

## PATENT ASSIGNMENT

Electronic Version v1.1  
 Stylesheet Version v1.1

| SUBMISSION TYPE:                                                                                                                                                                                                                                                                                                                                      | NEW ASSIGNMENT       |               |                      |                     |                      |                   |              |                |            |              |         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------|----------------------|---------------------|----------------------|-------------------|--------------|----------------|------------|--------------|---------|
| NATURE OF CONVEYANCE:                                                                                                                                                                                                                                                                                                                                 | ASSIGNMENT           |               |                      |                     |                      |                   |              |                |            |              |         |
| CONVEYING PARTY DATA                                                                                                                                                                                                                                                                                                                                  |                      |               |                      |                     |                      |                   |              |                |            |              |         |
| <table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Carsten Kirschning</td> <td>03/22/2013</td> </tr> <tr> <td>Hubertus Hochrein</td> <td>04/02/2013</td> </tr> <tr> <td>Stefan Bauer</td> <td>03/22/2013</td> </tr> </tbody> </table>                                                              |                      | Name          | Execution Date       | Carsten Kirschning  | 03/22/2013           | Hubertus Hochrein | 04/02/2013   | Stefan Bauer   | 03/22/2013 |              |         |
| Name                                                                                                                                                                                                                                                                                                                                                  | Execution Date       |               |                      |                     |                      |                   |              |                |            |              |         |
| Carsten Kirschning                                                                                                                                                                                                                                                                                                                                    | 03/22/2013           |               |                      |                     |                      |                   |              |                |            |              |         |
| Hubertus Hochrein                                                                                                                                                                                                                                                                                                                                     | 04/02/2013           |               |                      |                     |                      |                   |              |                |            |              |         |
| Stefan Bauer                                                                                                                                                                                                                                                                                                                                          | 03/22/2013           |               |                      |                     |                      |                   |              |                |            |              |         |
| RECEIVING PARTY DATA                                                                                                                                                                                                                                                                                                                                  |                      |               |                      |                     |                      |                   |              |                |            |              |         |
| <table border="1"> <tr> <td>Name:</td> <td>Bavarian Nordic GmbH</td> </tr> <tr> <td>Street Address:</td> <td>Fraunhoferstrasse 13</td> </tr> <tr> <td>City:</td> <td>Martinsreid</td> </tr> <tr> <td>State/Country:</td> <td>GERMANY</td> </tr> <tr> <td>Postal Code:</td> <td>D-82152</td> </tr> </table>                                            |                      | Name:         | Bavarian Nordic GmbH | Street Address:     | Fraunhoferstrasse 13 | City:             | Martinsreid  | State/Country: | GERMANY    | Postal Code: | D-82152 |
| Name:                                                                                                                                                                                                                                                                                                                                                 | Bavarian Nordic GmbH |               |                      |                     |                      |                   |              |                |            |              |         |
| Street Address:                                                                                                                                                                                                                                                                                                                                       | Fraunhoferstrasse 13 |               |                      |                     |                      |                   |              |                |            |              |         |
| City:                                                                                                                                                                                                                                                                                                                                                 | Martinsreid          |               |                      |                     |                      |                   |              |                |            |              |         |
| State/Country:                                                                                                                                                                                                                                                                                                                                        | GERMANY              |               |                      |                     |                      |                   |              |                |            |              |         |
| Postal Code:                                                                                                                                                                                                                                                                                                                                          | D-82152              |               |                      |                     |                      |                   |              |                |            |              |         |
| PROPERTY NUMBERS Total: 2                                                                                                                                                                                                                                                                                                                             |                      |               |                      |                     |                      |                   |              |                |            |              |         |
| <table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>61597063</td> </tr> <tr> <td>PCT Number:</td> <td>EP2013000392</td> </tr> </tbody> </table>                                                                                                                       |                      | Property Type | Number               | Application Number: | 61597063             | PCT Number:       | EP2013000392 |                |            |              |         |
| Property Type                                                                                                                                                                                                                                                                                                                                         | Number               |               |                      |                     |                      |                   |              |                |            |              |         |
| Application Number:                                                                                                                                                                                                                                                                                                                                   | 61597063             |               |                      |                     |                      |                   |              |                |            |              |         |
| PCT Number:                                                                                                                                                                                                                                                                                                                                           | EP2013000392         |               |                      |                     |                      |                   |              |                |            |              |         |
| CORRESPONDENCE DATA                                                                                                                                                                                                                                                                                                                                   |                      |               |                      |                     |                      |                   |              |                |            |              |         |
| <p>Fax Number: 6506251176<br/> <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 650-681-4780<br/>       Email: David.Hoffman@bn-it.com<br/>       Correspondent Name: David C. Hoffman<br/>       Address Line 1: 2425 Garcia Avenue<br/>       Address Line 4: Mountain View, CALIFORNIA 94043</p> |                      |               |                      |                     |                      |                   |              |                |            |              |         |
| ATTORNEY DOCKET NUMBER:                                                                                                                                                                                                                                                                                                                               | BN0079PCT            |               |                      |                     |                      |                   |              |                |            |              |         |
| NAME OF SUBMITTER:                                                                                                                                                                                                                                                                                                                                    | David C. Hoffman     |               |                      |                     |                      |                   |              |                |            |              |         |
| Signature:                                                                                                                                                                                                                                                                                                                                            | /David C. Hoffman/   |               |                      |                     |                      |                   |              |                |            |              |         |

Date:

06/05/2013

**Total Attachments: 5**

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CONFIRMATORY ASSIGNMENT

WHEREAS We, the below-named inventors (hereinafter referred to as 'Assignors'), have made certain new and useful inventions in "Agonists and Antagonists of Toll-Like Receptor (TLR) 13," set forth in a U.S. Provisional Patent Application bearing U.S. Application No. 61/597,063 filed on February 9, 2012; and in an International Patent Application bearing International Application No. PCT/EP2013/000392 having an international filing date of February 8, 2013; and

WHEREAS, pursuant to the provisions of the German Employees' Inventions Act (*Arbeitnehmererfindungsgesetz*), Assignors' entire right, title and interest in and to the above-identified invention; U.S. Application No. 61/597,063; and International Application No. PCT/EP2013/000392; all rights to claim priority on the basis of those applications; all National Stage Applications, divisions, continuations, and continuations-in-part thereof derived from those applications and claiming benefit thereof, which may be or have been filed in the United States or any foreign country; all Letters Patent or Patents which may be or have been granted thereon in the United States or any foreign country; and all extensions, renewals, and reissues thereof have been and are hereby sold, assigned, transferred and set over to Bavarian Nordic GmbH (formerly known as 'Bavarian Nordic Research Institute GmbH'), a corporation organized under the laws of Germany having its principal place of business at Fraunhoferstrasse 13, D-82152, Martinsried, Germany, by operation of German law, to the full end of the term or terms for which Letters Patent or Patents may be granted, as fully and entirely as if the same would have been held and enjoyed by the Assignors, had this sale and assignment not been made;

WHEREAS, pursuant to the Service Agreement between Bavarian Nordic GmbH and Bavarian Nordic A/S, effective January 1, 2000, Bavarian Nordic GmbH's entire right, title and interest in and to the above-identified invention; U.S. Application No. 61/597,063; and International Application No. PCT/EP2013/000392; all rights to claim priority on the basis of those applications; all National Stage Applications, divisions, continuations, and continuations-in-part thereof derived from those applications and claiming benefit thereof, which may be or have been filed in the United States or any foreign country; all Letters Patent or Patents which may be or have been granted thereon in the United States or any foreign country; and all extensions, renewals, and reissues thereof have been and are hereby sold, assigned, transferred and set over to Bavarian Nordic A/S (formerly known as 'Bavarian Nordic Research Institute A/S'), a corporation organized under the laws of Denmark having its principal place of business at Hejreskovvej 10A, DK-3490 Kvistgaard, Denmark, to the full end of the term or terms for which Letters Patent or Patents may be granted, as fully and entirely as if the same would have been held and enjoyed by Bavarian Nordic GmbH, had this sale and assignment not been made;

WHEREAS both Assignors and Bavarian Nordic GmbH wish to hereby sell, assign, transfer and set over and confirm the sale, assignment, transfer and set over of their entire right, title and interest in and to the above-identified invention; U.S. Application No. 61/597,063; and International Application No. PCT/EP2013/000392; all rights to claim priority on the basis of those applications;

all National Stage Applications, divisions, continuations, and continuations-in-part thereof derived from those applications and claiming benefit thereof, which may be or have been filed in the United States or any foreign country; all Letters Patent or Patents which may be or have been granted thereon in the United States or any foreign country; and all extensions, renewals, and reissues thereof;

NOW THEREFORE, for good and valuable consideration, the sufficiency and receipt of which is hereby acknowledged, Assignors and Bavarian Nordic GmbH hereby sell, assign, transfer and set over and confirm the sale, assignment, transfer and set over of their entire respective right, title and interest in and to the above-identified invention; U.S. Application No. 61/597,063; and International Application No. PCT/EP2013/000392; all rights to claim priority on the basis of these applications; all National Stage Applications, divisions, continuations, and continuations-in-part thereof derived from those applications and claiming benefit thereof, which may be or have been filed in the United States or any foreign country; all Letters Patent or Patents which may be or have been granted thereon in the United States or any foreign country; and all extensions, renewals, and reissues thereof to Bavarian Nordic GmbH (by Assignors) and to Bavarian Nordic A/S (by Bavarian Nordic GmbH); and

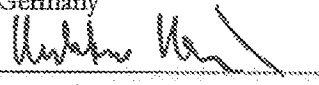
WE HEREBY covenant that Assignors and Bavarian Nordic GmbH had the full right to convey their entire respective right, title and interest by operation of German law and/or the prior agreements referred to herein; and that we will not execute any agreement in conflict with this Confirmatory Assignment or the prior agreements referred to herein; and

WE HEREBY further covenant and agree that we will, without further consideration, communicate with Bavarian Nordic A/S, its successors and assigns, any facts known to us regarding the above-identified invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to the above-identified invention in Bavarian Nordic A/S, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Bavarian Nordic A/S, its successors and assigns, to obtain and enforce proper patent protection for the above-identified invention in the United States and any foreign country, with the understanding that any expense relating to the execution of such papers shall be borne by Bavarian Nordic A/S, its successors and assigns.

IN TESTIMONY WHEREOF, we have hereunto set our hands.

\*\*\*\*\*

Name: Carsten Kirschning (Inventor/Assignor)  
Address: Bertoldstrasse 6  
45130 Essen  
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Signature:   
Date: 3/22/13

Name: Hubertus Hochrein (Inventor/Assignor)  
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Signature:   
Date: 4/02/13

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Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

Name: Carsten Kirschning (Inventor/Assignor)

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45130 Essen  
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Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Name: Hubertus Hochrein (Inventor/Assignor)

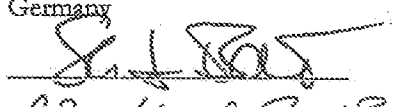
Address: Haffstrasse 134  
81825 Munich  
Germany

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Name: Stefan Bauer (Inventor/Assignor)

Address: Lahnblick 29  
35041 Marburg-Michelbach  
Germany

Signature:  \_\_\_\_\_

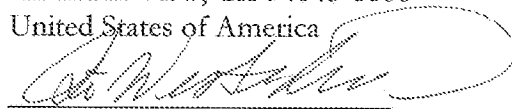
Date: 22 March 2013

Name: Li Westerlund (Vice President, Global Intellectual Property Bavarian Nordic Group)

Property)

Address: Bavarian Nordic GmbH  
c/o BN ImmunoTherapeutics, Inc.  
2425 Garcia Avenue  
Mountain View, CA 94043-1106  
United States of America

Signature:



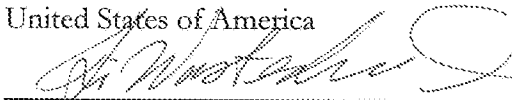
Date:

3 May 2013

Name: Li Westerlund (Vice President, Global Intellectual Property Bavarian Nordic Group)

Address: Bavarian Nordic A/S  
c/o BN ImmunoTherapeutics, Inc.  
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Mountain View, CA 94043-1106  
United States of America

Signature:



Date:

3 May 2013