PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4982866

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
ALNYLAM PHARMACEUTICALS, INC.	05/22/2018

RECEIVING PARTY DATA

Name:	GENZYME CORPORATION		
Street Address:	50 BINNEY STREET		
City:	CAMBRIDGE		
State/Country:	MASSACHUSETTS		
Postal Code:	02142		

PROPERTY NUMBERS Total: 6

Property Type	Number		
Application Number:	62264013		
Application Number:	62315228		
Application Number:	62366304		
Application Number:	62429241		
Application Number:	15371300		
PCT Number:	US2016065245		

CORRESPONDENCE DATA

Fax Number:

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.

Phone: 617-449-6500

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Correspondent Name: MCCARTER & ENGLISH, LLP

Address Line 1: 265 FRANKLIN STREET

Address Line 4: BOSTON, MASSACHUSETTS 02110

ATTORNEY DOCKET NUMBER:	117811-026_
NAME OF SUBMITTER:	DEBORAH L. NAGLE
SIGNATURE:	/Deborah L. Nagle/
DATE SIGNED:	05/30/2018

Total Attachments: 3

PATENT REEL: 045934 FRAME: 0178

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> PATENT REEL: 045934 FRAME: 0179

Attorney Docket No.: 117811-026

ASSIGNMENT

For valuable consideration, the receipt of which is hereby acknowledged, and intending to be bound legally, Alnylam Pharmaceuticals, Inc., a corporation formed under the laws of the State of Delaware and having a principal place of business at 300 Third Street, 3rd Floor, Cambridge, Massachusetts 02142, USA (the "Assignor"), assigns Genzyme Corporation, a corporation formed under the laws of Massachusetts and having a principal place of business at 50 Binney Street, Cambridge, Massachusetts 02142, USA, and its successors, transferees, and assignees (collectively the "Assignee"), all of its rights, titles, and interests throughout the world in the subject matter (the "Subject Matter") disclosed or claimed in the patents and applications listed in Schedule A (the "Patents and Applications").

This Assignment, effective as of February 20, 2018, assigns (a) the Patents and Applications and all other applications that may be made for, and all patents, utility models, design registrations, and other rights of exclusion and inventors' certificates for, any of the Subject Matter (collectively the "Patents, Applications, and Granted Rights") in every country or region, (b) the right to claim priority based on and the benefit of the filing date of any of the Patents, Applications, and Granted Rights under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other applicable treaties or conventions, and (c) the right to pursue, collect, and retain in the Assignee's name or otherwise, damages and any other remedies arising from any past, present, or future infringement of the Subject Matter, the Patents, Applications, and Granted Rights, and any other rights assigned by this Assignment.

Assignor authorizes the Assignee to apply for and pursue protection for any or all of the Subject Matter, the Patents, Applications, and Granted Rights, and any other rights assigned by this Assignment in all countries, regions, and territories of the world, in the Assignor's name or in the Assignee's name.

Assignor represents and warrants that it has the right and power to make this Assignment and that it has not made and will not make any other assignment that conflicts with this Assignment.

Assignor will communicate to the Assignee (or at the request of the Assignee to other parties) all known facts in any form relating to the Subject Matter, will execute and provide all

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oaths and declarations, statements, testimony, assignments, powers of attorney, applications, and documents, and will perform all other lawful acts necessary or desirable to secure fully to the Assignee the rights, titles, and interests assigned by this Assignment.

Signed at Cambridge, Massachusetts, US on this _____ day of _____ www. (City, State and Nation)

Alnylam Pharmaceuticals Inc.

Name: Steven A. Bossone, Ph.D., J.D.

Title: Vice President, Intellectual Property

ASSIGNMENT OF RIGHTS ACCEPTED BY Genzyme Corporation

Signed at

(City, State and Nation)

Cambridge, MA, USA on this 25 day of May , 2018.

By:

Brian R. Morrill

Title:

Name:

Attorney-in-Fact, Associate Vice President, Head of U.S. Pharma Patents

Attorney Docket No.: 117811-026_

SCHEDULE A

Pat./Pub. No.	App. No.	Country	Filing Date	<u>Title</u>
Not Applicable	62/264,013	US	December 7, 2015	METHODS AND
	·			COMPOSITIONS
				FOR TREATING
				A SERPINC1-
				ASSOCIATED
				DISORDER
Not Applicable	62/315,228	US	March 30, 2016	METHODS AND
				COMPOSITIONS
				FOR TREATING
				A SERPINC1-
				ASSOCIATED
				DISORDER
Not Applicable	62/366,304	US	July 25, 2016	METHODS AND
				COMPOSITIONS
				FOR TREATING
				A SERPINC1-
				ASSOCIATED
				DISORDER
Not Applicable	62/429,241	US	December 2, 2016	METHODS AND
				COMPOSITIONS
*				FOR TREATING
				A SERPINC1-
				ASSOCIATED
770 - 01 - 101 - 101 - 11				DISORDER
US 2017/0159053A1	15/371,300	US	December 7, 2016	METHODS AND
			,	COMPOSITIONS
				FOR TREATING
				A SERPINC1-
				ASSOCIATED
7770 404 114 0000				DISORDER
WO 2017/100236	PCT/US2016/065245	PCT	December 7, 2016	METHODS AND
				COMPOSITIONS
				FOR TREATING
				A SERPINC1-
				ASSOCIATED
		<u> </u>		DISORDER

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RECORDED: 05/30/2018