MOSEMAN	11/23/2015
GAURAV SATAM	12/02/2015
<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>
Application Number:	15964413
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(908)654-0415
<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) 518-6335
<b>Email:</b>	assignment@lerner david.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>	STJUDE 3.0F-339 CON CON
<b>NAME OF SUBMITTER:</b>	KATHLEEN REYNOLDS
<b>SIGNATURE:</b>	/Kathleen Reynolds/

<b>DATE SIGNED:</b>	05/15/2018
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**Total Attachments: 8**

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<b>ASSIGNMENT OF UTILITY APPLICATION</b>	Docket Number (Optional) STJUDE 3.0F-339 (E)
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Whereas, I, Kristen T. Morin of 1376 Portland Ave.; St. Paul, Minnesota 55104 hereafter referred to as assignor, have with others invented certain new and useful improvements in TRANSCATHETER VALVE WITH PARAVALVULAR LEAK SEALING RING  for which an application for a United States Letters Patent was filed on May 12, 2015 Application Number 14/709,560  for which an application for a United States Letters Patent was executed by me on \_\_\_\_\_ and \_\_\_\_\_

Whereas, St. Jude Medical, Cardiology Division, Inc. a corporation of Delaware herein referred to as "assignee" whose mailing address is 177 East County Road B; St. Paul, Minnesota 55117 is desirous of acquiring the entire right, title and interest in the same;

NOW, THEREFORE, in consideration of the sum of one dollars (\$ 1.00 ), the receipt whereof is acknowledged, and other good and valuable consideration, I as assignor hereby sell, assign and set over to said assignee my entire right, title and interest for the United States of America and all other countries in and to said invention and the aforesaid utility patent application and all original, divisional, continuation, continuation-in-part, substitute or reissue applications and patents applied for or granted therefor in the United States of America and all other countries, for said invention, including without limitation all applications and patents for said invention claiming priority or benefit of the aforesaid utility application pursuant to any law or treaty, and including the right to claim such priority or benefit and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said improvements or resulting therefrom to said assignee herein, as assignee of the entire interest therein; and the undersigned for me and my legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all original, divisional, continuation, reissue and other applications for Letters Patent on said improvements and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said improvements, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and to do generally everything necessary to aid assignee, its successors, assigns and nominees to obtain patent protection for said improvements in all countries, the expenses incident to said applications to be borne and paid by said assignee.

And I do hereby authorize my attorneys to insert on this deed the filing date and application number of said application when known.

23 Nov 15 (Date) Kristen T. Morin (Signature)

State of Minnesota ) SS:  
County of Hennepin )

On this 23<sup>rd</sup> day of November, 2015 before me personally came the above-named Kristen T. Morin, to me personally known as the individual who executed the foregoing instrument, who acknowledged to me that the same was executed by him/her of his/her own free will for the purposes therein set forth.

[Signature]  
(Notary Public)

\*Total of 8 forms are submitted.



ASSIGNMENT OF UTILITY APPLICATION

Docket Number (Optional)  
STJUDE 3.0F-339 (E)

Whereas, I, Andrea N. Para of  
7732 Gannon Ave.; Apt. 2F; St. Louis, Missouri 63130

hereafter referred to as assignor, have with others invented certain new and useful improvements in  
TRANSCATHETER VALVE WITH PARAVALVULAR LEAK SEALING RING

for which an application for a United States Letters Patent was filed on May 12, 2015  
Application Number 14/709,560

for which an application for a United States Letters Patent was executed by me on \_\_\_\_\_  
and

Whereas, St. Jude Medical, Cardiology Division, Inc.  
a corporation of Delaware herein referred to as "assignee" whose mailing address is  
177 East County Road B; St. Paul, Minnesota 55117  
is desirous of acquiring the entire right, title and interest in the same:

NOW, THEREFORE, in consideration of the sum of one dollars (\$ 1.00 ), the receipt whereof is acknowledged, and other good and valuable consideration, I as assignor hereby sell, assign and set over to said assignee my entire right, title and interest for the United States of America and all other countries in and to said invention and the aforesaid utility patent application and all original, divisional, continuation, continuation-in-part, substitute or reissue applications and patents applied for or granted therefor in the United States of America and all other countries, for said invention, including without limitation all applications and patents for said invention claiming priority or benefit of the aforesaid utility application pursuant to any law or treaty, and including the right to claim such priority or benefit and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said improvements or resulting therefrom to said assignee herein, as assignee of the entire interest therein; and the undersigned for me and my legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all original, divisional, continuation, reissue and other applications for Letters Patent on said improvements and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said improvements, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and to do generally everything necessary to aid assignee, its successors, assigns and nominees to obtain patent protection for said improvements in all countries, the expenses incident to said applications to be borne and paid by said assignee.

And I do hereby authorize my attorneys to insert on this deed the filing date and application number of said application when known.

7 Dec 15  
(Date)

Andrea Para  
(Signature)

State of Missouri ) SS:  
County of St. Louis )

On this 7 day of December, 2015 before me personally came the above-named Andrea N. Para, to me personally known as the individual who executed the foregoing instrument, who acknowledged to me that the same was executed by him/her of his/her own free will for the purposes therein set forth.

[Signature]  
(Notary Public)

DANELLA LANG  
Notary Public - Notary Seal  
State of Missouri  
Commissioned for St. Louis County  
My Commission Expires: November 02, 2018  
Commission Number: 14959264

\*Total of 8 forms are submitted.

<b>ASSIGNMENT OF UTILITY APPLICATION</b>	Docket Number (Optional) STJUDE 3.0F-339 (E)
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Whereas, I, Peter N. Braido of 21480 Heidelberg St. NE; Wyoming, Minnesota 55092 hereafter referred to as assignor, have with others invented certain new and useful improvements in TRANSCATHETER VALVE WITH PARAVALVULAR LEAK SEALING RING  for which an application for a United States Letters Patent was filed on May 12, 2015 Application Number 14/709,560  for which an application for a United States Letters Patent was executed by me on \_\_\_\_\_ and \_\_\_\_\_

Whereas, St. Jude Medical, Cardiology Division, Inc. a corporation of Delaware herein referred to as "assignee" whose mailing address is 177 East County Road B; St. Paul, Minnesota 55117 is desirous of acquiring the entire right, title and interest in the same;

NOW, THEREFORE, in consideration of the sum of one dollars (\$ 1.00 ), the receipt whereof is acknowledged, and other good and valuable consideration, I as assignor hereby sell, assign and set over to said assignee my entire right, title and interest for the United States of America and all other countries in and to said invention and the aforesaid utility patent application and all original, divisional, continuation, continuation-in-part, substitute or reissue applications and patents applied for or granted therefor in the United States of America and all other countries, for said invention, including without limitation all applications and patents for said invention claiming priority or benefit of the aforesaid utility application pursuant to any law or treaty, and including the right to claim such priority or benefit and the Commissioner of Patents and Trademarks' is hereby authorized and requested to issue all patents on said improvements or resulting therefrom to said assignee herein, as assignee of the entire interest therein; and the undersigned for me and my legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all original, divisional, continuation, reissue and other applications for Letters Patent on said improvements and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said improvements, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and to do generally everything necessary to aid assignee, its successors, assigns and nominees to obtain patent protection for said improvements in all countries, the expenses incident to said applications to be borne and paid by said assignee.

And I do hereby authorize my attorneys to insert on this deed the filing date and application number of said application when known.

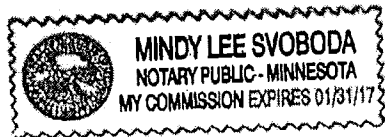
25 Nov 2015 (Date) Peter N. Braido (Signature)

State of Minnesota ) SS:  
County of Sherburne )

On this 25<sup>th</sup> day of November, 2015 before me personally came the above-named Peter N. Braido, to me personally known as the individual who executed the foregoing instrument, who acknowledged to me that the same was executed by him/her of his/her own free will for the purposes therein set forth.

Mindy Lee Svoboda  
(Notary Public)

\*Total of 8 forms are submitted.



<b>ASSIGNMENT OF UTILITY APPLICATION</b>	Docket Number (Optional)
	STJUDE 3.0F-339 (E)

Whereas, I, Sounthara (ott) Khouengboua of 2248 Manuela Drive; Chaska, Minnesota 55318

hereafter referred to as assignor, have with others invented certain new and useful improvements in TRANSCATHETER VALVE WITH PARAVALVULAR LEAK SEALING RING

for which an application for a United States Letters Patent was filed on May 12, 2015  
Application Number 14/709,560

for which an application for a United States Letters Patent was executed by me on \_\_\_\_\_ and \_\_\_\_\_

Whereas, St. Jude Medical, Cardiology Division, Inc.  
a corporation of Delaware herein referred to as "assignee" whose mailing address is 177 East County Road B; St. Paul, Minnesota 55117

is desirous of acquiring the entire right, title and interest in the same;

NOW, THEREFORE, in consideration of the sum of one dollars (\$ 1.00 ), the receipt whereof is acknowledged, and other good and valuable consideration, I as assignor hereby sell, assign and set over to said assignee my entire right, title and interest for the United States of America and all other countries in and to said invention and the aforesaid utility patent application and all original, divisional, continuation, continuation-in-part, substitute or reissue applications and patents applied for or granted therefor in the United States of America and all other countries, for said invention, including without limitation all applications and patents for said invention claiming priority or benefit of the aforesaid utility application pursuant to any law or treaty, and including the right to claim such priority or benefit and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said improvements or resulting therefrom to said assignee herein, as assignee of the entire interest therein; and the undersigned for me and my legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all original, divisional, continuation, reissue and other applications for Letters Patent on said improvements and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said improvements, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and to do generally everything necessary to aid assignee, its successors, assigns and nominees to obtain patent protection for said improvements in all countries, the expenses incident to said applications to be borne and paid by said assignee.

And I do hereby authorize my attorneys to insert on this deed the filing date and application number of said application when known.

NOV-20-2015  
(Date)

[Signature]  
(Signature)

State of MN ) SS:  
County of Hennepin )

On this 20<sup>th</sup> day of November, 2015 before me personally came the above-named Sounthara (ott) Khouengboua, to me personally known as the individual who executed the foregoing instrument, who acknowledged to me that the same was executed by him/her of his/her own free will for the purposes therein set forth.

[Signature]  
(Notary Public)

\*Total of 8 forms are submitted.

LD-528\





**ASSIGNMENT OF UTILITY APPLICATION**

Docket Number (Optional)

STJUDE 3.0F-339 (E)

Whereas, I, Saravana B. Kumar of 13824 Wood Lane; Minnetonka, Minnesota 55305

hereafter referred to as assignor, have with others invented certain new and useful improvements in

TRANSCATHETER VALVE WITH PARAVALVULAR LEAK SEALING RING

for which an application for a United States Letters Patent was filed on May 12, 2015  
Application Number 14/709,560

for which an application for a United States Letters Patent was executed by me on \_\_\_\_\_,  
and

Whereas, St. Jude Medical, Cardiology Division, Inc.  
a corporation of Delaware herein referred to as "assignee" whose mailing address is  
177 East County Road B; St. Paul, Minnesota 55117

is desirous of acquiring the entire right, title and interest in the same;

NOW, THEREFORE, in consideration of the sum of one dollars (\$ 1.00 ), the receipt whereof is acknowledged, and other good and valuable consideration, I as assignor hereby sell, assign and set over to said assignee my entire right, title and interest for the United States of America and all other countries in and to said invention and the aforesaid utility patent application and all original, divisional, continuation, continuation-in-part, substitute or reissue applications and patents applied for or granted therefor in the United States of America and all other countries, for said invention, including without limitation all applications and patents for said invention claiming priority or benefit of the aforesaid utility application pursuant to any law or treaty, and including the right to claim such priority or benefit and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said improvements or resulting therefrom to said assignee herein, as assignee of the entire interest therein; and the undersigned for me and my legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all original, divisional, continuation, reissue and other applications for Letters Patent on said improvements and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said improvements, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and to do generally everything necessary to aid assignee, its successors, assigns and nominees to obtain patent protection for said improvements in all countries, the expenses incident to said applications to be borne and paid by said assignee.

And I do hereby authorize my attorneys to insert on this deed the filing date and application number of said application when known.

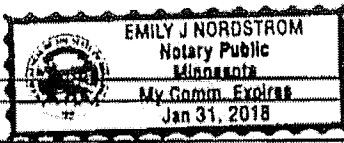
11 Dec. 2015  
(Date)

[Signature]  
(Signature)

State of Minnesota ) SS:  
County of Hennepin )

On this 11<sup>th</sup> day of December, 2015 before me personally came the above-named Saravana B. Kumar, to me personally known as the individual who executed the foregoing instrument, who acknowledged to me that the same was executed by him/her of his/her own free will for the purposes therein set forth.

[Signature]  
(Notary Public)



\*Total of 8 forms are submitted.



<b>ASSIGNMENT OF UTILITY APPLICATION</b>	Docket Number (Optional) STJUDE 3.0F-339 (E)
<p>Whereas, I, <u>Bruce Moseman</u> of <u>809 Daniel Drive; Belle Plaine, Minnesota 56011</u></p> <p>hereafter referred to as assignor, have with others invented certain new and useful improvements in <u>TRANSCATHETER VALVE WITH PARAVALVULAR LEAK SEALING RING</u></p> <p><input checked="" type="checkbox"/> for which an application for a United States Letters Patent was filed on <u>May 12, 2015</u> Application Number <u>14/709,560</u></p> <p><input type="checkbox"/> for which an application for a United States Letters Patent was executed by me on _____ and _____</p> <p>Whereas, <u>St. Jude Medical, Cardiology Division, Inc.</u> a corporation of <u>Delaware</u> herein referred to as "assignee" whose mailing address is <u>177 East County Road B; St. Paul, Minnesota 55117</u> is desirous of acquiring the entire right, title and interest in the same;</p> <p>NOW, THEREFORE, in consideration of the sum of <u>one</u> dollars (\$ <u>1.00</u> ), the receipt whereof is acknowledged, and other good and valuable consideration, I as assignor hereby sell, assign and set over to said assignee my entire right, title and interest for the United States of America and all other countries in and to said invention and the aforesaid utility patent application and all original, divisional, continuation, continuation-in-part, substitute or reissue applications and patents applied for or granted therefor in the United States of America and all other countries, for said invention, including without limitation all applications and patents for said invention claiming priority or benefit of the aforesaid utility application pursuant to any law or treaty, and including the right to claim such priority or benefit and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said improvements or resulting therefrom to said assignee herein, as assignee of the entire interest therein; and the undersigned for me and my legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all original, divisional, continuation, reissue and other applications for Letters Patent on said improvements and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said improvements, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and to do generally everything necessary to aid assignee, its successors, assigns and nominees to obtain patent protection for said improvements in all countries, the expenses incident to said applications to be borne and paid by said assignee.</p> <p>And I do hereby authorize my attorneys to insert on this deed the filing date and application number of said application when known.</p> <p style="text-align: center;"> <u>Nov 23, 2015</u> (Date)                      <u>Bruce Moseman</u> (Signature) </p> <p>State of <u>Minnesota</u> ) SS: County of <u>Dennison</u> )</p> <p>On this <u>23<sup>rd</sup></u> day of <u>November</u>, <u>2015</u> before me personally came the above-named <u>Bruce Moseman</u>, to me personally known as the individual who executed the foregoing instrument, who acknowledged to me that the same was executed by him/her of his/her own free will for the purposes therein set forth.</p> <p style="text-align: center;"><u>[Signature]</u> (Notary Public)</p>	

\*Total of 8 forms are submitted.

FD-324



<b>ASSIGNMENT OF UTILITY APPLICATION</b>	Docket Number (Optional) STJUDE 3.0F-339 (E)
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Whereas, I, Gaurav Satam of  
1309 Gibbs Ave.; Falcon Heights, Minnesota 55108

hereafter referred to as assignor, have with others invented certain new and useful improvements in  
TRANSCATHETER VALVE WITH PARAVALVULAR LEAK SEALING RING

for which an application for a United States Letters Patent was filed on May 12, 2015  
Application Number 14/709,560

for which an application for a United States Letters Patent was executed by me on \_\_\_\_\_  
and \_\_\_\_\_

Whereas, St. Jude Medical, Cardiology Division, Inc.  
a corporation of Delaware herein referred to as "assignee" whose mailing address is  
177 East County Road B; St. Paul, Minnesota 55117

is desirous of acquiring the entire right, title and interest in the same;

NOW, THEREFORE, in consideration of the sum of one dollars (\$ 1.00 ), the receipt whereof is acknowledged, and other good and valuable consideration, I as assignor hereby sell, assign and set over to said assignee my entire right, title and interest for the United States of America and all other countries in and to said invention and the aforesaid utility patent application and all original, divisional, continuation, continuation-in-part, substitute or reissue applications and patents applied for or granted therefor in the United States of America and all other countries, for said invention, including without limitation all applications and patents for said invention claiming priority or benefit of the aforesaid utility application pursuant to any law or treaty, and including the right to claim such priority or benefit and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said improvements or resulting therefrom to said assignee herein, as assignee of the entire interest therein; and the undersigned for me and my legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all original, divisional, continuation, reissue and other applications for Letters Patent on said improvements and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said improvements, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and to do generally everything necessary to aid assignee, its successors, assigns and nominees to obtain patent protection for said improvements in all countries, the expenses incident to said applications to be borne and paid by said assignee.

And I do hereby authorize my attorneys to insert on this deed the filing date and application number of said application when known.

12/2/2015  
\_\_\_\_\_  
(Date)

*Gaurav Satam*  
\_\_\_\_\_  
(Signature)

State of \_\_\_\_\_ ) SS:  
County of \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_ before me personally came the above-named Gaurav Satam, to me personally known as the individual who executed the foregoing instrument, who acknowledged to me that the same was executed by him/her of his/her own free will for the purposes therein set forth.

\_\_\_\_\_  
(Notary Public)

\*Total of 8 forms are submitted.