503644953 01/12/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3691588

| SUBMISSION TYPE: | NEW ASSIGNMENT |
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| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------------|----------------|
| Christoph Max Krell | 05/26/2014 |
| Marian Misun | 05/26/2014 |
| Daniel Andreas Niederer | 05/26/2014 |
| Werner Heinz Pachinger | 05/26/2014 |
| Marie-Christine Wolf | 05/26/2014 |
| Daniel Zimmermann | 05/22/2014 |

RECEIVING PARTY DATA

| Name: | NOVARTIS PHARMA AG | |
|-----------------|--------------------|--|
| Street Address: | POSTFACH | |
| City: | BASEL | |
| State/Country: | SWITZERLAND | |
| Postal Code: | 4002 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number | |
|---------------------|----------|--|
| Application Number: | 14974655 | |

CORRESPONDENCE DATA

Fax Number: (877)769-7945

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: (612) 337-5070 **Email:** apsi@fr.com

Correspondent Name: ANGELA D. FOLLETT **Address Line 1:** FISH & RICHARDSON P.C.

Address Line 2: P.O.BOX 1022

Address Line 4: MINNEAPOLIS, MINNESOTA 55440-1022

| ATTORNEY DOCKET NUMBER: | 41357-0012003 |
|-------------------------|------------------|
| NAME OF SUBMITTER: | JILL A. WRIGHT |
| SIGNATURE: | /Jill A. Wright/ |
| DATE SIGNED: | 01/12/2016 |

PATENT 503644953 REEL: 037465 FRAME: 0214

Total Attachments: 14 source=41357.0012003 Novartis Inv#page1.tif source=41357.0012003 Novartis Inv#page2.tif source=41357.0012003 Novartis Inv#page3.tif source=41357.0012003 Novartis Inv#page4.tif source=41357.0012003 Novartis Inv#page5.tif source=41357.0012003 Novartis Inv#page6.tif source=41357.0012003 Novartis Inv#page7.tif source=41357.0012003 Novartis Inv#page8.tif source=41357.0012003 Novartis Inv#page9.tif source=41357.0012003 Novartis Inv#page10.tif source=41357.0012003 Novartis Inv#page11.tif source=41357.0012003 Novartis Inv#page12.tif source=41357.0012003 Novartis Inv#page13.tif source=41357.0012003 Novartis Inv#page13.tif source=41357.0012003 Novartis Inv#page14.tif

PATENT REEL: 037465 FRAME: 0215

ASSIGNMENT

This Assignment Agreement is entered into by and between

Christoph Max KRELL

Citizen of Switzerland

Novartis Pharma AG

Postfach 4002 Basel

SWITZERLAND

Marian MISUN

Citizen of Switzerland

Novartis Pharma AG

Postfach 4002 Basel SWITZERLAND

Daniel Andreas NIEDERER Citizen of Switzerland

Novartis Pharma AG

Postfach 4002 Basel SWITZERLAND

Werner Heinz PACHINGER Citizen of Austria

Novartis Pharma AG

Postfach 4002 Basel SWITZERLAND

Marie-Christine WOLF

Citizen of France

Novartis Pharma AG

Postfach 4002 Basel SWITZERLAND

Daniel ZIMMERMANN

Citizen of Germany

Novartis Pharma AG

Postfach 4002 Basel SWITZERLAND

hereinafter "Inventor(s) and, NOVARTIS PHARMA AG, Postfach, 4002 Basel, Switzerland, a company organized under the laws of Switzerland.

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, I/We the Inventor(s) do hereby confirm and agree that, by operation of law and/or contract, and/or by the fulfillment of any and all legal requirements regarding the transfer of employee inventions in my/our country of employment, Novartis Pharma AG is the true and

PATENT REEL: 037465 FRAME: 0216 lawful owner of all right, title and interest in all inventions, discoveries, patents/utility models, applications, and rights described in paragraphs (1) through (8) below.

If, however, under the laws of any country, I/We the Inventor(s) nevertheless have any ownership right, title or interest in any of the items described herein (which I/We do not believe to be the case and make no claim in or to), for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, I/We the Inventor(s) do hereby sell, assign and transfer to Novartis Pharma AG and its successors, assigns and legal representatives (hereinafter referred to collectively as the "ASSIGNEE"), all of our right, title and interest for all countries of the world in and to

(1) all of our inventions and discoveries described in the provisional or non-provisional patent, utility model, or other application(s) entitled

PREPARATION OF AND FORMULATION COMPRISING A MEK INHIBITOR

| Number 61/716,169 and/or filed in the United States Patent and Trademark Office on October 18, 2013 and accorded Application Number 14/057,498; |
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- (2) the application(s) identified in paragraph (1), and all applications claiming priority from such application(s), directly or indirectly, including all national stages of any international patent application(s);
- (3) the right to file patent, utility model, or other applications on any invention or discovery disclosed in any of the applications identified in paragraphs (1) and (2), including the right to file such applications on said inventions and discoveries in the names of ASSIGNEE or their designees or in our/my name, at ASSIGNEE's election and in accordance with applicable law in all countries and regions; and the right to file all patent, utility model, or other applications in all countries and regions claiming the priority of any of the provisional or non-provisional application(s) identified in paragraphs (1) or (2):
- (4) all rights to claim priority from any of the applications referred to in paragraphs (1), (2), and (3) or from any application from which any of the applications referred to in paragraphs (1), (2) and (3) claim priority in all countries and regions under the Paris Convention for the Protection of Industrial Property, the WTO GATT TRIPS Agreement, the Inter-American Convention relating to Inventions, Patents, Designs, and Industrial Models and all other international agreements to which the United States now is or hereafter becomes a signatory and, if the United States patent application is a provisional patent application, under 35 USC 119(e);
- (5) all continuations, continuations-in-part, and divisionals of any United States patent application(s) or international patent application(s) designating the United States, any national

stages of any international application(s), and any other patent application(s) described in paragraphs (1) through (4) hereof, including further continuations, continuations-in-part, and divisionals such as, but not limited to, continuations of continuations and continuations of divisionals;

- (6) all patents, utility models, or other grants that issue from any of the application's referred to herein and all rights and remedies associated therewith including the right to sue for and recover past damages and to recover under 35 U.S.C. § 154 (d) or any other law permitting remedies for infringement prior to issuance of the patent;
- (7) all registrations and confirmations of, and importation certificates based upon, one or more of said patents, utility models, or other grants, and applications for such registrations, confirmations and importation certificates and;
- (8) all reissues, renewals and extensions of said patents, utility models, registrations, confirmations and importation certificates, reexamination certificates issued for said patents and supplementary protection certificates based upon said patents and applications for such reissues, renewals, extensions, reexamination certificates and supplementary protection certificates, the same to be held and enjoyed by said ASSIGNEE to the full ends of the terms for which said patents, utility models, registrations, confirmations, importation certificates, reexamination certificates, supplementary protection certificates, reissues, renewals and extensions may be granted, as fully and entirely as the same would have been held and enjoyed by me/us if this sale, assignment and transfer had not been made.

I/We the Inventor(s) hereby authorize ASSIGNEE and their representatives to insert in paragraph (1) of this Assignment the filing date(s) and Application Number(s) of said patent, utility model, or other application(s) when notified thereof.

I/We the Inventor(s) hereby covenant and agree that I/We will, at any time, (i) upon the request, but at the expense, of ASSIGNEE, execute and deliver all documents that may be necessary or desirable to perfect the title to the foregoing inventions and discoveries, applications, patents, utility models, registrations, confirmations, importation certificates, reissues, renewals, extensions, reexamination certificates, supplementary protection certificates, and applications within the scope of (7) and (8), in ASSIGNEE, including the execution and procurement of all further documents evidencing this sale, assignment and transfer as may be necessary or desirable for recording the same in the patent office or other intellectual property office, agency or the like of any country or region, (ii) upon the request, but at the expense, of ASSIGNEE execute all additional applications within the scope of paragraphs (1) through (6) and all applications within the scope of (7) or (8), and (iii) make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein, without further compensation, but at the expense of ASSIGNEE.

Should any provision of this Assignment be deemed invalid or unenforceable by reason of any law, statute, regulation or judgment, existing now or in the future in any jurisdiction, such provision shall be modified in such jurisdiction so as to nearly approximate the intent of the Parties. If this cannot be done, such invalid or unenforceable provision shall be divisible and be

deleted in any such jurisdiction, and all other provisions shall remain in full force and effect. The modification or deletion of any provision in one jurisdiction shall have no effect on this Assignment in any other jurisdiction.

This Assignment shall be governed by the laws of Switzerland.

This Assignment is effective as from the earliest priority date as stated above.

| Executed this 26 th day of 72 2014. |
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| Christoph Max KRELL. |
| Witness: Print Name: MARÍA DE 103 DES MARARADOS, LATORRE SELESPRE. |
| Witness: SERMAREA AROUTE |
| Executed this 2014. |
| Daniel Andreas NIEDERER L.S. |
| Witness: Print Name: MAKIA DE MOS PESAMPARADOS , LANDRRE SILVESME. |
| Witness: Print Name: SEANTER ARXIE |
| Executed this 26th day of May 2014. Marian MISE |
| Marian MISEN Witness: |
| Witness: Print Name: ***** OE LOS OBSAM/ARAOS , LAMBRE SILVESTRE. |
| Witness: Print Name: Season R 60000 |

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| Print Name: | EDAVIACA APONTE | | | | |
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| Witness: | | | | | |
| Print Name: | | | | | |
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| Print Name: | | | | | |

| Executed this day of2014. |
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| NOVARTIS PHARMA AG |
| BY: Sonja Boesch Print Name: Sonja Boesch Authorized Signatory |
| BY: L.S. Print Name: Elke Blab-Rotzinger Authorized signatory |
| Witness: Print Name: MARIA OF LOS DESAMPA RADOS, LATORRE SILVESTRE. |
| Witness: Print Name: Sexual Apolice |

ASSIGNMENT

This Assignment Agreement is entered into by and between

Christoph Max KRELL

Citizen of Switzerland

Novartis Pharma AG

Postfach 4002 Basel

SWITZERLAND

Marian MISUN

Citizen of Switzerland

Novartis Pharma AG

Postfach 4002 Basel

SWITZERLAND

Daniel Andreas NIEDERER Citizen of Switzerland

Novartis Pharma AG

Postfach 4002 Basel

SWITZERLAND

Werner Heinz PACHINGER Citizen of Austria

Novartis Pharma AG

Postfach 4002 Basel

SWITZERLAND

Marie-Christine WOLF

Citizen of France

Novartis Pharma AG

Postfach 4002 Basel

SWITZERLAND

Daniel ZIMMERMANN

Citizen of Germany

Novartis Pharma AG

Postfach 4002 Basel

SWITZERLAND

hereinafter "Inventor(s) and, NOVARTIS PHARMA AG, Postfach, 4002 Basel, Switzerland, a company organized under the laws of Switzerland.

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, I/We the Inventor(s) do hereby confirm and agree that, by operation of law and/or contract, and/or by the fulfillment of any and all legal requirements regarding the transfer of employee inventions in my/our country of employment, Novartis Pharma AG is the true and

PATENT

REEL: 037465 FRAME: 0223

lawful owner of all right, title and interest in all inventions, discoveries, patents/utility models, applications, and rights described in paragraphs (1) through (8) below.

If, however, under the laws of any country, I/We the Inventor(s) nevertheless have any ownership right, title or interest in any of the items described herein (which I/We do not believe to be the case and make no claim in or to), for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, I/We the Inventor(s) do hereby sell, assign and transfer to Novartis Pharma AG and its successors, assigns and legal representatives (hereinafter referred to collectively as the "ASSIGNEE"), all of our right, title and interest for all countries of the world in and to

(1) all of our inventions and discoveries described in the provisional or non-provisional patent, utility model, or other application(s) entitled

PREPARATION OF AND FORMULATION COMPRISING A MEK INHIBITOR

| and filed in the | Office on | , 20 | and accorded |
|-------------------------|---|---------------|---------------------|
| Application Number | and/or filed as a PCT | 'Internationa | ll Application on |
| , and acc | corded International Patent Application | ı Number; ar | nd/or filed in the |
| United States Patent an | d Trademark Office on October 19, 20 | J12 and acce | orded Application |
| Number 61/716,169 an | d/or filed in the United States Patent ar | nd Trademar | k Office on October |
| 18, 2013 and accorded | Application Number 14/057,498; | | |

- (2) the application(s) identified in paragraph (1), and all applications claiming priority from such application(s), directly or indirectly, including all national stages of any international patent application(s):
- (3) the right to file patent, utility model, or other applications on any invention or discovery disclosed in any of the applications identified in paragraphs (1) and (2), including the right to file such applications on said inventions and discoveries in the names of ASSIGNEE or their designees or in our/my name, at ASSIGNEE's election and in accordance with applicable law in all countries and regions; and the right to file all patent, utility model, or other applications in all countries and regions claiming the priority of any of the provisional or non-provisional application(s) identified in paragraphs (1) or (2);
- (4) all rights to claim priority from any of the applications referred to in paragraphs (1),
 (2), and (3) or from any application from which any of the applications referred to in paragraphs
 (1), (2) and (3) claim priority in all countries and regions under the Paris Convention for the Protection of Industrial Property, the WTO GATT TRIPS Agreement, the Inter-American Convention relating to Inventions, Patents, Designs, and Industrial Models and all other international agreements to which the United States now is or hereafter becomes a signatory and, if the United States patent application is a provisional patent application, under 35 USC 119(e);
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- (7) all registrations and confirmations of, and importation certificates based upon, one or more of said patents, utility models, or other grants, and applications for such registrations, confirmations and importation certificates and;
- (8) all reissues, renewals and extensions of said patents, utility models, registrations, confirmations and importation certificates, reexamination certificates issued for said patents and supplementary protection certificates based upon said patents and applications for such reissues, renewals, extensions, reexamination certificates and supplementary protection certificates, the same to be held and enjoyed by said ASSIGNEE to the full ends of the terms for which said patents, utility models, registrations, confirmations, importation certificates, reexamination certificates, supplementary protection certificates, reissues, renewals and extensions may be granted, as fully and entirely as the same would have been held and enjoyed by me/us if this sale, assignment and transfer had not been made.

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I/We the Inventor(s) hereby covenant and agree that I/We will, at any time, (i) upon the request, but at the expense, of ASSIGNEE, execute and deliver all documents that may be necessary or desirable to perfect the title to the foregoing inventions and discoveries, applications, patents, utility models, registrations, confirmations, importation certificates, reissues, renewals, extensions, reexamination certificates, supplementary protection certificates, and applications within the scope of (7) and (8), in ASSIGNEE, including the execution and procurement of all further documents evidencing this sale, assignment and transfer as may be necessary or desirable for recording the same in the patent office or other intellectual property office, agency or the like of any country or region, (ii) upon the request, but at the expense, of ASSIGNEE execute all additional applications within the scope of paragraphs (1) through (6) and all applications within the scope of (7) or (8), and (iii) make all rightful oaths and declarations and do all lawful acts requisite for procuring the same or for aiding therein, without further compensation, but at the expense of ASSIGNEE.

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deleted in any such jurisdiction, and all other provisions shall remain in full force and effect. The modification or deletion of any provision in one jurisdiction shall have no effect on this Assignment in any other jurisdiction.

This Assignment shall be governed by the laws of Switzerland.

This Assignment is effective as from the earliest priority date as stated above.

| Executed this | _ day of | | 2014. |
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| | | L.S. | |
| Christoph Max KRELL | | | |
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| Witness: Print Name: | | × | |
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| Daniel Andreas NIEDEDED | *************************************** | L.S. | |
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| Executed this | day of _ | | 2014. |
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| | | L.S. | |
| Werner Heinz PACHING | ER | | |
| Witness: Print Name: | | ······································ | |
| Witness: Print Name: | | | |
| Executed this | day of | | 2014. |
| Marie-Christine WOLF | ······ | L.S. | |
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| Executed this | day of | | 2014. |
| David Dimmer | | \$ | |
| Daniel ZIMMERMANN | M. Comment | L.0; | |
| Marie Ma | | | |
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| Witness: Print Name: 725 8 / | | | |

| Executed this day of 2014. |
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| NOVARTIS PHARMA AG |
| BY: S. Tos C. Authorized Signatory S. |
| Print Name: |
| BY:L.S. Print Name: Elke Blab-Rotzinger Authorized signatory |
| Witness: Print Name: MARIA OF LOS PERMILARADOS, LANGURE MALVESTRE |
| Witness: Print Name: AND |

RECORDED: 01/12/2016