## 504793215 02/26/2018

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4839947

		NEW ASSIGNMENT	
NATURE OF CONVEYANCE: ASSIGNMENT		ASSIGNMENT	
CONVEYING PARTY DA	АТА		
		Name	Execution Date
MARK KRANS			02/23/2018
THEODORE PAUL DAL	E		02/06/2018
ANDREA N. PARA			02/23/2018
MATHIAS CHARLES GL	IMSDALE	E	02/06/2018
THOMAS M. BENSON		02/07/2018	
PETER N. BRAIDO			02/21/2018
RECEIVING PARTY DA	ТА		
Name:	ST. JUD	E MEDICAL, CARDIOLOGY DIVISION,	INC.
Street Address:	177 EAST COUNTY ROAD B		
City:	ST. PAUL		
State/Country:	MINNESOTA		
Postal Code:	55117		
PROPERTY NUMBERS	Total: 1	Number	
Property Type			
	1	5077070	
Application Number:		5077070	
Application Number: CORRESPONDENCE D Fax Number:	 ATA (	908)654-0415	
Application Number: CORRESPONDENCE D Fax Number: Correspondence will be	ATA (	908)654-0415 <i>the e-mail address first; if that is unsu</i>	
Application Number: CORRESPONDENCE D Fax Number: Correspondence will be using a fax number, if p	ATA ( e sent to provided;	908)654-0415 the e-mail address first; if that is unsu i ff that is unsuccessful, it will be sent	
Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone:	ATA ( e sent to provided; (	908)654-0415 <i>the e-mail address first; if that is unsu</i>	
Application Number: CORRESPONDENCE D Fax Number: Correspondence will be	ATA ( e sent to provided; ( a	908)654-0415 the e-mail address first; if that is unsu if that is unsuccessful, it will be sent 908) 518-6335	via US Mail.
Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1:	ATA ( e sent to provided; ( a L 6	908)654-0415 <i>the e-mail address first; if that is unsu</i> <i>if that is unsuccessful, it will be sent</i> 908) 518-6335 assignment@lernerdavid.com .ERNER, DAVID, LITTENBERG, KRUMH 500 SOUTH AVENUE WEST	via US Mail.
Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1:	ATA ( e sent to provided; ( a L 6	908)654-0415 <i>the e-mail address first; if that is unsu</i> <i>if that is unsuccessful, it will be sent</i> 908) 518-6335 assignment@lernerdavid.com .ERNER, DAVID, LITTENBERG, KRUMH	via US Mail.
Application Number: CORRESPONDENCE D Fax Number: Correspondence will be using a fax number, if p Phone: Email: Correspondent Name: Address Line 1: Address Line 4:	ATA e sent to provided; ( a L 6 V	908)654-0415 <i>the e-mail address first; if that is unsu</i> <i>if that is unsuccessful, it will be sent</i> 908) 518-6335 assignment@lernerdavid.com .ERNER, DAVID, LITTENBERG, KRUMH 500 SOUTH AVENUE WEST	via US Mail.
Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NU	ATA e sent to provided; ( a L 6 V	908)654-0415 <i>the e-mail address first; if that is unsu</i> <i>if that is unsuccessful, it will be sent</i> 908) 518-6335 assignment@lernerdavid.com .ERNER, DAVID, LITTENBERG, KRUMH 500 SOUTH AVENUE WEST VESTFIELD, NEW JERSEY 07090	via US Mail.
Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will be</i> <i>using a fax number, if p</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NUMATE OF SUBMITTER:	ATA e sent to provided; ( a L 6 V	908)654-0415 the e-mail address first; if that is unsu- if that is unsuccessful, it will be sent 908) 518-6335 assignment@lernerdavid.com .ERNER, DAVID, LITTENBERG, KRUMH 500 SOUTH AVENUE WEST VESTFIELD, NEW JERSEY 07090 STJUDE 3.0F-349	via US Mail.
Application Number: CORRESPONDENCE D Fax Number: Correspondence will be using a fax number, if p Phone: Email: Correspondent Name: Address Line 1:	ATA e sent to provided; ( a L 6 V	908)654-0415 the e-mail address first; if that is unsu if that is unsuccessful, it will be sent 908) 518-6335 assignment@lernerdavid.com ERNER, DAVID, LITTENBERG, KRUMH 500 SOUTH AVENUE WEST VESTFIELD, NEW JERSEY 07090 STJUDE 3.0F-349 KATHLEEN REYNOLDS	via US Mail.

	former PTO/SB/15 (8-00) t Docket Number (Optional)	
ASSIGNMENT OF UTILITY APPLICATION	STJUDE 3.0F-349	
Whereas, I, Mark Krans		of
738 Drillane Circle; Hopkins, Minnesota 55305		
ereafter referred to as assignor, have with others invented certain ne	ew and useful improvements in	
PROSTHETIC MITRAL VALVE		
x for which an application for a United States Letters Pate	ent was filed on <u>March 22, 2016</u>	
Application Number 15/077,070		
for which an application for a United States Letters Paten and	it was executed by me on	
/hereas, St. Jude Medical, Cardiology Division, Inc.		
corporation of Delaware herein referred to as "assignee" whose ma	iling address is	
177 East County Road B; St. Paul, Minnesota 55117 desirous of acquiring the entire right, title and interest in the same;		
Obstrous of acquiring the entire right, title and interest in the same; OW, THEREFORE, in consideration of the sum of <u>one</u> do		
ther countries, for said invention, including without limitation all ap riority or benefit of the aforesaid utility application pursuant to any la riority or benefit and the Commissioner of Patents and Trademarks atents on said improvements or resulting therefrom to said assignee not the undersigned for me and my legal representatives, heirs and other undersigned for me and only legal representatives. Heirs and	aw or treaty, and including the right to da s is hereby authorized and requested to a herein, as assigned of the optice interest	aim such issue all
atters Patent on said improvements and all assignments thereof to aid assignee or its representatives all facts known to the unders equested, to testify in any interferences or other legal proceedings acome involved, to sign all lawful papers, make all rightful oaths, asignee, its successors, assigns and nominees to obtain patent pro- openses incident to said applications to be borne and paid by said as as assignor, hereby assign to said assignee all of my right, title and b. <u>62/137,444</u> , filed <u>March 24, 2015</u> , and in the invention disclosed that to claim priority or benefit of said Application No. <u>62/137,444</u> pt	continuation, reissue and other applica said assignee or its assigns, to commu- signed respecting said improvements, w in which any of said applications or pate and to do generally everything necessar tection for said improvements in all count signee. d interest in United States Provisional Ap- thereto in all countries of the world inclu-	tions for nicate to /henever ents may ry to aid tries, the plication
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enders Parent on said improvements and all assignments thereof to ald assignee or its representatives all facts known to the unders equested, to testify in any interferences or other legal proceedings ecome involved, to sign all lawful papers, make all rightful oaths, ssignee, its successors, assigns and nominees to obtain patent provements incident to said applications to be borne and paid by said as as assignor, hereby assign to said assignee all of my right, title and o. 62/137.444, filed March 24, 2015, and in the invention disclosed ght to claim priority or benefit of said Application No. 62/137.444 pt orld.   and I do hereby authorize my attorneys to insert on this deed the filin hen known.   23 Feb 2018   (Date) (Date)   hale of Minpro2014c	continuation, reissue and other applica said assignee or its assigns, to commu- signed respecting said improvements, w in which any of said applications or pate and to do generally everything necessar tection for said improvements in all count signee. d interest in United States Provisional Ap thereto in all countries of the world inclu- ursuant to any law or treaty in the countries	tions for nicate to whenever ents may ry to aid tries, the uplication iding the as of the
etters Patent on said improvements and all assignments thereof to ald assignee or its representatives all facts known to the unders equested, to testify in any interferences or other legal proceedings ecome involved, to sign all lawful papers, make all rightful oaths, ssignee, its successors, assigns and nominees to obtain patent pro- kpenses incident to said applications to be borne and paid by said as as assignor, hereby assign to said assignee all of my right, title and o. <u>62/137,444</u> , filed <u>March 24, 2015</u> , and in the invention disclosed and to claim priority or benefit of said Application No. <u>62/137,444</u> pt orld. In this deed the film then known. <u>23 Feb 2018</u> (Date) Itale of <u>Min. Paperke</u> ) SS: county of <u>Auroka</u> before me per me personally known as the individual who executed the foregoin	continuation, reissue and other applica said assignee or its assigns, to communi- signed respecting said improvements, we in which any of said applications or pate and to do generally everything necessar tection for said improvements in all count signee. d interest in United States Provisional Ap thereto in all countries of the world inclu ursuant to any law or treaty in the countrie of date and application number of said ap (Signature)	tions for nicate to rhenever ints may ry to aid ries, the plication ding the as of the plication
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6 00(01(2001(7 07 ))*); (20/ 6 05( (0.17)01)	formar PTC/S8/15 (5-00) Medified L Docket Number (Optional)
ASSIGNMENT OF UTILITY APPLICATION	STJUDE 3.0F-349
Whereas, I. Theodore Paul Dale	of
6905 Old Settlers Road; Corcoran, Minnesota 55340	
hereafter referred to as assignor, have with others invented certain nev	
DEVOSTWETHC MITRAL VALVE	
X for which an application for a United States Letters Pater	
Application Number 15/077,970	
for which an application for a United States Letters Patent and	
Whereas, St. Jude Medical, Cardiology Division, Inc. a corporation of Delaware herein referred to as "assignee" whose mail	8
	ing address is
177 East County Road B; St. Paul, Minnesota 55117 is desirous of acquiring the entire right, title and interest in the same;	
	lars (\$ <u>1.00</u> ), the receipt when
is acknowledged, and other good and valuable consideration. I as a assignee my entire right, title and interest for the United States of invention and the aforesaid utility patent application and all origin substitute or reissue applications and patents applied for or granted other countries, for said invention, including without limitation all app priority or benefit of the aforesaid utility application pursuant to any la priority or benefit and the Commissioner of Patents and Trademarks patents on said improvements or resulting therefrom to said assignee and the undersigned for me and my legal representatives, heirs and further remuneration, to execute and deliver all original, divisional, Letters Patent on said improvements and all assignments thereof to said assignee or its representatives all facts known to the unders requested, to testify in any interferences or other legal proceedings i become involved, to sign all lawful papers, make all rightful oaths, a assignee, its successors, assigns and nominees to obtain patent prot expenses incident to said applications to be borne and paid by said assignee. I as assigner, hereby assign to said assignee all of my right, title and said assignee, hereby assign to said assignee all of my right, title and said assignee.	America and all other countries in and to s bal, divisional, continuation, continuation-in-p therefor in the United States of America and dications and patents for said invention claims w or treaty, and including the right to claim su is hereby authorized and requested to issue herein, as assignee of the entire interest there assigns do hereby agree and covenant with continuation, reissue and other applications said assignee or its assigns, to communicate igned respecting said improvements, where n which any of said applications or patents m and to do generally everything necessary to ection for said improvements in all countries, ignee.
No <u>62/137.444</u> , filed <u>March 24, 2015</u> , and in the invention disclosed right to claim priority or benefit of said Application No. <u>62/137.444</u> pu world.	thereto in all countries of the world including t
And I do hereby authorize my attorneys to insert on this deed the filing when known.	g date and application number of said applicat
Tready Frenary 6 2018	1-0120h
(Date)	(Signature)
State of <u>Trinnes(da)</u> SS:	
County of Awarka )	
Theodore Paul Dale to me personality known as the individual acknowledged to me wat the same was executed by him/her of his/her	re me personally came the above-name who executed the foregoing instrument, we own free will for the purposes therein set forth.
(Notary Public)	
x *Total of 6 forms are submitted.	
x *Total of <u>6</u> forms are submitted.	
	MICHAEL ROY TEETZEL & NOTARY PUBLIC - MINNESOTA & MY COMM. EXPINES 01/31/2022 &

A M M I M I S S S M S IN S IN S IN S IN S	Docket Number (Optional)	
ASSIGNMENT OF UTILITY APPLICATION	STJUDE 3.0F-349	
ereas. I. Andrea N. Para		of
7732 Gannon Ave.; Apt. 2F; St. Louis, Miesouri 63130		
eaftar referred to as assignor, have with others invented certain new ar	nd useful improvements in	
PROSTHETIC MITRAL VALVE		
x for which an application for a United States Letters Patent w	as filed on March 22, 2016	
Application Number 15/077,070		
for which an application for a United States Letters Patent was and	s executed by me on	inining i
ereas. St. Jude Medical, Cardiology Division. Inc.		a 141 mar -
prporation of <u>Delaware</u> herein referred to as "assignee" whose mailing	address is	
177 East County Road B; St. Paul, Minnesota 55117 estrous of acquiring the entire right, title and interest in the same;		<del></del>
estrous of acquiring the entire fight, the and interest in the same. W. THEREFORE, in consideration of the sum of <u>one</u> dollars	s (\$ 1.00 ), the req	e fa séa s
er countries, for said invention, including without limitation all applica rity or benefit of the aforesaid utility application pursuant to any law c	ations and patents for said inventi	
If countries, for said invention, including without limitation all applicativity or benefit of the aforesaid utility application pursuant to any law curity or benefit and the Commissioner of Patents and Trademarks is ents on said improvements or resulting therefrom to said assignee here the undersigned for me and my legal representatives, heirs and as her remuneration, to execute and deliver all original, divisional, correst Patent on said improvements and all assignments thereof to said assignee or its representatives all facts known to the undersigned is used to testify in any interferences or other legal proceedings in wome involved, to sign all lawful papers, make all rightful oaths, and ignee, its successors, assigns and nominees to obtain patent protectlienses incident to said applications to be borne and paid by said assign	ations and patents for said inventi- or treaty, and including the right to hereby authorized and requested rein, as assignee of the entire inter- signs do hereby agree and cover ntinuation, reissue and other app d assignee or its assigns, to com ed respecting said improvements which any of said applications or p t to do generally everything neces- ion for said improvements in all co	ion claiming claim suct to issue a rest therein nant withou lications fo municate to municate to stents may seary to aid
rity or benefit of the aforesaid utility application pursuant to any law c rity or benefit and the Commissioner of Patents and Trademarks is ents on said improvements or resulting therefrom to said assignee her the undersigned for me and my legal representatives, heirs and as her remuneration, to execute and deliver all original, divisional, cor- ters Patent on said improvements and all assignments thereof to said assignee or its representatives all facts known to the undersigne uested, to testify in any interferences or other legal proceedings in w ome involved, to sign all lawful papers, make all rightful oaths, and ignee, its successors, assigns and nominees to obtain patent protecti	ations and patents for said inventi- br treaty, and including the right to hereby authorized and requested rein, as assignee of the entire inter- signs do hereby agree and cover ntinuation, reissue and other app d assignee or its assigns, to com ed respecting said improvements which any of said applications or p i to do generally everything neces- ion for said improvements in all co- tee. terest in United States Provisional areto in all countries of the world in	ion claiming claim suct to issue a rest therein nant withou lications fo municate to indicate to atents may sary to aid puntries, the Application ncluding the
rity or benefit of the aforesaid utility application pursuant to any law c rity or benefit and the Commissioner of Patents and Trademarks is ants on said improvements or resulting therefrom to said assignee her the undersigned for me and my legal representatives, heirs and as her remuneration, to execute and deliver all original, divisional, cor- ters Patent on said improvements and all assignments thereof to said assignee or its representatives all facts known to the undersigne uested, to testify in any interferences or other legal proceedings in w ome involved, to sign all lawful papers, make all rightful oaths, and ignee, its successors, assigns and nominees to obtain patent protect enses incident to said applications to be borne and pald by said assign s assignor, hereby assign to said assignee all of my right, title and int . <u>62/137,444</u> , filed <u>March 24, 2015</u> , and in the invention disclosed the it to claim priority or benefit of said Application No. <u>62/137,444</u> pursu	ations and patents for said inventi- br treaty, and including the right to hereby authorized and requested rein, as assignee of the entire inter- isigns do hereby agree and cover- ntinuation, reissue and other app d assignee or its assigns, to com ed respecting said improvements which any of said applications or p i to do generally everything neces- tion for said improvements in all co- tee. terest in United States Provisional areto in all countries of the world in part to any law or treaty in the cou-	ion claiming claim such to issue al rest therein nant withou lications fo municate to atents may seary to aid patents may seary to aid patents may seary to aid patents the patents of the ntries of the
rity or benefit of the aforesaid utility application pursuant to any law or rity or benefit and the Commissioner of Patents and Trademarks is ants on said improvements or resulting therefrom to said assignee her the undersigned for me and my legal representatives, heirs and as- her remuneration, to execute and deliver all original, divisional, cor- ters Patent on said improvements and all assignments thereof to said assignee or its representatives all facts known to the undersigne uested, to testify in any interferences or other legal proceedings in w ome involved, to sign all lawful papers, make all rightul oaths, and ignee, its successors, assigns and nominees to obtain patent protect enses incident to said applications to be borne and paid by said assign s assignor, hereby assign to said assignee all of my right, title and int . <u>62/137,444</u> , filed <u>March 24, 2015</u> , and in the invention disclosed the it to claim priority or benefit of said Application No. <u>52/137,444</u> pursu td. I I do hereby authorize my attorneys to insert on this deed the filing date an known.	ations and patents for said inventi- br treaty, and including the right to hereby authorized and requested rein, as assignee of the entire inter- signs do hereby agree and cover ntinuation, reissue and other app d assignee or its assigns, to com ed respecting said improvements which any of said applications or p i to do generally everything neces- tion for said improvements in all co- tee. terest in United States Provisional areto in all countries of the world in pant to any law or treaty in the cou- ate and application number of said	ion claiming claim such to issue al rest therein nant withou lications fo municate to atents may seary to aid patents may seary to aid patents may seary to aid patents the patents of the ntries of the
rity or benefit of the aforesaid utility application pursuant to any law or rity or benefit and the Commissioner of Patents and Trademarks is ants on said improvements or resulting therefrom to said assignee her the undersigned for me and my legal representatives, heirs and as- her remuneration, to execute and deliver all original, divisional, cor- ters Patent on said improvements and all assignments thereof to said assignee or its representatives all facts known to the undersigne uested, to testify in any interferences or other legal proceedings in w ome involved, to sign all lawful papers, make all rightul oaths, and ignee, its successors, assigns and nominees to obtain patent protect enses incident to said applications to be borne and paid by said assign s assignor, hereby assign to said assignee all of my right, title and int . <u>62/137,444</u> , filed <u>March 24, 2015</u> , and in the invention disclosed the it to claim priority or benefit of said Application No. <u>52/137,444</u> pursu td. I I do hereby authorize my attorneys to insert on this deed the filing date an known.	ations and patents for said inventi- br treaty, and including the right to hereby authorized and requested rein, as assignee of the entire inter- isigns do hereby agree and cover- ntinuation, reissue and other app d assignee or its assigns, to com ed respecting said improvements which any of said applications or p i to do generally everything neces- tion for said improvements in all co- tee. terest in United States Provisional areto in all countries of the world in part to any law or treaty in the cou-	ion claiming claim such to issue al rest therein hant withou lications fo municate to atents may seary to air patents may seary to air patents may seary to air patents, the Application netuding the ntrids of the I application
rity or benefit of the aforesaid utility application pursuant to any law or rity or benefit and the Commissioner of Patents and Trademarks is ants on said improvements or resulting therefrom to said assignee her the undersigned for me and my legal representatives, heirs and as- her remuneration, to execute and deliver all original, divisional, cor- ters Patent on said improvements and all assignments thereof to said assignee or its representatives all facts known to the undersigned uested, to testify in any interferences or other legal proceedings in w ome involved, to sign all lawful papers, make all rightful oaths, and ignee, its successors, assigns and nominees to obtain patent protectle enses incident to said applications to be borne and paid by said assign is assignor, hereby assign to said assignee all of my right, title and inti- . <u>62/137,444</u> , filed <u>March 24, 2015</u> , and in the invention disclosed the it to claim priority or benefit of said Application No. <u>52/137,444</u> pursu 1d. It do hereby authorize my attorneys to insert on this deed the filing day and known.	ations and patents for said invention for treaty, and including the right to hereby authorized and requested rein, as assignee of the entire inter- isigns do hereby agree and cover- ntinuation, reissue and other app d assignee or its assigns, to com ed respecting seid improvements which any of said applications or p d to do generally everything neces- ton for said improvements in all co- nee. terest in United States Provisional areto in all countries of the world in part to any law or treaty in the cou- ate and application number of said	ion claiming claim such to issue al rest therein hant withou lications fo municate to atents may seary to aid partness, the Application netuding the netuding the netuding the
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rity or benefit of the aforesaid utility application pursuant to any law of rity or benefit and the Commissioner of Patents and Trademarks is ants on said improvements or resulting therefrom to said assignee her the undersigned for me and my legal representatives, heirs and as- her remuneration, to execute and deliver all original, divisional, cor- ters Patent on said improvements and all assignments thereof to said assignee or its representatives all facts known to the undersigned uested, to testify in any interferences or other legal proceedings in we ome involved, to sign all lawful papers, make all rightful oaths, and ignee, its successors, assigns and nominees to obtain patent protecti- enses incident to said applications to be borne and paid by said assign s assignor, hereby assign to said assignee all of my right, title and inti- . <u>62/137,444</u> , filed <u>March 24, 2015</u> , and in the invention disclosed the it to claim priority or benefit of said Application No. <u>52/137,444</u> pursu- Id. I I do hereby authorize my attorneys to insert on this deed the filing date an known. <u>J3 F66 18</u> (Date) te of <u>Mission 1</u> SS: unty of <u>S4, J66</u> SS:	ations and patents for said invention treaty, and including the right to hereby authorized and requested rein, as assignee of the entire intersigns do hereby agree and cover ntinuation, reissue and other apped assignee or its assigns, to come derespecting said improvements which any of said applications or part to do generally everything necession for said improvements in all contents. Iterest in United States Provisional areto in all countries of the world in any law or treaty in the count to any law or treaty in the count to any law or treaty in the count of said application number of said instrument, who acknowledged to erein set forth.	ion claiming rolaim such to issue al rest therein hant withou lications fo municate to a wheneve batents may seary to aid buntries, the Application netuding the netries of the I application
rity or benefit of the aforesaid utility application pursuant to any law or rity or benefit and the Commissioner of Patents and Trademarks is ants on said improvements or resulting therefrom to said assignee her the undersigned for me and my legal representatives, heirs and as- her remuneration, to execute and deliver all original, divisional, cor- ters Patent on said improvements and all assignments thereof to said assignee or its representatives all facts known to the undersigned uested, to testify in any interferences or other legal proceedings in w orme involved, to sign all lawful papers, make all rightful oaths, and ignee, its successors, assigns and nominees to obtain patent protecti- enses incident to said applications to be bome and paid by said assign assignor, hereby assign to said assignee all of my right, title and inti- <u>62/137,444</u> , filed March 24, 2015, and in the invention disclosed the it to claim priority or benefit of said Application No: <u>62/137,444</u> pursu- td. I I do hereby authorize my attorneys to insert on this deed the filing da- an known. <u>J3 FCL I8</u> (Date) the of <u>Mission 1</u> ) SS- unty of <u>Jack I8</u> this <u>2.3</u> day of <u>Jack I8</u> which are individual who executed the foregoing in the was executed by him/her of his/her/bwn free will for the purposes the <i>Mission Current</i>	ations and patents for said inventions and patents for said inventions for treaty, and including the right to hereby authorized and requested rein, as assignee of the entire intersistings do hereby agree and cover ntinuation, reissue and other apped assignee or its assigns, to come derespecting said improvements of the applications or pathological said applications or pathological descent in the same of the sam	ion claiming rolaim such to issue al rest therein hant withou lications fo municate to a wheneve batents may seary to aid buntries, the Application netuding the netries of the I application

	Docket Number (Optional)
ASSIGNMENT OF UTILITY APPLICATION	STJUDE 3.0F-349
Whereas, I,Mathias Charles Glimsdale	of
624 Lincoln Dr. NE; St. Michael, Minnesota 55376	
hereafter referred to as assignor, have with others invented certain n	ew and useful improvements in
PROSTHETIC MITRAL VALVE	
X for which an application for a United States Letters Pat	tent was filed onMarch 22, 2016
Application Number15/077,070	
for which an application for a United States Letters Pater and	nt was executed by me on
Whereas, St. Jude Medical, Cardiology Division, Inc.	
a corporation of <u>Delaware</u> herein referred to as "assignee" whose ma	ailing 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;	
NOW, THEREFORE, in consideration of the sum of <u>one</u>	
substitute or reissue applications and patents applied for or grante other countries, for said invention, including without limitation all ap priority or benefit of the aforesaid utility application pursuant to any priority or benefit and the Commissioner of Patents and Trademart patents on said improvements or resulting therefrom to said assigned and the undersigned for me and my legal representatives, heirs are further remuneration, to execute and deliver all original, divisiona Letters Patent on said improvements and all assignments thereof t said assignee or its representatives all facts known to the under requested, to testify in any interferences or other legal proceedings become involved, to sign all lawful papers, make all rightful oaths assignee, its successors, assigns and nominees to obtain patent pr expenses incident to said applications to be borne and paid by said a	pplications and patents for said invention claiming law or treaty, and including the right to claim suc ks is hereby authorized and requested to issue a secherein, as assignee of the entire interest thereir nd assigns do hereby agree and covenant without, continuation, reissue and other applications fo to said assignee or its assigns, to communicate to risigned respecting said improvements, wheneve is in which any of said applications or patents mat , and to do generally everything necessary to air rotection for said improvements in all countries, the
I, as assigner, hereby assign to said assignee all of my right, title a No <u>62/137,444</u> , filed <u>March 24, 2015</u> , and in the invention disclose right to claim priority or benefit of said Application No. <u>62/137,444</u> world.	ed thereto in all countries of the world including the
And I do hereby authorize my attorneys to insert on this deed the fill when known.	ing date and application number of said application
6FEB 2018 N	1 TGES
(Date)	(Signature)
State of Minney Han ) SS:	(2000)
County of Aragka )	
On this (0 day of <u>February</u> , <u>At 18</u> before <u>Mathias Charles Glimsdale</u> , to me personally known as the indiv acknowledged to me that the same was expouted by him/her of his/he Mathias (Notary Public)	idual who executed the foregoing instrument, who
x *Total of <u>6</u> forms are submitted.	
	MICHAEL ROY TEETZEL NOTARY PUBLIC - MINNESOTA MY COMMA EXPIRES 01/31/2022

ASSIGNMENT OF UTILITY APPLICATION	Docket Number (Optional) STJUDE 3.0F-349
an the second second second second free shifts from a new second s	015002 0.01-040
Whereas, I, Thomas M. Benson	of
3423 Tyler Street NE; Minneapolis, Minnesota 55418	
hereafter referred to as assignor, have with others invented certain ne	ew and useful improvements in
PROSTHETIC MITRAL VALVE	
X for which an application for a United States Letters Pate	ent was filed on March 22, 2016
*	
Application Number 15/077.070	
for which an application for a United States Letters Pater and	nt was executed by me on,
Whereas, St. Jude Medical, Cardiology Division, Inc.	
a corporation of <u>Delaware</u> herein referred to as "assignee" whose ma	ailing 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;	
invention and the aforesaid utility patent application and all origi substitute or reissue applications and patents applied for or granter other countries, for said invention, including without limitation all ap priority or benefit of the aforesaid utility application pursuant to any priority or benefit and the Commissioner of Patents and Trademark patents on said improvements or resulting therefrom to said assigne and the undersigned for me and my legal representatives, heirs an further remuneration, to execute and deliver all original, divisional Letters Patent on said improvements and all assignments thereof to said assignee or its representatives all facts known to the under requested, to testify in any interferences or other legal proceedings become involved, to sign all lawful papers, make all rightful oaths, assignee, its successors, assigns and nominees to obtain patent pro expenses incident to said applications to be borne and paid by said at 1, as assignor, hereby assign to said assignee all of my right, title ar No <u>62/137.444</u> , filed <u>March 24, 2015</u> , and in the invention disclosed right to claim priority or benefit of said Application No. <u>62/137.444</u> p	d therefor in the United States of America and all oplications and patents for said invention claiming law or treaty, and including the right to claim such is is hereby authorized and requested to issue all e herein, as assignee of the entire interest therein; d assigns do hereby agree and covenant without l, continuation, reissue and other applications for o said assignee or its assigns, to communicate to rsigned respecting said improvements, whenever i in which any of said applications or patents may , and to do generally everything necessary to aid otection for said improvements in all countries, the ssignee.
world.	oursuant to any law or treaty in the countries of the
And I do hereby authorize my attorneys to insert on this deed the filli when known.	ng date and application number of said application
And I do hereby authorize my attorneys to insert on this deed the filli when known. 7 - FEB - Zag	ng date and application number of said application Lon M. German
And I do hereby authorize my attorneys to insert on this deed the filli when known. $\frac{7 - FEB - Zadg}{(Date)}$	ng date and application number of said application
And I do hereby authorize my attorneys to insert on this deed the filli when known. $\frac{7 - FEB - Zadg}{(Date)}$ State of	ng date and application number of said application Lon M. German
And I do hereby authorize my attorneys to insert on this deed the fill when known. <u>7-FE73-Za4</u> (Date) State of County of On thisday of) State of) before Thomas M. Benson, to me personally known as the individual	ng date and application number of said application <u>Man M Man</u> (Signature) me personally came the above-named al who executed the foregoing instrument, who
And I do hereby authorize my attorneys to insert on this deed the filli when known. $\frac{7 - FEB - Zad}{(Date)}$	ng date and application number of said application <u>Man M Man</u> (Signature) me personally came the above-named al who executed the foregoing instrument, who

	Docket Number (Optional)	
ASSIGNMENT OF UTILITY APPLICATION	STJUDE 3.0F-349	
Whereas, t,Peter N. Braido	of	
21460 Heidelberg St. NE; Wyoming, Minnesota 55092		
hereafter referred to as assignor, have with others invented certain r	ew and useful improvements in	
PROSTHETIC MITRAL VALVE		
x for which an application for a United States Letters Par	ent was filed onMarch 22, 2016	
Application Number 15/077,070		
for which an application for a United States Letters Pate and	nt was executed by me on ,	
Whereas, St. Jude Medical, Cardiology Division, Inc.		
a corporation of <u>Delaware</u> herein referred to as "assignee" whose m	alling address is	
177 East County Road B; St. Paul, Minnesota 55117		
is desirous of acquiring the entire right, title and interest in the same	dollars (\$ <u>1.00</u> ), the receipt whereof	
my entire right, title and interest for the United States of America aforesaid utility patent application and all original, divisional, or applications and patents applied for or granted therefor in the United States and patents applications and patents applications and patents for utility application pursuant to any law or treaty, and including the rig of Patents and Trademarks is hereby authorized and requested thereform to said assignee herein, as assignee of the entire inte representatives, heirs and assigns do hereby agree and covenant original, divisional, continuation, reissue and other applications for L thereof to said assignee or its assigns, to communicate to said undersigned respecting said improvements, whenever requested, to which any of said applications or patents may become involved, to generally everything necessary to aid assignee, its successors, as improvements in all countries, the expenses incident to said application displayed to said application No. <u>62/137,444</u> , pursuant And I do hereby authorize my attorneys to insert on this deed the fill known.	ontinuation, continuation-in-part, substitute or reissue ited States of America and all other countries, for said said invention claiming priority or benefit of the aforesaid ht to claim such priority or benefit and the Commissioner to issue all patents on said improvements or resulting rest therein; and the undersigned for me and my legal without further remuneration, to execute and deliver all etters Patent on said improvements and all assignments assignee or its representatives all facts known to the testify in any interferences or other legal proceedings in sign all lawful papers, make all rightful oaths, and to do signs and nominees to obtain patent protection for said ions to be bome and paid by said assignee.	
21 Feb 2018 (Date)	DH Brown (Signature)	
State of $\underline{M_{NNESOTR}}$ ) SS: County of $\underline{A_{XDKA}}$ )		
On this <u>31</u> day of <u>FEBRUARY</u> , <u>2615</u> before me me personally known as the individual who executed the foregoing executed by him/her of his/her own free will for the purposes therein CARDENDER (Notary Public)	CHERYLANN GERLICHER	
x *Total of <u>6</u> forms are subm	itted.	