

## PATENT ASSIGNMENT COVER SHEET

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 Stylesheet Version v1.2

EPAS ID: PAT4545219

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
MUTHIAH MANOHARAN	08/01/2011
MUTHUSAMY JAYARAMAN	08/15/2011
KALLANTHOTTATHIL G. RAJEEV	08/08/2011
LAXMAN ELTEPU	08/15/2011
STEVEN ANSELL	08/18/2011
JIANXIN CHEN	08/04/2011
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	ALNYLAM PHARMACEUTICALS, INC.
<b>Street Address:</b>	300 THIRD STREET
<b>City:</b>	CAMBRIDGE
<b>State/Country:</b>	MASSACHUSETTS
<b>Postal Code:</b>	02142
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15617520
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(952)876-4098
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<b>ATTORNEY DOCKET NUMBER:</b>	08050.007US3
<b>NAME OF SUBMITTER:</b>	YANG LI
<b>SIGNATURE:</b>	/Yang Li/
<b>DATE SIGNED:</b>	08/10/2017

**Total Attachments: 12**

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## ASSIGNMENT BY INVENTORS

**THIS ASSIGNMENT** by Muthiah MANOHARAN; Muthusamy JAYARAMAN; Kallanthottathil G. RAJEEV; Laxman ELTEPU, Steven ANSELL; and Jiansin CHEN (hereinafter referred to as Assignors), each located at 300 Third Street, Cambridge, Massachusetts 02142;

**WHEREAS**, Assignors have invented certain new and useful improvements in NOVEL LIPIDS AND COMPOSITIONS FOR THE DELIVERY OF THERAPEUTICS, set forth in U.S. Patent Application No. 13/128,283, filed on May 9, 2011, and International Patent Application No. PCT/US09/63927, filed on November 10, 2009;

**WHEREAS**, ALNYLAM PHARMACEUTICALS, INC., a company 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: 8/1/2011

Signature:   
Muthiah MANOHARAN

Date: Aug. 15, 2011

Signature:   
Muthusamy JAYARAMAN

Date: 8/8/2011

Signature:   
Kallanthottathil G. RAJEEV

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

Signature: \_\_\_\_\_  
Laxman ELTEPU

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

Signature: \_\_\_\_\_  
Steven ANSELL

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

Signature: \_\_\_\_\_  
Jianxin CHEN

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

Signature: \_\_\_\_\_  
Muthiah MANOHARAN

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

Signature: \_\_\_\_\_  
Muthusamy JAYARAMAN

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

Signature: \_\_\_\_\_  
Kallanthottathil G. RAJEEV

Date: Aug 15, 2011

Signature: *Laxman*  
Laxman ELTEPU

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

Signature: \_\_\_\_\_  
Steven ANSELL

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

Signature: \_\_\_\_\_  
Jianxin CHEN



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

Signature: \_\_\_\_\_  
Muthiah MANOHARAN

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

Signature: \_\_\_\_\_  
Muthusamy JAYARAMAN

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

Signature: \_\_\_\_\_  
Kallanthottathil G. RAJEEV

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

Signature: \_\_\_\_\_  
Laxman ELTEPU

Date: 18 AUGUST 2011

Signature:   
Steven ANSELL

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

Signature: \_\_\_\_\_  
Jianxin CHEN

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

Signature: \_\_\_\_\_  
Muthiah MANOHARAN

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

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

Signature: \_\_\_\_\_  
Kallanthottathil G. RAJEEV

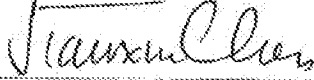
Date: \_\_\_\_\_

Signature: \_\_\_\_\_  
Laxman ELTEPU

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

Signature: \_\_\_\_\_  
Steven ANSELL

Date: Aug. 4, 2011

Signature:   
Jianxin CHEN