PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3209077

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MAIK FINZE	01/20/2015
WALTER FRANK	01/22/2015
NIKOLAI (MYKOLA) IGNATYEV	01/20/2015
MICHAEL SCHULTE	01/20/2015
JAN SPRENGER	01/21/2015

RECEIVING PARTY DATA

Name:	MERCK PATENT GESELLSCHAFT MIT BESCHRAENKTER HAFTUNG
Street Address:	FRANKFURTER STRASSE 250
City:	DARMSTADT
State/Country:	GERMANY
Postal Code:	64293

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14546661

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

Address Line 1: 2200 CLARENDON BLVD

Address Line 2: SUITE 1400

Address Line 4: ARLINGTON, VIRGINIA 22201

ATTORNEY DOCKET NUMBER:	MERCK-3967-D01
NAME OF SUBMITTER:	JANET M. JACOBS
SIGNATURE:	/Janet M. Jacobs/
DATE SIGNED:	02/03/2015
	This document serves as an Oath/Declaration (37 CFR 1.63).

PATENT REEL: 034872 FRAME: 0506

503162462

Total Attachments: 5 source=P10010_Declaration_Finze#page1.tif source=P10010_Declaration_Frank#page1.tif

source=P10010_Declaration_Ignatyev#page1.tif source=P10010_Declaration_Schulte#page1.tif

source=P10010_Declaration_Sprenger#page1.tif

PATENT REEL: 034872 FRAME: 0507

Title of	
Invention	
Ac the bolow nar	ned inventor, I hereby declare that:
	FINE COLUMN ASSOCIATION OF THE COLUMN ASSOCI
This declaration	United States Application or PCT International Application number 14/546.661 filed on November
is directed to:	∑ 18.2014 ☐
The above-identi	fied application was made or authorized to be made by me.
I believe that I at	n the original inventor or an original joint inventor of a claimed invention in the application.
including any ar	MERCE PATENT GESELLSCHAFT MIT BESCHRAENKTER HAFTUNG Frankfurter Strasse 250 64293 Darmstadt, Germany red to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and dislove, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, and all renewals, reissues, reexaminations and extensions thereof.
NOW, WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged. ASSIGNOR hereby assigns, selfs, and transfers to ASSIGNBE, 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 right, title and interest in and to said invention and patent(s), including any and all renewals, reissues, reaxaminations and extensions and all Letters Patent which may be granted therefor, including any and all renewals, reissues, reaxaminations and extensions or thereof, and in and to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits according or thereof, and in and to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits according to accruze with respect to the filting or securing of patents in the United States and/or any countries foreign thereto concerning said to accruze with respect to the filting or securing of patents in the United States and/or any countries foreign thereto concerning said to accruze with respect to the filting or securing of patents in the United States and/or any countries foreign thereto concerning said inventions, and all Letters Patent including any and all learlier priority rights (U.S. and foreign), divisions and continuations thereof, and and extensions thereof, including the which may be granted therefor, including any and all renewals, reissues, prexaminations and extensions thereof, for the use and benefit of ASSIGNOR might or could have held and representatives, in as ample and beneficial a manner in all intents and purposes as the ASSIGNOR might or could have held and enjoyed the same, if the assignment had not been made.	
AND and ferrigo cor execute any off	ASSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States intries for said invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to her papers that may be needed in connection with securing Letters Patents thereon.
any and all div	ASSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on islons and continuations thereof, to ASSIGNEE, its assigns and logal 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 her	eby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by parent of not more than five (5) years, or both.
	E OF INVENTOR Date: 10 01, 2015
Signature:	Mento

Millen, White, Zelano & Branigan, P.C.
Attorneys at Law
Arlington Courthouse Plaza
2200 Clarendon Borlevard i Suite 1400 I Arlington VA 22201
Telephone: 703.243.63331Pax: 703.243.6410
Email: Mail@mwzb.com

Effective, September 16, 2012

PATENT REEL: 034872 FRAME: 0508

Title of Invention	
As the below nam	med inventor, I hereby declare that:
	
This declaration	
is directed to:	United States Application or PCT International Application number 14/546,661 filed on November 18, 2014
	fied application was made or authorized to be made by me.
	n the original inventor or an original joint inventor of a claimed invention in the application.
AND WHEREAS	
	MERCK PATENT GESELLSCHAFT MIT BESCHRAENKTER HAFTUNG Frankfurter Strasse 250
	64293 Darmstadt, Germany
hereinafter referred to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and all patent(s) listed above, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, including any and all 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 filing 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 carlier 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 and extensions 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 foreign coun execute any other	ASSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States stries for said invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to a papers that may be needed in connection with securing Letters Patents thereon.
any and all divisi	ASSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on ions and continuations thereof, to ASSIGNEE, its assigns and legal representatives, in accordance herewith.
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	IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR
fine or imprisons	by acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by ment of not more than five (5) years, or both.
	OF INVENTOR Walter FRANK Date: 04-22-2045
Inventor:	Walter FRANK Date: V3 - 20 1 3
Signature:	Walter Frank

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

PATENT REEL: 034872 FRAME: 0509

Title of Invention	
As the below nun	ed inventor, I hereby declare that:
This declaration	The strached application, or
is directed to:	United States Application or PCT International Application number 14/546,661 filed on November 18, 2014
The above identit	led application was made or authorized to be made by me.
I believe that I are	the original inventor or an original joint inventor of a claimed invention in the application.
all patent(s) lister	MERCK PATENT GESELLSCHAFT MIT BESCHRAENRTER HAFTUNG Frankfurter Strasse 250 64293 Darmstadt, Germany ed 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, tall renewals, reissues, reexaminations and extensions thereof.
NOW, ASSIGNOR here right, title and int and all Letters Pa thereof, and in an to accrue with reinvention, SAID including any and which may be gratight to sue for drarising from or a renewals, reissue representatives, it 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 onewals, reissues, reexaminations and extensions d to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accraining or pect 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. I all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent inted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, including the images occurring before the assignment, with all the rights, powers, privileges and advantages in anywise operationing thereto, for and during the term or terms of any and all such Letters Patent, including any and all so pertaining thereto, for and during the term or terms of any and all such Letters Patent, including any and all as a ample and beneficial a manner to all intents and purposes as the ASSIGNEE and its assigns and legal and it the assignment had not been made. ASSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States tries for said invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to a papers that may be needed in connection with securing Letters Patents thereon.
	ASSIGNOR 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.
	dersigned hereby grant(s) the law firm of Millen, White, Zeiano & Branigan, P.C. the power to insert on this mation which may be necessary or desirable in order for the United States Patent and Trademark Office to his document.
	IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR
	y acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by nent of not more than five (5) years, or both.
LEGAL NAME	OF INVENTOR Nikolai (Mykola) IGNATYEV Date: January 20, 2015
Signature: /	Vike lai / Na bele Tanaker

MILLEN, WHITE, ZELANO & BRANGAN, P.C. ATTORNEYS AT LAW ARLINGTON COURTMOUSE PLAZA 2200 CEARENDON ROEA EVARD I SCITTE 14003 ARLINGTON VA 22201 Telephone: 703.243.63331 Fax: 703.243.6410

EMAIL: MAIL @MWZB.COM

Effective, September 16, 2012

Invention	
As the below named inventor, I hereby declare that:	
This declaration The attached application, or	
United States Application or PCT International Application number 14/546.661 filed on November	
is directed to: X 18,2914	
The above-identified 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 GESELLSCHAFT MIT	
BESCHRAENKTER HAFTUNG	
Frankfurter Strasse 250	
64293 Darmstadt, Germany hereinafter referred to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and	
all patent(s) listed above, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof,	
including any and all 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 ASSIGNOE, its assigns and legal representatives, the entire and exclusive right, title and inferest 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 filing 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 and extensions 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 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, Zalano & 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 exceed 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: Michael SCHULTS // Date: 20 / 20/5	
Signature:	

Millen, Wiete, Zelang & Branigan, P.C. Attorneys at Law Ablington Counthouse 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

I	
Title of Invention	
As the below named	l inventor, I hereby declare that:
This declaration	The attached application, or
is directed to:	United States Application or PCT International Application number 14/546.661 filed on November 18, 2014
The above-identified	application was made or authorized to be made by me.
I believe that I am th	ne original inventor or an original joint inventor of a claimed invention in the application.
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ASSIGNOR hereby right, title and intere and all Letters Paten thereof, and in and to to accrue with respective invention, SAID AS including any and all which may be granteright to sue for dama arising from or appearenewals, reissues, representatives, in as	TNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive st in and to said invention and patent(s), including any and all divisions and continuations thereof, and any the which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions and any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or any and all Letters patents to the filing or securing of patents in the United States and/or any countries foreign thereto concerning said SIGNEE, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and patent, learlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent det therefor, including any and all renewals, reissues, reexaminations and extensions thereof, including the ges occurring before the assignment, with all the rights, powers, privileges and advantages in anywise taining thereto, for and during the term or terms of any and all such Letters Patent, including any and all examinations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and the assignment had not been made.
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AND ASS any and all divisions	IGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on and continuations thereof, to ASSIGNEB, its assigns and legal representatives, in accordance herewith.
The unders assignment informati properly record this o	igned hereby grant(s) the law firm of Millen, White, Zelano & Branigan, P.C. the power to insert on this on which may be necessary or desirable in order for the United States Patent and Trademark Office to locument.
	IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR
fine or imprisonment	knowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by of not more than five (5) years, or both.
LEGAL NAME OF I	NVENTOR SPRENGER Date: 21.1.15
Signature:	- Carrier and the carrier and

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

PATENT REEL: 034872 FRAME: 0512

RECORDED: 02/03/2015