

## PATENT ASSIGNMENT

Electronic Version v1.1  
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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>Muthiah MANOHARAN</td> <td>01/10/2012</td> </tr> <tr> <td>Kallanthottathil G RAJEEV</td> <td>01/20/2012</td> </tr> <tr> <td>Muthusamy JAYARAMAN</td> <td>01/10/2012</td> </tr> <tr> <td>David BUTLER</td> <td>01/03/2012</td> </tr> <tr> <td>Michael E JUNG</td> <td>12/31/2011</td> </tr> </tbody> </table>		Name	Execution Date	Muthiah MANOHARAN	01/10/2012	Kallanthottathil G RAJEEV	01/20/2012	Muthusamy JAYARAMAN	01/10/2012	David BUTLER	01/03/2012	Michael E JUNG	12/31/2011
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RECEIVING PARTY DATA													
<table border="1"> <tr> <td>Name:</td> <td>ALNYLAM PHARMACEUTICALS, INC.</td> </tr> <tr> <td>Street Address:</td> <td>300 Third Street</td> </tr> <tr> <td>City:</td> <td>Cambridge</td> </tr> <tr> <td>State/Country:</td> <td>MASSACHUSETTS</td> </tr> <tr> <td>Postal Code:</td> <td>02142</td> </tr> </table>		Name:	ALNYLAM PHARMACEUTICALS, INC.	Street Address:	300 Third Street	City:	Cambridge	State/Country:	MASSACHUSETTS	Postal Code:	02142		
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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>13318600</td> </tr> <tr> <td>PCT Number:</td> <td>US1033777</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13318600	PCT Number:	US1033777						
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Application Number:	13318600												
PCT Number:	US1033777												
CORRESPONDENCE DATA													
Fax Number:	(917)332-3773												
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Email:	patents@blankrome.com												
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>													
Correspondent Name:	Alnylam Pharmaceuticals c/o Blank Rome												
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ATTORNEY DOCKET NUMBER:	135399.00904												

CH \$80.00 13318600

PATENT

NAME OF SUBMITTER:

Judy Yeddo

**Total Attachments: 11**

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## ASSIGNMENT BY INVENTORS

**THIS ASSIGNMENT** by Muthiah MANOHARAN; Kallanthottathil G. RAJEEV; Muthusamy JAYARAMAN; David BUTLER; and Michael E. JUNG (hereinafter referred to as Assignors), residing at 300 Third Street, Cambridge, Massachusetts 02142; 300 Third Street, Cambridge, Massachusetts 02142; 300 Third Street, Cambridge, Massachusetts 02142; 36 Everett St, Medford, Massachusetts 02155; and 300 Third Street, Cambridge, Massachusetts 02142, respectively;

**WHEREAS**, Assignors have invented certain new and useful improvements in LIPID COMPOSITIONS, set forth in U.S. Patent Application No. 13/318,600, filed November 2, 2011, and International Patent Application No. PCT/US2010/033777, filed May 5, 2010; and

**WHEREAS**, ALNYLAM PHARMACEUTICALS, INC., a organized under and pursuant to the laws of Delaware having its principal place of business at 300 Third Street, Cambridge, Massachusetts 02142 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said inventions and said Application for Letters Patent of the United States, and in and to any Letters Patent of the United States to be obtained therefore and thereon.

**NOW, THEREFORE**, in consideration of One Dollar (\$1.00) and other good and sufficient consideration, the receipt of which is hereby acknowledged, Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions and application for Letters Patent, and in and to any and all direct and indirect divisions, continuations and continuations-in-part of said application, and any and all Letters Patent in the United States and all foreign countries which may be granted therefor and thereon, and reissues, reexaminations and extensions of said Letters Patent, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee, for its own use and benefit and the use and benefit of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent may be granted and/or extended, as fully and entirely as the

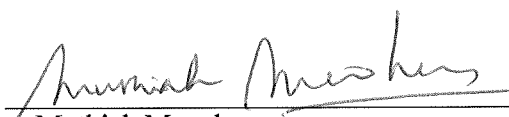
same would have been held and enjoyed by Assignors, had this sale and assignment not been made.

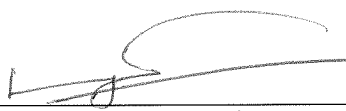
**AND** for the same consideration, Assignors hereby represent and warrant to Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already been transferred to Assignee, Assignors are the sole and lawful owners of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

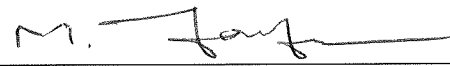
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**AND** Assignors hereby request the Commissioner of Patent and Trademarks to issue said Letters Patent of the United States to Assignee, as Assignee of said inventions and the Letters Patent to be issued thereon, for the sole use and benefit of Assignee, its successors, legal representatives and assigns.

**AND** Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

Date: 1/10/2012 Signature:   
Muthiah Manoharan

Date: 1/10/2012 Signature:   
Kallanthottathil G. Rajeev

Date: 1/10/2012 Signature:   
Muthusamy Jayaraman

Date: \_\_\_\_\_ Signature: \_\_\_\_\_  
David Butler

Date: \_\_\_\_\_ Signature: \_\_\_\_\_  
Michael E. Jung

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

Signature: \_\_\_\_\_  
Muthiah Manoharan


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

Signature: \_\_\_\_\_  
Kallanthottathil G. Rajeev

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

Signature: \_\_\_\_\_  
Muthusamy Jayaraman

Date: 3<sup>rd</sup> Jan 2012

Signature:  \_\_\_\_\_  
David Butler

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

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

Signature: \_\_\_\_\_  
Kallanthottathil G. Rajeev

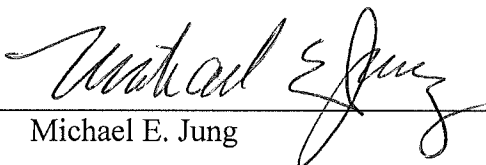
Date: \_\_\_\_\_

Signature: \_\_\_\_\_  
Muthusamy Jayaraman

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

Signature: \_\_\_\_\_  
David Butler

Date: 12/31/11

Signature:   
Michael E. Jung

**RECORDATION FORM COVER SHEET**  
**PATENTS ONLY**

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

<b>1. Name of conveying party(ies):</b> Muthiah MANOHARAN (01/10/2012), Kallanthottathil G. RAJEEV (01/20/2012), Muthusamy JAYARAMAN (01/10/2012) Additional name(s) of conveying party(ies) attached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>2. Name and address of receiving party(ies)</b> Name: <u>ALNYLAM PHARMACEUTICALS, INC.</u> Internal Address: _____ Street Address: _____  300 Third Street  City: <u>Cambridge</u> State: <u>Massachusetts</u> Country: <u>United States of America</u> Zip: <u>02142</u> Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>3. Nature of conveyance/Execution Date(s):</b> Execution Date(s): <u>in parentheses after inventor name</u> <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Change of Name <input type="checkbox"/> Security Agreement <input type="checkbox"/> Joint Research Agreement <input type="checkbox"/> Government Interest Assignment <input type="checkbox"/> Executive Order 9424, Confirmatory License <input type="checkbox"/> Other _____	<b>4. Application or patent number(s):</b> <input type="checkbox"/> This document is being filed together with a new application. A. Patent Application No.(s) 13/318,600 PCT/US2010/033777 B. Patent No.(s)  Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>5. Name and address to whom correspondence concerning document should be mailed:</b> Name: <u>Jay P. Lessler</u> <u>BLANK ROME LLP</u> Internal Address: <u>Atty. Dkt.: 135399.00904</u> Street Address: <u>The Chrysler Building</u> <u>405 Lexington Ave.</u>  City: <u>New York</u> State: <u>NY</u> Zip: <u>10174-0208</u> Phone Number: <u>(212) 885-5000</u> Fax Number: <u>(212) 885-5001</u> Email Address: <u>patents@blankrome.com</u>	<b>6. Total number of applications and patents involved:</b> <span style="border: 1px solid black; padding: 2px 10px;">2</span>  <b>7. Total fee</b> (37 CFR 1.21(h) & 3.41) \$ <u>80.00</u>  <input checked="" type="checkbox"/> Authorized to be charged to deposit account <input type="checkbox"/> Enclosed <input type="checkbox"/> None required (government interest not affecting title)  <b>8. Payment Information</b> Deposit Account Number <u>02-2555</u> Authorized User Name <u>Jay P. Lessler</u>
<b>9. Signature:</b> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"><div style="width: 60%;"><u>/Jay P. Lessler/</u> Signature  <u>Jay P. Lessler - 41,151</u> Name of Person Signing</div><div style="width: 35%; text-align: right;"><u>February 6, 2012</u> Date  Total number of pages including cover sheet, attachments, and documents: <span style="border: 1px solid black; padding: 2px 10px;">11</span></div></div>	

**RECORDATION FORM COVER SHEET (PTO-1595)**  
**(supplemental sheet)**

**Additional Conveying Party(ies)/Execution Date(s) (1. Continued):**

David BUTLER (01/03/2012), and Michael E. JUNG (12/31/2011)

**Additional Assignees (2. Continued):**

Assignee Name: \_\_\_\_\_

Internal Address:

Street Address:

City: \_\_\_\_\_ State: \_\_\_\_\_ Country: \_\_\_\_\_ Zip: \_\_\_\_\_

Assignee Name: \_\_\_\_\_

Internal Address:

Street Address:

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Assignee Name: \_\_\_\_\_

Internal Address:

Street Address:

City: \_\_\_\_\_ State: \_\_\_\_\_ Country: \_\_\_\_\_ Zip: \_\_\_\_\_

**Additional Applications and/or Patents (4. Continued):**

Additional Patent Application Numbers

4A. Continued:

Additional Patent Numbers

4B. Continued:

Additional numbers attached?

☐ Yes

☐ No