

PATENT ASSIGNMENT

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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>07/10/2012</td> </tr> <tr> <td>Kallanthottathil G RAJEEV</td> <td>07/10/2012</td> </tr> <tr> <td>Muthusamy JAYARAMAN</td> <td>07/10/2012</td> </tr> <tr> <td>David BUTLER</td> <td>07/10/2012</td> </tr> <tr> <td>Mamta KAPOOR</td> <td>07/10/2012</td> </tr> <tr> <td>Rajesh Kumar KAINTHAN</td> <td>07/12/2012</td> </tr> </tbody> </table>		Name	Execution Date	Muthiah MANOHARAN	07/10/2012	Kallanthottathil G RAJEEV	07/10/2012	Muthusamy JAYARAMAN	07/10/2012	David BUTLER	07/10/2012	Mamta KAPOOR	07/10/2012	Rajesh Kumar KAINTHAN	07/12/2012
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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: 1															
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13514352</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13514352										
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Application Number:	13514352														
CORRESPONDENCE DATA															
Fax Number:	9173323773														
Phone:	2128855176														
Email:	jyeddo@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														
Address Line 1:	ATTN: Patent Docketing														
Address Line 2:	600 New Hampshire Avenue NW														
Address Line 4:	Washington, DISTRICT OF COLUMBIA 20037														
ATTORNEY DOCKET NUMBER:	135399.01106														

CH \$40.00 13514352

NAME OF SUBMITTER:

Judy Yeddo

Total Attachments: 9

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ASSIGNMENT BY INVENTORS

THIS ASSIGNMENT by Muthiah MANOHARAN; Kallanthottathil G. RAJEEV; Muthusamy JAYARAMAN; David BUTLER; Mamta KAPOOR; and Rajesh Kumar KAINTHAN (hereinafter referred to as Assignors), each residing at 300 Third Street, Cambridge, Massachusetts 02142, respectively;

WHEREAS, Assignors have invented certain new and useful improvements in COMPOSITIONS FOR NUCLEIC ACID DELIVERY, set forth in International Patent Application No. PCT/US2010/059206, filed December 7, 2010, U.S. Patent Application No. 13/514,352, filed June 7, 2012, and U.S. Provisional Patent Application Nos. 61/267,419, filed December 7, 2009, 61/334,398, filed May 13, 2010, and 61/384,303, filed September 19, 2010; and

WHEREAS, ALNYLAM PHARMACEUTICALS, INC., a corporation 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 all foreign countries, and in and to any Letters Patent of the United States and all foreign countries 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.

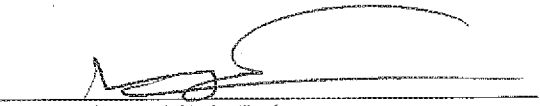
AND for the same consideration, Assignors hereby represent and warrant to Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already 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.

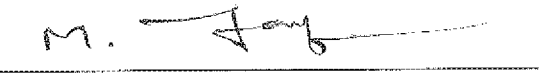
AND for the same consideration, Assignors hereby covenant and agree to and with Assignee, its successors, legal representatives and assigns, that Assignors will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignee, its successors, legal representatives and assigns, whenever counsel of Assignee, or counsel of its successors, legal representatives and assigns, shall advise: that any proceeding in connection with said inventions, or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions in any country, including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable.

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: 7/10/2012 Signature: 
Muthiah Manoharan

Date: 7/10/2012 Signature: 
Kallanthottathil G. Rajeev

Date: 07/10/2012 Signature: 
Muthusamy Jayaraman

Date: _____ Signature: _____
David Butler

Date: _____ Signature: _____
Mamta Kapoor

Date: _____ Signature: _____
Rajesh Kumar Kainthan

Date: _____

Signature: _____
Muthiah Manoharan

Date: _____

Signature: _____
Kallanthottathil G. Rajeev

Date: _____

Signature: _____
Muthusamy Jayaraman

Date: 10th July 2012

Signature:  _____
David Butler

Date: _____

Signature: _____
Mamta Kapoor

Date: _____

Signature: _____
Rajesh Kumar Kainthan

Date: _____

Signature: _____
Muthiah Manoharan

Date: _____

Signature: _____
Kallanthottathil G. Rajeev

Date: _____

Signature: _____
Muthusamy Jayaraman

Date: _____

Signature: _____
David Butler

Date: 07/10/12

Signature: 
Mamta Kapoor

Date: _____

Signature: _____
Rajesh Kumar Kainthan

Date: _____ Signature: _____
Muthiah Manoharan

Date: _____ Signature: _____
Kallanthottathil G. Rajeev

Date: _____ Signature: _____
Muthusamy Jayaraman

Date: _____ Signature: _____
David Butler

Date: _____ Signature: _____
Mamta Kapoor

Date: July 12, 2012 Signature: _____
Rajesh Kumar Kainthan

ACCEPTANCE BY ASSIGNEE

In connection with an assignment in any jurisdiction in which an acceptance by ASSIGNEE is required, I hereby accept this assignment on behalf of **ALNYLAM PHARMACEUTICALS, INC.**, I declare under penalty of perjury under the laws of the United States of America, and under penalty of the laws of any other jurisdiction before which this document may be presented, that (check all that apply):

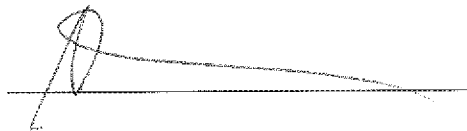
- ☒ I am an officer of the above-identified ASSIGNEE,
- ☒ I have signed this document on behalf of ASSIGNEE with the full authority of its board of directors,

and that all the foregoing is true and correct.

Date:

7/14/2012

By:



Print Name:

Title:

Steven A. Bossone
Vice President, Intellectual Property

**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.

1. Name of conveying party(ies):

Muthiah MANOHARAN (07/10/2012),
Kallanthottathil G. RAJEEV (07/10/2012),
Muthusamy JAYARAMAN (07/10/2012),

Additional name(s) of conveying party(ies) attached? ☒ Yes ☐ No

2. Name and address of receiving party(ies)

Name: ALNYLAM PHARMACEUTICALS, INC.

Internal Address: _____

Street Address: _____

300 Third Street

City: Cambridge

State: Massachusetts

Country: United States of America Zip: 02142

Additional name(s) & address(es) attached? ☐ Yes ☒ No

3. Nature of conveyance/Execution Date(s):

Execution Date(s): in parentheses after inventor name

☒ Assignment ☐ Merger ☐ Change of Name

☐ Security Agreement ☐ Joint Research Agreement

☐ Government Interest Assignment

☐ Executive Order 9424, Confirmatory License

☐ Other _____

4. Application or patent number(s):

A. Patent Application No.(s)

13/514,352

☐ This document is being filed together with a new application.

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address to whom correspondence concerning document should be mailed:

Name: Jay P. Lessler
BLANK ROME LLP

Internal Address: Atty. Dkt.: 135399.01106

Street Address: The Chrysler Building
405 Lexington Ave.

City: New York

State: NY Zip: 10174-0208

Phone Number: (212) 885-5000

Fax Number: (212) 885-5001

Email Address: patents@blankrome.com

6. Total number of applications and patents involved:

1

7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00

☒ Authorized to be charged to deposit account

☐ Enclosed

☐ None required (government interest not affecting title)

8. Payment Information

Deposit Account Number 02-2555

Authorized User Name Jay P. Lessler

9. Signature:

/Jay P. Lessler/

Signature

August 21, 2012

Date

Jay P. Lessler - 41,151

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

9

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

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

David BUTLER (07/10/2012), Mamta KAPOOR (07/10/2012), and Rajesh Kumar KAINTHAN (07/12/2012)

Additional Assignees (2. Continued):

Assignee Name: _____

Internal Address:

Street Address:

City: _____ State: _____ Country: _____ Zip: _____

Assignee Name: _____

Internal Address:

Street Address:

City: _____ State: _____ Country: _____ Zip: _____

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