

## PATENT ASSIGNMENT COVER SHEET

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Stylesheet Version v1.2

EPAS ID: PAT6000150

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
KEVIN FITZGERALD	07/18/2016
GREGORY HINKLE	07/19/2016
TIMOTHY RYAN MOONEY	07/19/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	ALNYLAM PHARMACEUTICALS, INC.
<b>Street Address:</b>	300 THIRD STREET
<b>Internal Address:</b>	3RD FLOOR
<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>
<b>Application Number:</b>	16752742
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<i>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.</i>	
<b>Phone:</b>	617-449-6500
<b>Email:</b>	fkatsikis@mccarter.com
<b>Correspondent Name:</b>	MCCARTER & ENGLISH, LLP
<b>Address Line 1:</b>	265 FRANKLIN STREET
<b>Address Line 4:</b>	BOSTON, MASSACHUSETTS 02110
<b>ATTORNEY DOCKET NUMBER:</b>	121301-04005
<b>NAME OF SUBMITTER:</b>	DEBORAH L. NAGLE, PH.D.
<b>SIGNATURE:</b>	/Deborah L. Nagle/
<b>DATE SIGNED:</b>	03/06/2020
<b>Total Attachments: 6</b>	
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## ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor (hereinafter referred to singly and collectively as "ASSIGNOR") has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto

**Alynham Pharmaceuticals, Inc.**  
300 Third Street  
3rd Floor  
Cambridge, Massachusetts 02142  
United States of America

(hereinafter referred to as "ASSIGNEE") its successors and assigns, the full and exclusive right, title and interest for the United States, its territories and possessions, and all foreign countries in and to this invention relating to

### **XANTHINE DEHYDROGENASE (XDH) iRNA COMPOSITIONS AND METHODS OF USE THEREOF**

as set forth in the following Patent Application:

International Application No. PCT/US2016/043985, filed July 26, 2016

which claims the benefit of the following applications:

U.S. Provisional Application No. 62/197,221, filed July 27, 2015  
U.S. Provisional Application No. 62/255,603, filed November 16, 2015  
U.S. Provisional Application No. 62/287,522, filed January 27, 2016

as well as in and to (a) all improvements and modifications of the above-identified invention or inventions, (b) the above-identified applications and all other applications for Letters Patent of the United States and countries foreign thereto for above-identified invention or inventions and all improvements and modifications thereof, (c) all Letters Patent which may issue from said applications in the United States and countries foreign thereto, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the International Convention and any other international agreement to which the United States adheres; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

ASSIGNOR HEREBY AUTHORIZES ASSIGNEE to file patent applications in any or all countries on the above-identified invention or inventions in the name of the undersigned or in the name of ASSIGNEE or otherwise as ASSIGNEE may deem advisable under the International Convention or otherwise.

ASSIGNOR HEREBY AUTHORIZES AND REQUESTS the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns.

ASSIGNOR HEREBY AGREES (a) to communicate to ASSIGNEE, its successors and assigns, or their representative or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States or a country foreign thereto; (c) to execute and deliver, upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, oaths, affidavits, and declarations, depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States and countries foreign thereto.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the law firm of **McCarter & English, LLP** the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of **McCarter & English, LLP** do not personally represent ASSIGNOR OR ASSIGNOR'S legal interests, but instead represent the interests of ASSIGNEE; since said attorneys and agents cannot provide legal advice to ASSIGNOR with respect to this Assignment, ASSIGNOR acknowledges its right to seek its own independent legal counsel.

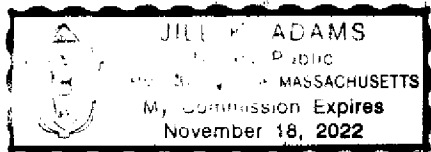
Executed this 18 day of July, 2016.

[Signature]  
Kevin FITZGERALD

United States of America  
State of Massachusetts  
County of Middlesex

On this 18th day of July, 2016 before me,  
the undersigned notary public, personally appeared Kevin FITZGERALD  
(name of document signer), proved to me through satisfactory evidence of identification,  
which was personally known, to be the person whose name  
is signed on the preceding or attached document in my presence.

[Signature] (official signature and seal of notary)  
My commission expires 18-NOV-2022



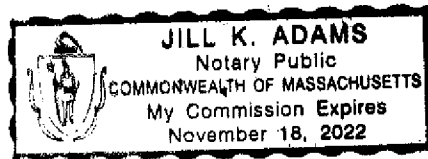
Executed this 19 day of July, 2016.

[Signature]  
Gregory HINKLE

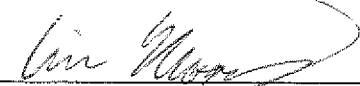
United States of America  
State of Massachusetts  
County of Wardsex

On this 19th day of July, 2016 before me,  
the undersigned notary public, personally appeared Gregory HINKLE  
(name of document signer), proved to me through satisfactory evidence of identification,  
which was personally known, to be the person whose name  
is signed on the preceding or attached document in my presence.

[Signature] (official signature and seal of notary)  
My commission expires 18-November-2022

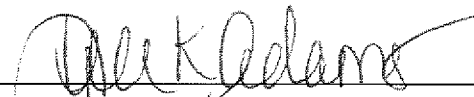


Executed this 19<sup>th</sup> day of July, 2016.

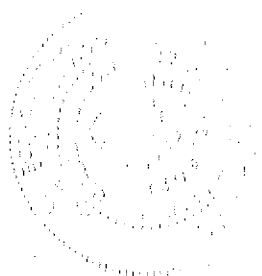
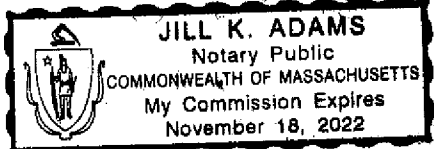
  
\_\_\_\_\_  
Timothy Ryan MOONEY

United States of America  
State of Massachusetts  
County of Middlesex

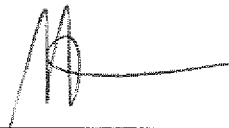
On this 19<sup>th</sup> day of July, 2016 before me,  
the undersigned notary public, personally appeared Timothy Ryan MOONEY  
(name of document signer), proved to me through satisfactory evidence of identification,  
which was personally known, to be the person whose name  
is signed on the preceding or attached document in my presence.

  
\_\_\_\_\_  
(official signature and seal of notary)

My commission expires 18-November-2022




Executed this 7<sup>th</sup> day of July, 2016.



Alnylam Pharmaceuticals, Inc.

United States of America  
State of Massachusetts  
County of Middlesex

On this 7<sup>th</sup> day of July, 2016 before me,  
the undersigned notary public, personally appeared Steven A. Bossone  
(name of document signer), proved to me through satisfactory evidence of identification,  
which was personally known, to be the person whose name  
is signed on the preceding or attached document in my presence.

 (official signature and seal of notary)  
My commission expires 18 - November - 2022

