PharmD Fellowship Program
Program Guide and Application Information 2018-2020

IN PARTNERSHIP WITH
Northeastern University
Bouvé College of Health Sciences
Message from Alnylam’s CEO

Over the past 15 years, we have strived to make a meaningful difference in patients’ lives by translating the biological phenomenon of RNA interference (RNAi) into a potential new class of medicines for treating rare and ultra-rare diseases. It has been a daring and stimulating endeavor, but through sheer perseverance and unwavering commitment to our core values, Alnylam is proud to have four robust, late stage clinical programs in development and we hope to transition from an R&D organization to a fully integrated global commercial company with a sustainable pipeline of RNAi-based medicines.

One of Alnylam’s Core Values is Commitment to People. We live this pledge every day by championing professional growth and investing in the people who will make our goals a reality. We firmly believe that by supporting the next generation of industry leaders through the Alnylam Pharmaceuticals and Northeastern University PharmD Fellowship Program, we can not only advance the careers of the Fellows, but also drive the progress of the broader biopharmaceutical industry. Our program offers prospective PharmD graduates the opportunity to join us at a pivotal time in the Company’s evolution, a time when there is much to do and much to learn. As such, our Fellows will gain deep exposure to a wide range of functional and therapeutic areas, interfacing with medical and regulatory affairs, health economics and outcomes research, and experiencing first-hand what drives our decision-making.

With the promise of RNAi being more palpable than ever, we are thrilled to have Fellows take part in our journey and contribute to the Company’s mission. Together, we hope to soon deliver Nobel Prize-winning science to patients around the world, expanding the boundaries of science and revolutionizing medicine as we know it. We hope you will join us!

John Maraganore, PhD
Chief Executive Officer of Alnylam Pharmaceuticals and Chair of the Biotechnology Innovation Organization (BIO) Board of Directors 2017-2018
Fellowship Program

Three years ago, Alnylam Pharmaceuticals partnered with Northeastern University to become the first Fellowship Program at a pre-commercial company. Since its inception, the Program has grown and continues to be an integral asset to all stakeholders. For the 2018 – 2020 recruitment cycle, the Fellowship Program is pleased to offer four 2-year positions in the following expertise areas: Regulatory Affairs, Medical Affairs, Value and Evidence Strategy (VESt)/HEOR, and Medical Information. The first year, Fellows customize their experience with individualized elective rotations throughout various groups at Alnylam while remaining a vital member in their core expertise area. In the second year, Fellows focus on their primary function. Throughout the two years, Fellows also have responsibilities at Northeastern University, such as teaching PharmD students and participating in longitudinal research with faculty.

ELECTIVE ROTATIONS

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<tr>
<th>Medical Affairs</th>
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<td>Investor/Public Relations</td>
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<td>Regulatory Affairs</td>
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<td>Market Access</td>
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<td>Clinical Operations</td>
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WHAT SETS THE ALNYLAM-NORTHEASTERN FELLOWSHIP APART?

- Ability to work in rare and orphan diseases
- Vested interest and individualized mentoring from senior management
- Located in the heart of the world’s biotech hub, Cambridge, MA
- Ability to teach and precept pharmacy students while earning a teaching certificate

“At Alnylam, we are driven by our dedication to developing RNAi therapeutics and the potential to bring this entirely new class of medicines to patients with high unmet medical needs. Our continued expansion of the Fellowship Program supports our commitment to enhancing opportunities for pharmacy graduates as they explore a variety of career paths in the pharmaceutical industry.”

Annie Partisano, PharmD, MS, RPh, CMPP
Senior Director, Medical Communications and Publications, Alnylam Fellowship Director

“My fellowship at Alnylam can be described in one word – exhilarating. Every day, I had access to a wealth of resources, supportive colleagues who were eager to challenge me, mentorship from leadership, and key responsibilities that directly impacted the company’s objectives. The Fellowship Program’s rotational opportunities continue to benefit me in my current role as one of Alnylam’s Medical Science Liaisons. If you are looking for a company where people work each day with a sense of urgency and purpose, this is the place. I entered this fellowship with already high expectations, and I can say without a doubt, the Fellowship far exceeded all of them.”

Alex Wei, PharmD, Manager, Medical Affairs, Alnylam’s First Fellowship Alumnus
COMPANY HISTORY

Since it was founded in 2002, Alnylam Pharmaceuticals has been committed to harnessing the power of RNA interference (RNAi) for treating rare conditions with high unmet medical need. Today, it is leading the translation of RNAi to a potential new class of innovative medicines to treat a wide range of diseases using its powerful, clinically validated approach. In 2015, the company issued its “Alnylam 2020” guidance for the advancement and commercialization of RNAi therapeutics in three Strategic Areas (STArs): Genetic Medicines, Cardio-Metabolic Diseases, and Hepatic Infectious Diseases and has the potential to launch multiple commercial products.

COMPANY FACTS

>600 Employees

>1k Study Participants Dosed

>20 Clinical Studies to Date

8 Programs Currently in Clinical Development

>14k Doses Administered

>3yrs Longest Duration of Exposure

As of June 2017
Alnylam’s Science and RNAi Platform

RNAi was first discovered in plants by biologists Andrew Fire and Craig Mello, marking a major scientific breakthrough that established a new frontier in drug development. Fire and Mello shared the 2006 Nobel Prize in Physiology or Medicine for their achievement. Alnylam’s mission is to build a top-tier biopharmaceutical company founded on RNAi. Rather than treating symptoms, Alnylam’s investigational therapies work upstream of today’s medicines by silencing the messenger RNA (mRNA) that is transcribed into disease-causing or disease-contributing proteins. By doing so, patients are treated in a fundamentally new way.

FROM POSSIBILITIES TO PATIENTS

ABOUT RNAi

ALNYLAM CLINICAL DEVELOPMENT PIPELINE

Focused in 3 Strategic Therapeutic Areas (STArs):

- Genetic Medicines
- Cardio-Metabolic Diseases
- Hepatic Infectious Diseases

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<th>HUMAN POC*</th>
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*Proof of concept (POC) defined as having demonstrated target gene knockdown and/or additional evidence of activity in clinical studies
** Fitusiran currently on hold with intent to resume dosing as soon as possible upon agreement with regulatory authorities on risk mitigation/safety monitoring
As of September 2017
ACTIVELY RECRUITING: 1 FELLOW

The Regulatory Affairs Department at Alnylam is a diverse group with scientific, technical, and clinical expertise that works collaboratively to manage all regulatory aspects of Alnylam products, including the generation and filing of investigational new drug applications, clinical trial applications, and marketing applications around the world. Regulatory Affairs provides strategic non-clinical and clinical regulatory insights to the development teams in all phases of drug development. Unique experiences in the rare disease space include orphan drug applications, breakthrough therapy, and PRIME designation requests, and other novel regulatory pathways and approaches.

“Alnylam’s rotational program has allowed me to develop practical and substantive drug development skills very early in my career. Each rotation has brought me the opportunity to become skilled in a new expertise area allowing me to become an agile drug developer. I was able to quickly and effectively learn the complexities of drug development and commercialization.”

Dayna LeSueur, PharmD, 2nd Year Regulatory Affairs Fellow

“I chose the Alnylam Fellowship because of the opportunities that are afforded to the Fellow. Having the ability to rotate through different expertise areas is an amazing opportunity at this stage in my career, all while having the ability to discuss key topics with amazing mentors that have a multitude of experience and are eager to help.”

Sarah Scott, PharmD, 1st Year Regulatory Affairs Fellow

“Alnylam gives the Fellows invaluable hands-on experience in Regulatory Affairs. This unparalleled experience across multiple expertise areas of drug development will help the Fellow lay the foundation for a successful career within the biopharmaceutical industry.”

Andrew Slugg, MS, MBA, Vice President of Regulatory Affairs

CORE ROTATIONS
- Regulatory Strategy
- Advertising, Labeling, and Promotional Materials
- Chemistry Manufacturing and Controls (CMC)
- Regulatory Technology and Operations

LONGITUDINAL ACTIVITIES
- Regulatory intelligence, industry surveillance, analysis, and reporting
- Regulatory submission and filing support
- Regulatory annual report generation, management, and submission
- Internal regulatory correspondence support, analysis, and trending
- Work cross-functionally to ensure the successful NDA filings of multiple RNAi therapeutics
The core responsibility of Medical Affairs at Alnylam is to generate and communicate clinical and scientific data as well as engage in discussions with key stakeholders, including Key Opinion Leaders (KOLs), patients, and payers. By doing so, Medical Affairs at Alnylam actively supports the development and delivery of therapies to patients with a high unmet need.

**ACTIVELY RECRUITING: ONE FELLOW**

The Fellows become an integral part of the organization from the very beginning and are valued highly by the teams they work with. Having completed a fellowship myself, I realize the importance of this chapter in a new pharmacist’s career. To cultivate their professional success, I encourage Fellows to take on a high level of ownership while providing tailored mentorship throughout the two years.

Amy Monpara, PharmD, Senior Manager, Medical Communications and Publications

“The Alnylam Fellowship allows me to train to be a multifaceted drug developer enabling me to make meaningful contributions to this company’s ambitious mission and vision. I am excited by the privilege of advancing the science of RNAi therapeutics through the advancement and potential launch of multiple products. Every day is high energy and intellectually stimulating. I am confident the experiences gained at Alnylam during this transformational period in the company’s history will help me throughout my career.”

Ruthvik Malladi, PharmD, 1st Year Medical Affairs Fellow

“Looking back on my first year, I’ve had the opportunity to author scientific publications, present at an advisory board, work closely with physicians and patient advocacy groups, draft an expedited program application for the FDA, and design health economics and outcomes studies – an array of activities that I could have never thought I would lead as a Fellow. Alnylam continues to provide me with a wealth of opportunities and a supportive network of mentors across the company who guide and challenge me while preparing me for a meaningful career in the biotech industry.”

Anastasia McManus, PharmD, RPh, 2nd Year Medical Affairs Fellow
Value and Evidence Strategy (VESt)/HEOR

ACTIVELY RECRUITING: ONE FELLOW

The core purpose of the Value and Evidence Strategy team at Alnylam is to lead evidence generation and value demonstration activities through cross-functional collaboration with Clinical Development, Market Access, Market Insights, Regulatory Affairs, and other expertise areas. The Fellow will gain a thorough understanding of and hands on experience in health economics and outcomes research methodologies to scientifically evaluate a therapeutic’s potential economic, clinical, and humanistic impact. VESt’s goal is to ensure excellence in evidence generation so Alnylam’s innovative science can reach patients and healthcare systems.

LONGITUDINAL ACTIVITIES

• Conduct evidence gap analysis and develop data generation strategy to communicate the value of products to internal and external stakeholders
• Contribute to prospective and retrospective observational studies, cost effectiveness research, comparative effectiveness research, chart review studies, patient-reported outcomes research, and other studies with potential for publication
• Conduct burden of illness studies and pharmacoeconomic analyses for use by healthcare decision makers
• Develop and maintain peer/KOL relationships for clinical input into HEOR studies

“Upon starting the Fellowship, I soon realized the unbelievable opportunity set in front of me. Working closely with Sonalee and the rest of the VESt team has undoubtedly advanced my critical thinking abilities and allowed me to quickly contribute to Alnylam’s value approach. It is a great honor to come to work each day to serve Alnylam’s incredible patients. They are at the forefront of each decision, and improving their lives drives our culture.”
Madeline Merkel, PharmD, 1st Year Value and Evidence Strategy Fellow

“The Alnylam and Northeastern Fellowship Program is a great way to integrate your pharmacy training in a cross-functional and dynamic biotech environment to develop integral skills needed for success in the HEOR field.”
Sonalee Agarwal, BPharm, PhD, Senior Director, Value and Evidence Strategy
Medical Information

ACTIVELY RECRUITING: ONE FELLOW

The Medical Information team serves to provide health care professionals, patients, and caregivers with balanced, accurate, and current medical information about Alnylam’s products. Medical Information engages cross functionally with Pharmacovigilance/Safety, Quality, Legal, Regulatory Affairs, Commercial, Clinical Operations, Clinical Development, and Information Technology to ensure the safe, effective, and appropriate use of our therapies. Fellows in this program will partake in the development and launch of Medical Information services across the globe supporting multiple products.

CORE ROTATIONS
- Medical Communications & Publications
- Medical Science Liaisons (Field Medical)
- Pharmacovigilance and Safety
- Regulatory Affairs
- Patient Advocacy

LONGITUDINAL ACTIVITIES
- Global management of medical information inquiries
- Medical Information content development, including standard response letters
- Adverse event and product quality complaint reporting
- Data analytics and insights reporting
- Global product launch preparation and execution pertaining to Medical Information activities
- Medical congress and information booth support

“The Alnylam Fellowship truly provide unique, hands-on experiences. The Global Medical Information Fellow will have the opportunity to understand and become proficient in medical information operations on a global scale, while developing valuable skills that will contribute to future success in the biotech and pharmaceutical industry.”

Heather Sun, PharmD, Director, Medical Information
Northeastern University is a global, experiential, research university built on a tradition of engagement with the world, creating a distinctive approach to education and research. At Northeastern, we encourage our students to become engaged, confident, and resourceful global citizens who realize their knowledge and actions have a far-reaching impact.

The School of Pharmacy is dedicated to excellence in pharmacy-related education, research, and service, including the provision of patient care. We prepare students with knowledge, skills, and values for careers in pharmacy practice and the pharmaceutical sciences. Our programs promote intellectual growth, professionalism, and lifelong learning.

The Alnylam Pharmaceuticals and Northeastern University Fellowship Program provides a dynamic academic environment to guide and support Fellows toward successful careers in the biopharmaceutical industry and offers them the opportunity to gain a wide range of teaching experiences. Fellows are also provided with several opportunities to engage with students utilizing a layered learning model, from co-precepting students within our unique co-op program, to the incorporation of students within Northeastern-based research and scholarship initiatives. The Northeastern faculty and Alnylam Fellowship preceptors mentor Fellows according to their scholarly and professional interests throughout the two-year program.

POSTDOCTORAL FELLOWS AT NORTHEASTERN UNIVERSITY WILL:

- Teach and facilitate in both large didactic, and small practice-based PharmD courses
- Create and publish scholarly research and review articles with a faculty advisor
- Present research at scientific and clinical meetings
- Collaborate with fellows and residents in the Boston area on professional development and teaching seminars
Living, working, and playing in Kendall Square

Alnylam is located in the heart of Kendall Square in Cambridge, MA, just across the Charles River from downtown Boston. It is surrounded by top tier academic and research institutions: Harvard, Massachusetts Institute of Technology, Massachusetts General Hospital, Brigham & Women’s Hospital, Broad Institute, and more. The area is teeming with pioneers of innovation who are committed to intellectual curiosity and scientific advancement. The Greater Boston area is a melting pot of culture offering endless world-class attractions and a rich history.

“Welcome to Kendall Square, the fertile crescent of the booming biotech industry”
– STAT News

THE BOSTON AREA OFFERS

• Diverse, exciting, and international culture
• Extensive outdoor activities including watersports on the Charles River
• Abundance of indoor and outdoor restaurants and eateries
• Home to five professional sports teams: Boston Red Sox, Celtics, Bruins, New England Patriots, and Revolution
• Rich history including the famous “Freedom Trail”
• Stunning art at the Museum of Fine Arts, Institute of Contemporary Art, and Isabella Stewart Gardner Museum
• World class music and theater scene
• Nightlife throughout the city
• Weekend adventures in nearby Cape Cod and Nantucket, MA, Portland, ME, Providence and Newport, RI, and mountains of VT & NH
Application Process

Thank you for your interest in the Alnylam Pharmaceuticals and Northeastern University PharmD Postdoctoral Fellowship Program.

Fellows will be selected on a nationally competitive basis, and candidates must have a Doctor of Pharmacy degree from an ACPE-accredited college of pharmacy by June 30, 2018. Candidates who wish to apply must submit their formal application to Northeastern University’s job website no later than December 1, 2017.

REQUIREMENTS

- Curriculum vitae (CV) and cover letter
- Unofficial college transcript (paper or electronic)
- Three references’ contact information and formal letters of recommendation sent to Fellowship@alnylam.com

For posting information and to apply for these positions, please visit: www.northeastern.edu/bouve/pharmacy/fellowships

TIMELINE

- Applications will be reviewed on a rolling basis. Therefore, applicants are encouraged to submit their materials accordingly. To be considered for an interview prior to December 1st, a CV, cover letter, and references’ contact information are required. Official transcripts will be requested if an on-site interview is scheduled.
- Alnylam will be participating in the Personnel Placement Service (PPS) at the 2017 ASHP Midyear Clinical Meeting. Applicants who have submitted a formal application will receive information on scheduling an interview at the ASHP Midyear Clinical Meeting.

CONTACT INFORMATION

Address your cover letter and three letters of recommendation to Mark Douglass:

Mark Douglass, PharmD, RPh
Associate Clinical Professor
Northeastern University School of Pharmacy
Alnylam Fellowship Program Director

For questions regarding the Fellowship program contact: Fellowship@alnylam.com

“The continued growth of the Alnylam Northeastern Fellowship Program has resulted in exciting opportunities for our students and faculty to engage with the Fellows in mutually beneficial teaching and scholarship opportunities.”

Mark Douglass, PharmD, RPh
Frequently Asked Questions

Q: How is Alnylam pronounced?
A: “Al-nye-lam”. Click on the “From Possibility to Patients: What’s in a Name?” video below to learn more.

Our name may not be the easiest to pronounce – but once you learn it, you never forget it.

Q: To which therapeutic areas/programs will I be assigned?
A: Your interests are as important as Alnylam’s business needs. The opportunities to work in different areas are endless. The Fellowship can be tailored to your curiosities.

Q: Is the Fellowship a paid position?
A: As Northeastern University staff members, the Fellows are provided with a competitive salary and benefits package enabling them to invest in their health and well-being (health/wellness, paid time off, tuition reimbursement, life insurance, etc.). Fellows are also granted a relocation stipend and fellowship-related travel/non-travel expenses reimbursement. For a full description of NU benefits, visit: http://www.northeastern.edu/hrm/benefits/.

Q: Do I need industry experience to apply?
A: Prior experience is not required. The Program is seeking candidates who demonstrate a drive and genuine interest in a career in the biopharmaceutical industry.

Q: Are there recruiting events or webinars held prior to Midyear?
A: Yes, please visit https://bouve.northeastern.edu/pharmacy/fellowships/ to find out where recruitment events will be held prior to ASHP Midyear 2017. The website contains a link to a survey where you can sign-up for updates on upcoming webinars and recruitment events.

Q: Can I apply to more than one position?
A: Candidates can apply to more than one position. Tailor your application to the programs that best suit your interests and career goals.

Q: When will I hear back about my application?
A: The earlier you submit your application, the sooner it will be reviewed. Applications are considered on a rolling basis.
To those who say “impossible, impractical, unrealistic,” we say:

CHALLENGE ACCEPTED

We are relentless in our pursuit of new treatments. Because patients shouldn’t have to wait for hope.