



PharmD Industry Fellowships

Dear Prospective Fellow

We're thrilled that you're considering Ironwood Pharmaceuticals, for your next big career step! At Ironwood, we're committed to advancing the treatment of GI diseases and redefining the standard of care for millions of GI patients. Ironwood is more than just a company—we're a community of passionate individuals each with unique perspectives and talents, working together to create medicines designed to improve the lives of GI patients.

Joining Ironwood means you'll be part of a diverse, inclusive, and collaborative team where fresh ideas are encouraged and everyone's voice is valued. We believe that the unique viewpoints each person brings help us create innovative ideas that can help us discover and deliver break-through therapies for patients and build the next great pharmaceutical company.



If you're interested in working in a hands-on environment, taking on innovative discovery opportunities and advancing them into drugs designed to alleviate patients' symptoms, improve their quality of life, and even tackle diseases, look no further than our PharmD Fellowship Program.

Our Fellowships offer a unique learning experience, providing a solid foundation in research and opportunities to deepen your understanding of disease biology, pharmacology and drug delivery including the different phases of drug development. You'll also have the opportunity to make meaningful contributions to GI patient care and learn from seasoned experts in medical safety, and regulatory affairs, and more, all while growing both personally and professionally.

On behalf of everyone at Ironwood, thank you for your interest in our PharmD Fellowship Program class of 2026–2028. We're excited about the possibility of you joining and invite you to apply and explore a future with us!

All the best,

Mike Shetzline, MD, PhD

SVP, Chief Medical Officer and Head of Research and Development

Our PharmD Fellowship Programs

Ironwood's fellowship programs are designed to offer Doctor of Pharmacy (PharmD) graduates in-depth experience within a biopharmaceutical setting. We now offer four distinct two-year fellowships in the following functional areas: Clinical Development, Medical Scientific Affairs, Regulatory Affairs, and Global Patient Safety. Each program provides fellows with the opportunity to contribute meaningfully to the drug development and commercialization process while gaining the confidence and knowledge needed to thrive in a dynamic, cross-functional team environment. The fellowships are designed to foster both professional and personal growth through hands-on involvement in high-visibility, high-impact projects. By the end of the two-year program, Ironwood fellows will have developed highly marketable skills and the experience necessary to pursue successful careers in the pharmaceutical industry. Fellows will work closely with Directors and senior leaders within their respective functional areas. All fellowships are based out of Ironwood's headquarters in Boston.



Regulatory Affairs

2-Year Fellowship, Recruiting 1 Position

About the Fellowship:

The purpose of the Regulatory Affairs (RA) Fellowship is to provide the fellow with training in the functional area and to prepare them to enter an industry role as an individual contributor in Global Regulatory Affairs after the end of their 2-year fellowship. By gaining experience in Global Regulatory Affairs, the fellow will be able to pursue a successful career in the Regulatory Affairs, and will have a practical understanding of the other function's responsibilities to enable them to be an optimal collaborator and colleague.

During the fellowship, the fellow will work within Regulatory Affairs to gain experience in maintenance of IND/CTAs and/or NDAs/MAAs, regulatory strategy, regulatory intelligence, Agency meeting management and correspondence, global/regional labeling, and regulatory operations.

The fellow will have the opportunity to work collaboratively with other functional areas within Ironwood, including global patient safety, clinical development, medical scientific affairs, program management, data sciences, quality and compliance, nonclinical, medical writing and publications, and chemistry, manufacturing, and controls, as well as experience partner interactions and engage in vendor oversight. The fellowship training will enable them to collaborate effectively with colleagues across various disciplines which is essential to both the development of a therapeutic product and management of that product throughout its life cycle.

Additionally, the fellow will have the opportunity to attend meetings and conferences, present guidance reviews, and other opportunities as they arise.



Head of Functional Area and Fellowship Preceptor:



"If you're a PharmD holder passionate about science, global health, and making a real-world impact, the Regulatory Affairs Fellowship with Ironwood is your launchpad. This program is designed to give you more than just a foundation in regulatory science—it immerses you in the dynamic world of drug development, policy, and global collaboration. You'll gain hands-on experience, work alongside industry leaders, and develop the strategic mindset needed to shape the future of healthcare. As a Global Head of Regulatory, I'm excited to support this initiative at Ironwood and invite you to explore how a career in Regulatory Affairs can take your PharmD further than you imagined."

Elizabeth Amstutz

Vice President, Head of Global Regulatory Affairs



"The Regulatory Affairs (RA) Fellowship at Ironwood offers Fellows the opportunity to learn how to bridge science and strategy. Regulatory decisions influence how and where a drug can be marketed, directly impacting patients' lives. RA work involves interpreting current and evolving regulations and applying strategic thinking to position a drug effectively in a high-stakes environment. RA is essential at all stages of drug development, and the experiences Fellows gain at Ironwood can help them develop the skills needed for a successful career in this high-demand field."

Allison Caso, MPH, RAC

Associate Director, Global Regulatory Affairs; Fellowship Preceptor & Coordinator



Clinical Development

2-Year Fellowship, Not Recruiting

About the Fellowship:

The Clinical Development Fellowship at Ironwood offers the fellow the opportunity to acquire the knowledge and skills needed to perform as an individual contributor within the Clinical Development team. The fellow will gain hands-on experience supporting the clinical strategy and execution of Ironwood's pipeline compounds across various stages of development. Throughout the fellowship, the fellow will be exposed to cross-functional collaboration, protocol and study design, data interpretation, and clinical trial operations. The goal is to build a strong foundation in clinical development within a dynamic, science-driven environment and prepare the fellow for a successful career in the pharmaceutical industry.

Head of Functional Area and Fellowship Preceptor:



"Step into a fellowship where science meets purpose. At Ironwood, you won't just learn clinical development—you'll live it. Collaborate across disciplines, shape tomorrow's trials, and build the foundation for a career that transforms lives."

Andrea Stancati, MD Senior Vice President, Research and Development; Fellowship Preceptor





"As a second-year Clinical Development fellow at Ironwood, I've had the opportunity to contribute meaningfully to study design, protocol development, and ongoing clinical trial execution. Working alongside experienced crossfunctional teams, I've developed a deeper understanding of clinical strategy, regulatory considerations, and patient safety. The fellowship has given me the tools, mentorship, and confidence to grow into a future leader in drug development."

Mildred Asamoah, PharmD, RPh, MBS Second Year Clinical Development Fellow





Medical Scientific Affairs

2-Year Fellowship, Not Recruiting

About the Fellowship:

The Medical Scientific Affairs (MSA) Fellowship provides a unique opportunity to develop the knowledge and skills necessary to function as an individual contributor within the Medical Affairs team. Fellows will actively participate in the design and execution of complex strategic medical plans for Ironwood's gastrointestinal (GI) and rare disease portfolios. Through full integration into the MSA team, the fellow will gain hands-on experience in medical strategy development, the Medical-Legal-Regulatory (MLR) review process, publication planning, scientific content creation, advisory board execution, congress planning, and insight generation. The fellowship also offers in-depth exposure to GI and rare disease state knowledge, preparing the fellow for a successful career in medical affairs.

Head of Functional Area and Fellowship Preceptor:



"Our Medical Scientific Affairs fellowship offers more than just a learning experience, it's an opportunity to be embedded in a high-impact, mission-driven team shaping the future of gastrointestinal and rare diseases. Fellows will gain hands-on exposure to the full spectrum of medical affairs, from strategic planning and scientific engagement to evidence generation and insight gathering. We're committed to fostering future leaders who bring scientific rigor, collaboration, and purpose to everything they do, while putting PATIENTS first!"

Mena Boules, MD Vice President, Medical Scientific Affairs



"Medical Affairs sits at the intersection of science, strategy, and communication—translating complex data into meaningful insights that shape clinical practice and improve patient outcomes. Through the fellowship program, fellows gain handson experience in this dynamic space, developing the skills to collaborate across functions, support evidence generation, and become trusted scientific partners. It's incredibly rewarding to support their growth and see their contributions make a real-world impact."

Sally Higgins, PharmDDirector, Medical Scientific Affairs; Fellowship Preceptor



"I was drawn to Ironwood for its innovative GI pipeline, as well as the opportunity to wear multiple hats and gain hands-on experience in various MSA disciplines such as medical strategy, publications, and scientific communications. One of the key advantages of being an industry fellow at a small, tight-knit, and robust company like Ironwood is the accessibility of feedback and mentorship from experts in MSA and other functional areas such as clinical development and patient advocacy. This program provides an ideal environment for professional growth and lifelong learning!"

Annie Cheung, PharmDFirst Year Medical Scientific Affairs Fellow





Global Patient Safety

2-Year Fellowship, Not Recruiting

About the Fellowship:

The purpose of the Global Patient Safety (GPS) Fellowship is to provide the fellow with in-depth training and experience in drug safety and pharmacovigilance within the pharmaceutical industry. During the first year of the fellowship, the fellow will work within GPS to gain experience in case processing operations, safety database management, compliance, signal detection, signal management, aggregate reports, safety governance, and advanced pharmacovigilance analytics. During the second year of the fellowship, the fellow will work to increase autonomy in the Medical Risk Management GPS functions by focusing on signal detection, signal management, aggregate reports, and safety governance. By the end of the fellowship, the fellow will be well-prepared for a career in Global Patient Safety, with a strong understanding of how safety plays a critical role in the development and ongoing evaluation of therapeutic products.

Head of Functional Area and Fellowship Preceptor:



"I have a deep appreciation of how well the multi-faceted education of a PharmD uniquely prepares you for many career paths in the pharmaceutical industry. The fellowship program at Ironwood builds on that foundation by offering broad and in-depth experience in pharmacovigilance/regulatory affairs or clinical development/medical affairs. As a small company, we wear many different hats, giving the Fellow the opportunity to see how their work contributes to the big picture."

Patricia Valencia, PharmD, RPh Vice President, Global Patient Safety



"Ironwood knows the value an industry fellowship can provide and has hired multiple fellows our own and from other programs, including myself. We are excited to continue to grow our own fellowship programs and alumni, allowing more PharmD graduates to jumpstart their career in the pharmaceutical industry. In the GPS fellowship, our fellow will have the opportunity to interact closely with other departments within Ironwood and gain hands-on experience in patient safety to prepare them for a career in industry."

Theresa Foster, PharmD, MPH
Senior Director of Pharmacovigilance Excellence, Global Patient Safety;
Fellowship Preceptor



Ugonna Okafor, PharmDFirst Year GPS Fellow

The structure of the fellowship stood out to me because of its emphasis on cross functional collaboration and hands on project work. From day one, I've found my colleagues and preceptors to be incredibly supportive, approachable, and genuinely invested in my growth and development. Ultimately, the opportunity to train at Ironwood felt personal, intentional, and mission focused which is exactly the kind of fellowship where I knew I could grow and thrive as a future leader in global patient safety."

"What led me to Ironwood's Global Patient Safety Fellowship was the opportunity to join a

globally engaged company where I could build a strong foundation in patient safety, with

exposure to both U.S. and international safety requirements.

"Now in my second year, I can confidently say this fellowship's focus on Global Patient Safety has been a cornerstone of my professional growth. Patient safety forms the roots of our industry, and this program has nurtured those roots through immersive, hands-on experience in core pharmacovigilance functions such as case processing, signal detection, benefit-risk assessment, aggregate reporting, and health authority interactions. My first year laid a strong foundation in the fundamentals, while my second year has allowed me to apply that knowledge more strategically and crossfunctionally. Beyond the technical skills, the collaborative and supportive culture has accelerated my professional development. The mentorship and openness of my colleagues have empowered me to grow into a confident, competent future scientist committed to advancing global patient safety and making a tangible difference in people's lives."



Yasser Ibrahim, PharmD, RPh Second Year GPS Fellow



About Ironwood

Ironwood is a biotechnology company developing and commercializing life-changing therapies for people living with gastrointestinal (GI) and rare diseases. Ironwood is advancing apraglutide, a next-generation, long-acting synthetic GLP-2 analog being developed for short bowel syndrome patients who are dependent on parenteral support. In addition, Ironwood has been a pioneer in the development of LINZESS® (linaclotide), the U.S. branded prescription market leader for adults with irritable bowel syndrome with constipation (IBS-C) or chronic idiopathic constipation (CIC). LINZESS is also approved for the treatment of functional constipation in pediatric patients ages 6-17 years old. Building upon our history of innovation, we keep patients at the heart of our R&D and commercialization efforts to reduce the burden of diseases and address significant unmet needs.

Founded in 1998, Ironwood is headquartered in Boston, Massachusetts, with a site in Basel, Switzerland. For more information, please visit www.ironwoodpharma.com.

Our Values Our Products Our Pipeline Our Values Our Products Our Pipeline

Life at Ironwood: Culture, Community, and Global Collaboration

Ironwood champions a culture rooted in diversity, equity, inclusion, and belonging, with nearly half of the workforce being women and strong representation across leadership teams. Employee-led groups such as W@IRWD (Women at Ironwood), PRIDE@IRWD, IMPACT (Ironwood Makes Positive Advances in our Communities Together) alongside DEIB trainings and programs, foster connection, allyship, and community impact. The company also regularly hosts Culture & Collaboration (C&C) Days, bringing Boston-based teams together 3–5 days a month for in-person collaboration, wellness initiatives, and morale-boosting events.

Although the fellowship is based in Boston, fellows also collaborate closely with Ironwood's Basel, Switzerland colleagues, tapping into international expertise in Gl drug development and strengthened by global teamwork and multi-site knowledge exchange. This hybrid environment—melding remote flexibility with in-person C&C engagement—not only nurtures professional growth but embodies Ironwood's core values of challenge & collaborate, curiosity, and real-world impact.



Phyllis SokolovDirector, Talent Acquisition

"Ironwood's office is situated on the 23rd floor of a modern skyscraper in downtown Boston. It is a blend of modern design and comfort, characterized by natural light, spacious workstations, state-of-the-art conference rooms, and common areas designed to foster collaboration and creativity. Our vantage point offers amazing panoramic views of the Boston and Cambridge skylines, the Charles River, and Boston Harbor. Located just steps away from the Boston Common and of the surrounding neighborhoods like the Seaport District, our office sits amidst the city's bustling streets, iconic landmarks, and impressive modern architecture. Our location offers access to a multitude of diverse restaurants, shops, and cultural attractions such as galleries, museums, and sports venues. Ironwood Fellows will be able to immerse themselves in the unique blend of history, culture, and modernity that Boston has to offer."

Potential Opportunities for Fellows

- Attending national scientific or regulatory conferences
- Presenting topics at company-wide meetings
- Participation in interactive R&D workshops led by functional experts
- Developing professional and work skills through internal workshops



Fellowship Alumni			
Name	Alma Mater	Current Position	
Medical Scientific Affairs Fellowship			
Niha Yerneni, PharmD, MPH	MCPHS-Boston	Associate Director, Medical Communications, Takeda	
Clinical Development / Medical Scientific Affairs Fellowship			
Danielle D'Achino, PharmD	University of Rhode Island College of Pharmacy	Medical Affairs Associate Ironwood	
Kayla Reid, PharmD, RPh	MCPHS-Worcester	Medical Science Liaison IBSA USA	

Rayla Reid, PharmD, RPh MCPHS-Worcester Medical Science Liaison IBSA USA Laura Nduka, PharmD, RPh University of Maryland - Baltimore Ironwood Medical Science Liaison IBSA USA Interdisciplinary Scientist Food and Drug Administration

Global Patient Safety / Regulatory Affairs Fellowship

Amira Abubakari, PharmD	MCPHS-Worcester	Manager, Pharmacovigilance Scientist Ironwood
Julia Busiere, PharmD	University of New England	Regulatory Affairs Project Manager Daiichi Sankyo
Georgia Quartey, PharmD	MCPHS-Boston	Senior Manager, Regulatory Affairs Verve Therapeutics



ABOUT OUR PROGRAM

OVERVIEW

Northeastern University Pharmaceutical Industry Fellowships Program is a two-year experiential program designed to advance lifelong learning and the education and training of PharmD graduates. Critical to the success of the program is our ability to prepare fellows to meet the ongoing workforce needs in various areas of industry.

Our program provides fellows an opportunity to work with our innovative biopharmaceutical industry partners while collaborating with Northeastern University faculty in the areas of professional and career development, service, scholarship, and teaching.



OUR MISSION

Our mission is to provide the highest quality training for future biopharmaceutical industry professionals by combining industry expertise with Northeastern University's renowned tradition of lifelong and experiential learning.

CORE VALUES

- Social Impact Through Drug Development

FOCUS AREAS

LEARN

Pursue graduate degrees or certificates in Regulatory Affairs, Business, Public Health, and more through tuition reimbursement.

TEACH

Teach pharmacy students in various small and large group classes. Earn a Teaching Certificate of achievement.

RESEARCH

Perform research with faculty and students. Present data at conferences. Publish your findings. Generate literature.

NETWORK

Boston has a lot to offer, both socially and professionally. Our program takes advantage of it all! Thanks to the collaboration and dedication of our industry partners over the course of nearly 10 years, our program is now the 3rd largest industry fellowship program in the nation.

OUR PROGRAM PILLARS

TEACHING & SCHOLARSHIP

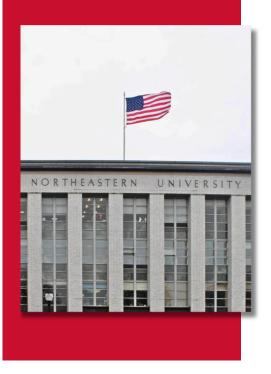
Teaching and Learning Seminar Series provides contextual activities and reflection on adult education and pedagogy outcomes.

PROFESSIONAL & CAREER TRAINING

Professional Development and Career Training Series are customized to engage fellows in appropriate and professional conduct for success.

SERVICE

Through their service on committees, fellows have an active connection within the community and program. This allows an opportunity to demonstrate leadership development and skills.



Northeastern University Pharmaceutical Industry Fellowships Program provides a dynamic academic environment offering fellows the opportunity for a wide breadth of experiences.



PROGRAM OPPORTUNITIES

Develop teaching skills through participation in our Teaching and Learning Seminar Series

Utilize a layered learning model in experiential education by co-precepting students on pharmacy practice experiences including Northeastern's unique co-op program

Facilitate small and large group didactic education in partnership with a faculty mentor

Create, present, and publish scholarly research through collaborative industry and university relationships

Engage with faculty who participate in various interdisciplinary graduate programs including biotechnology, nanomedicine, immunology, health informatics, and drug discovery

Network with local residents and other Northeastern fellows via professional development programs, teaching seminars, and participation on fellowship committees

OUR PARTNER COMPANIES

SINCE 2015

Through these exciting partnerships, Northeastern fellows collaborate and learn from each other, further positioning them to be successful in both academic and industry settings. Fellows are empowered to shape their experience, as well as the future of the program, through leadership on the Professional Development & Networking and Recruitment committees.















































BOSTON, MA:

OUR TEAM



Andrew Orr-Skirvin
Faculty Director



Sherisse Mayala-Nelson
Program Manager



Sophia SawtelleSenior Program Coordinator

CONNECT WITH US!

O Instagram
@nufellowship

in LinkedIn

Northeastern Pharmaceutical

Industry Fellowships



Karen Stanley
Bouvé Director of Finance
and Administration



Julia Van

Director of Corporate
and Foundation Relations



Jenny Van Amburgh

Clinical Professor
Fellowship Faculty Manager



Debra CopelandClinical Professor
Fellowship Faculty Manager



Milini Rambukwella

Human Resources

Associate



Dayna D'AngeloBudget Coordinator



Joseph ElijahClinical Professor
Fellowship Faculty Manager



Michael Gonyeau

Clinical Professor
Fellowship Faculty Manager





Jason Lancaster

Clinical Professor
Fellowship Faculty Manager



Adam Wooley
Clinical Professor
Fellowship Faculty Manager





Samantha Denson, PharmD Abbott Global Medical Affairs



Elizabeth Brown, PharmDAlnylam
North America Medical Affairs - Rare
Disease



Priscilla Ly, PharmDAbbott
Global Medical Affairs



Rachel Phang, PharmD Alnylam Global Medical Information



Jonathan Le, PharmD Alnylam US Medical Affairs



Colin Galliano, PharmD Alnylam Global Regulatory Affairs



Rohan Kantesaria, PharmD Alnylam Global Patient Safety and Risk Management



Gail Mensah, PharmD Alnylam Regulatory Affairs



Jacob Molnar, PharmD Alnylam Early Assets Global Medical Affairs



Aidan ThongKham, PharmDApellis
Global Medical Affairs



Michelle Yu, PharmD Alnylam Global Medical Communications and Publications



Kiara Rubino, PharmD Braeburn Medical Affairs



David Leung, PharmD BridgeBio Regulatory Affairs



Bryan Hoang Do, PharmDIPSEN
Commercial Marketing



Ming Ye, PharmD Chiesi North America Medical Affairs



Samantha Zakhem, PharmD IPSEN Commercial Marketing



Chansonida Uk, PharmDCSL Seqirus
Medical Affairs



Kaya Candido, PharmDIPSEN
Medical Affairs



Jessica Kim, PharmD GSK Global Medical Information



Priya Patel, PharmDIPSEN
Medical Affairs



Jeilyn Nunez, PharmDIPSEN
Commercial Marketing



Annie Cheung, PharmDIronwood
Medical Scientific Affairs



Victoria Perez, PharmD IPSEN Commercial Marketing



Ugonna Okafor, PharmD Ironwood Global Patient Safety



Jay Mehta, PharmD Karyopharm Therapeutics Global Medical Affairs



Sharon Fong, PharmDTakeda
US Medical Clinical Science



Amanda Rhee, PharmD Takeda Global Medical Affairs



George Fahmy, PharmDPraxis
Medical Affairs



Shanon McCarthy, PhDTakeda
Global Medical Affairs



Alexander Fleschar, PharmD, MBAPraxis
Medical Affairs



Natalie Biel, PhD Takeda Marketed Products Development



Terrance Stamps, PharmDPraxis
Medical Affairs



Daphne Lin, PharmD Takeda Clinical Science



Allamar Moore, PharmD, RPh Vertex Clinical Science



Rama Shamieh, PharmD Takeda Clinical Science



Hana Hasan, PharmD Vertex US Marketing



Sanika Welling, PharmD Vertex Medical Affairs



Pamela Diokpara, PharmD Arvinas Global Medical Affairs



Mia Romano, PharmD Vertex Global Medical Affairs



Autumn William, PharmD Blueprint Global Regulatory Affairs



Maxim Johnson, PharmD Vertex Clinical and Quantitative Pharmacology



Deev Patel, PharmDBlueprint Medicines
Global Medical Affairs



Jacob Felderman, PharmD Vertex Clinical and Quantitative Pharmacology



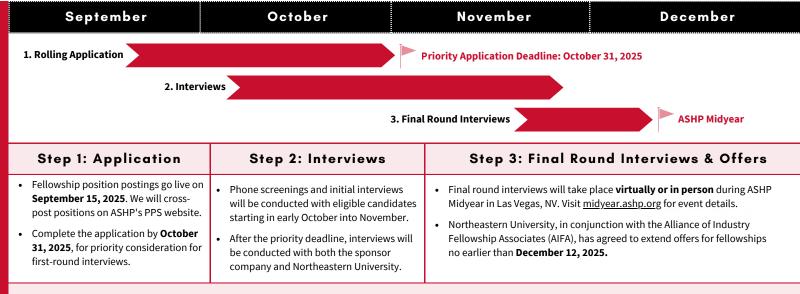
Se Jin Park, PharmD Vertex Global Regulatory Affairs



Barbara Moukoulis, PharmD Arvinas Global Medical Affairs

APPLICATION REQUIREMENTS

Fellows are selected on a nationally competitive basis. Unless otherwise noted in the position description, candidates must have a Doctor of Pharmacy degree from an ACPE-accredited college of pharmacy by June 30, 2026. Candidates must apply through Northeastern's career portal and are encouraged to do so by the priority application deadline of October 31, 2025.



Applications are reviewed on a rolling basis - apply early!

Application Materials:

- Curriculum Vitae (CV)
- Unofficial PharmD Transcript
- Cover Letter

3 Letters of Recommendation:

- Highly encouraged to submit by October 31, 2025
- Official Deadline: November 21, 2025
- Email: <u>PharmDFellowships@northeastern.edu</u>
- Letter writers should submit one letter per candidate and indicate the companies of interest in the subject of the email

ADDRESS YOUR COVER LETTER AND 3 LETTERS OF RECOMMENDATION TO:

J. Andrew Orr-Skirvin, PharmD, BCOP Clinical Professor, School of Pharmacy Chair, Department of Pharmacy & Health System Sciences Director of Pharmaceutical Industry Fellowship Program 360 Huntington Ave, 140TF R218 Boston, MA 02115

For more information and fellowship resources:

Visit: a27p.com

Visit: <u>bouve.northeastern.edu/pharmacy/fellowships</u> Email: <u>PharmDfellowships@northeastern.edu</u>

Northeastern University will not provide H1-B, TN, O-1, E-3, or any other type of employment visa sponsorship for the successful applicant to this position, now or in the future. Furthermore, the successful applicant must be able to maintain valid work authorization in the United States throughout the entire appointment without Northeastern University's sponsorship for a visa.