### 504445505 07/06/2017

### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4492206

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
PEER KIRSCH	06/01/2017
QIONG TONG	06/02/2017
ANDREAS RUHL	06/15/2017
MARC TORNOW	06/01/2017
ACHYUT BORA	05/30/2017

#### **RECEIVING PARTY DATA**

Name:	MERCK PATENT GMBH
Street Address:	FRANKFURTER STRASSE 250
City:	DARMSTADT
State/Country:	GERMANY
Postal Code:	64293

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

Property Type	Number
Application Number:	15541973

#### **CORRESPONDENCE DATA**

**Fax Number:** (703)243-6410

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: 703-243-6333
Email: mail@mwzb.com

Correspondent Name: MILLEN, WHITE, ZELANO & BRANIGAN-AEW

Address Line 1: 2200 CLARENDON BLVD.

Address Line 2: SUITE 1400

Address Line 4: ARLINGTON, VIRGINIA 22201

ATTORNEY DOCKET NUMBER:	MERCK-4619
NAME OF SUBMITTER:	ASHLEY BROOKSHIRE
SIGNATURE:	/Ashley Brookshire/
DATE SIGNED:	07/06/2017
	This document serves as an Oath/Declaration (37 CFR 1.63).

PATENT 504445505 REEL: 042925 FRAME: 0529

## **Total Attachments: 5**

source=EXECUTED\_DUAL\_DEC\_ASSIGNMENTS#page1.tif source=EXECUTED\_DUAL\_DEC\_ASSIGNMENTS#page2.tif

source=EXECUTED\_DUAL\_DEC\_ASSIGNMENTS#page3.tif

source=EXECUTED\_DUAL\_DEC\_ASSIGNMENTS#page4.tif

source=EXECUTED\_DUAL\_DEC\_ASSIGNMENTS#page5.tif

Title of Invention	ELECT	RONIC COMPONENT
As the below nan	ed invento	or, I hereby declare that:
This declaration		The attached application, or
is directed to:	Q	United States Application or PCT International Application number <u>PCT/EP2015/002477</u> filed on <u>08.12.2015</u>
The above-identif	ied applica	ution was made or authorized to be made by me.
I believe that I am	the origin	al inventor or an original joint inventor of a claimed invention in the application.
all patent(s) listed	ed to as the above, inc	lerck Patent GmbH rankfurter Strasse 250 4293 Darmstadt / DE ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and cluding any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, als, reissues, reexaminations and extensions thereof.
ASSIGNOR here right, title and into and all Letters Pathereof, and in an to accrue with resinvention, SAID including any and which may be graright to sue for datarising from or a renewals, reissues representatives, in	by assigns, erest in and tent which do any ar pect to the ASSIGNE! I all earlier inted therei images occupertaining, reexamir as ample	ETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive it to said invention and patent(s), including any and all divisions and continuations thereof, and any may be granted therefor, including any and all renewals, reissues, reexaminations and extensions id all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or filing or securing of patents in the United States and/or any countries foreign thereto concerning said in the sasigns and legal representatives to have, hold, exercise, and enjoy said invention and patent, priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent for, including any and all renewals, reissues, reexaminations and extensions thereof, including the urring before the assignment, with all the rights, powers, privileges and advantages in anywise thereto, for and during the term or terms of any and all such Letters Patent, including any and all lations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and grament had not been made.
and foreign count	ries for sai	hereby agrees to execute all papers that may be necessary to file applications in the United States d invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to it may be needed in connection with securing Letters Patents thereon.
AND A any and all division	SSIGNOR	authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on intinuations thereof, to ASSIGNEE, its assigns and legal representatives, in accordance herewith.
The uncassignment inforr properly record the	nation whi	nereby grant(s) the law firm of Millen, White, Zelano & Branigan, P.C. the power to insert on this ch may be necessary or desirable in order for the United States Patent and Trademark Office to not.
	1	IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.		
LEGAL NAME (		
Inventor: I	eerKIRSO	Date.
Signature:		

MILLEN, WHITE, ZELANO & BRANIGAN, P.C.
ATTORNEYS AT LAW
ARLINGTON COURTHOUSE PLAZA
2200 CLARENDON BOULEVARD | SUITE 1400 | ARLINGTON VA 22201
TELEPHONE: 703.243.6333 | FAX: 703.243.6410
EMAIL: MAIL@MWZB.COM

Effective, September 16, 2012

Title of	ELECTRONIC COMPONENT	
Invention		
As the below nan	ned inventor, I hereby declare that:	
This declaration		
is directed to:	United States Application or PCT International Application number <a href="PCT/EP2015/002477">PCT/EP2015/002477</a> filed on <a href="08.12.2015">08.12.2015</a>	
The above-identif	fied application was made or authorized to be made by me.	
I believe that I an	the original inventor or an original joint inventor of a claimed invention in the application.	
AND WHEREAS		
	Merck Patent GmbH Frankfurter Strasse 250 64293 Darmstadt / DE	
all patent(s) listed	ed to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and a labove, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, all renewals, reissues, reexaminations and extensions thereof.	
ASSIGNOR here right, title and int and all Letters Pa thereof, and in an to accrue with res invention, SAID including any and which may be graright to sue for da arising from or agrenewals, reissues representatives, in enjoyed the same	WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, by assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive erest in and to said invention and patent(s), including any and all divisions and continuations thereof, and any tent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions d to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or spect to the filing or securing of patents in the United States and/or any countries foreign thereto concerning said ASSIGNEE, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and patent, all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent unted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, including the unages occurring before the assignment, with all the rights, powers, privileges and advantages in anywise opertaining thereto, for and during the term or terms of any and all such Letters Patent, including any and all so, reexaminations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal in as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and, if the assignment had not been made.	
AND ASSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States and foreign countries for said invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to execute any other papers that may be needed in connection with securing Letters Patents thereon.		
AND A any and all divisi	SSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on one and continuations thereof, to ASSIGNEE, its assigns and legal representatives, in accordance herewith.	
The undersigned hereby grant(s) the law firm of Millen, White, Zelano & Branigan, P.C. the power to insert on this assignment information which may be necessary or desirable in order for the United States Patent and Trademark Office to properly record this document.		
	IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR	
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.		
LEGAL NAME	OF INVENTOR	
Inventor:	Qiong TONG Date: 02.06.1	
Signature:	- Chartel-	

Millen, White, Zelano & Branigan, P.C.
Attorneys at Law
Arlington Courthouse Plaza
2200 Clarendon Boulevard | Suite 1400 | Arlington VA 22201
Telephone: 703.243.6333 | Fax: 703.243.6410
Email: Mail@mwzb.com

Effective, September 16, 2012

Title of Invention	ELECT	RONIC COMPONENT
As the below nam	ed invento	or, I hereby declare that:
This declaration		The attached application, or
is directed to:		United States Application or PCT International Application number <u>PCT/EP2015/002477</u> filed on <u>08.12.2015</u>
The above-identif	fied applica	ation was made or authorized to be made by me.
I believe that I am	the origin	al inventor or an original joint inventor of a claimed invention in the application.
all patent(s) listed	F 6 d to as the labove, inc	Merck Patent GmbH rankfurter Strasse 250 4293 Darmstadt / DE ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and cluding any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, als, reissues, reexaminations and extensions thereof.
ASSIGNOR here right, title and into and all Letters Parthereof, and in anto accrue with resinvention, SAID a including any and which may be graright to sue for darising from or a prenewals, reissues representatives, in	by assigns, erest in and tent which do any ar ippect to the ASSIGNE I all earlier unted there umages occupertaining, reexamin as ample	ETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive I to said invention and patent(s), including any and all divisions and continuations thereof, and any may be granted therefor, including any and all renewals, reissues, reexaminations and extensions all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or filing or securing of patents in the United States and/or any countries foreign thereto concerning said E, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and patent, priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent for, including any and all renewals, reissues, reexaminations and extensions thereof, including the surring before the assignment, with all the rights, powers, privileges and advantages in anywise thereto, for and during the term or terms of any and all such Letters Patent, including any and all nations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and grament had not been made.
and foreign count	tries for sai	hereby agrees to execute all papers that may be necessary to file applications in the United States id invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to at may be needed in connection with securing Letters Patents thereon.
AND A any and all division	SSIGNOR	t authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on intinuations thereof, to ASSIGNEE, its assigns and legal representatives, in accordance herewith.
The uncassignment inforr properly record the	nation whi	nereby grant(s) the law firm of Millen, White, Zelano & Branigan, P.C. the power to insert on this ch may be necessary or desirable in order for the United States Patent and Trademark Office to ent.
		IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.		
LEGAL NAME (	OF INVEN	TTOR UHL Date: //////
Inventor:	Andreas RI	
Signature:		And is sure

Millen, White, Zelano & Branigan, P.C.
Attorneys at Law
Arlington Courthouse Plaza
2200 Clarendon Boulevard | Suite 1400 | Arlington VA 22201
Telephone: 703.243.6333 | Fax: 703.243.6410
Email: mail@mwzb.com

Effective, September 16, 2012

Title of	ELECTRONIC COMPONENT	
Invention		
As the below named inventor, I hereby declare that:		
This declaration	☐ The attached application, or	
is directed to:	United States Application or PCT International Application number <u>PCT/EP2015/002477</u> filed on	
The above-identif	ed application was made or authorized to be made by me.	
I believe that I am	the original inventor or an original joint inventor of a claimed invention in the application.	
AND WHEREAS		
	Merck Patent GmbH Frankfurter Strasse 250 64293 Darmstadt / DE	
all patent(s) listed	to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and above, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, all renewals, reissues, reexaminations and extensions thereof.	
ASSIGNOR herel right, title and into and all Letters Pat thereof, and in an to accrue with res invention, SAID A including any and which may be graright to sue for da arising from or ap renewals, reissues representatives, in	ATTNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, y assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive rest in and to said invention and patent(s), including any and all divisions and continuations thereof, and any ant which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing o sect to the filing or securing of patents in the United States and/or any countries foreign thereto concerning said SSIGNEE, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and patent, all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent uted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, including the nages occurring before the assignment, with all the rights, powers, privileges and advantages in anywise pertaining thereto, for and during the term or terms of any and all such Letters Patent, including any and all reexaminations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and if the assignment had not been made.	id
AND ASSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States and foreign countries for said invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to execute any other papers that may be needed in connection with securing Letters Patents thereon.		
	SIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on as and continuations thereof, to ASSIGNEE, its assigns and legal representatives, in accordance herewith.	
The undersigned hereby grant(s) the law firm of Millen, White, Zelano & Branigan, P.C. the power to insert on this assignment information which may be necessary or desirable in order for the United States Patent and Trademark Office to properly record this document.		
	IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR	
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.		
LEGAL NAME C		
Inventor: <u>N</u>	arc TORNOW Date: JAME 1999 GM/14	
Signature:		

MILLEN, WHITE, ZELANO & BRANIGAN, P.C. ATTORNEYS AT LAW ARLINGTON COURTHOUSE PLAZA 2200 CLARENDON BOULEVARD | SUITE 1400 | ARLINGTON VA 22201 Telephone: 703.243.6333 | Fax: 703.243.6410

EMAIL: MAIL@MWZB.COM

Effective, September 16, 2012

Title of	ELECTRONIC COMPONENT	
Invention		
As the below nam	ed inventor, I hereby declare that:	
This declaration	☐ The attached application, or	
is directed to:	United States Application or PCT International Application number <a href="PCT/EP2015/002477">PCT/EP2015/002477</a> filed on <a href="0.8.12.2015">0.8.12.2015</a>	
The above-identif	ied application was made or authorized to be made by me.	
I believe that I am	the original inventor or an original joint inventor of a claimed invention in the application.	
all patent(s) listed	Merck Patent GmbH Frankfurter Strasse 250 64293 Darmstadt / DE ed to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and labove, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, lall renewals, reissues, reexaminations and extensions thereof.	
NOW, WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, ASSIGNOR hereby assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive right, title and interest in and to said invention and patent(s), including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, and in and to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or to accrue with respect to the filling or securing of patents in the United States and/or any countries foreign thereto concerning said invention. SAID ASSIGNEE, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and patent, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent which may be granted therefor, including any and all renewals, reissues, reexaminations thereof, including the right to sue for damages occurring before the assignment, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such Letters Patent, including any and all renewals, reissues, reexaminations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal representatives, in as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and enjoyed the same, if the assignment had not been made.		
AND ASSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States and foreign countries for said invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to execute any other papers that may be needed in connection with securing Letters Patents thereon.		
AND ASSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on any and all divisions and continuations thereof, to ASSIGNEE, its assigns and legal representatives, in accordance herewith.		
The undersigned hereby grant(s) the law firm of Millen, White, Zelano & Branigan, P.C. the power to insert on this assignment information which may be necessary or desirable in order for the United States Patent and Trademark Office to properly record this document.		
	IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR	
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by line or imprisonment of not more than five (5) years, or both.		
LEGAL NAME (	OF INVENTOR	
Inventor:	Achyut BORA Date: 30,05,2017	
Signature:	a second	

MILLEN, WHITE, ZELANO & BRANIGAN, P.C. ATTORNEYS AT LAW

ARLINGTON COURTHOUSE PLAZA
2200 CLARENDON BOULEVARD | SUITE 1400 | ARLINGTON VA 22201

TELEPHONE: 703.243.6333 | Fax: 703.243.6410 | EMAIL: MAIL@MWZB.COM

**PATENT** 

RECORDED: 07/06/2017 REEL: 042925 FRAME: 0535