

abbvie

2022-2023 Pharmaceutical Industry Fellowship Program



About AbbVie

Our Mission: Create an **innovation-driven, patient-focused specialty biopharmaceutical company** capable of achieving sustainable **top-tier performance** through **outstanding execution** and a consistent stream of **innovative new medicines** which have a **remarkable impact** on people's lives.

We are a global, research-based biopharmaceutical company committed to discovering, developing and delivering innovative new medicines with distinct and compelling benefits for people. Today, our medicines help 57 million people living in more than 175 countries, and we are making significant advancements with a robust pipeline of potential new medicines.

We are a passionate, diverse and inclusive organization with a culture that supports the best ideas, wherever they originate. We bring people together because we know that collaboration is the key to breaking barriers and exploring new frontiers in science. We take smart risks that lead to transformative breakthroughs and can change lives for people all over the globe.

Our commitment to making a remarkable impact doesn't end at developing medicines; it begins there. We provide broader support to our patients and help address the health needs of underserved communities. We strive to protect our environment and to make a positive impact in the areas where we live and work.

About University of Southern California

The USC School of Pharmacy is the only private pharmacy school on a major health sciences campus, which includes the Keck School of Medicine, Keck Hospital of USC and the USC Norris Comprehensive Cancer Center and is immediately adjacent to the LAC+USC Medical Center, one of the largest public hospitals in the country.

Ranked by US News and World Report as a top ten pharmacy school nationwide and #1 among private schools, the USC School of Pharmacy is recognized for its century-old reputation for innovation in pharmaceutical education, clinical practice, and research.

With a history of "firsts" that includes the nation's first Pharm.D. program (1950), first clinical clerkship program (1968), first Ph.D. in pharmaceutical economics (1990), and first professional doctorate in regulatory science (2008), the school holds an essential leadership role in the safe, efficient, and optimal use of medication therapy that can save lives and improve the human condition.



About Our Fellowship Program



Quoc Ho, Pharm.D.
*Fellowship Advisor,
Associate Director, Clinical Development,
Ophthalmology,
AbbVie Inc.*



**William C. Gong,
Pharm.D., FASHP, FCSHP,**
*Director, Residency and Fellowship Programs
Associate Professor of Clinical Pharmacy
USC School of Pharmacy*

The USC-AbbVie Pharmaceutical Industry Fellowship Program is designed to prepare postdoctoral scholars for rewarding careers in the pharmaceutical industry. Fellows work with mentors to participate in activities that enhance the skills required to excel in their field. Graduate-level coursework and seminars at USC may be included in the program, in addition to hands-on project activities in AbbVie teams.

Upon completion of the program, fellows will be prepared for the challenges of a career in the pharmaceutical industry. Past fellows have been placed into rewarding positions in industry, pharmacy practice, and research. USC Pharmacy's fellowship programs adhere to the guidelines of the American Association of Colleges of Pharmacy and the American College of Clinical Pharmacy. The fellowships begin on July 1 and end on June 30 (some positions may vary).

Key Highlights

- Access to USC Regulatory Science courses and tuition remission, up to 4 units per semester towards a graduate certificate
- Networking with USC students and alumni
- Participating in professional leadership workshops
- Financial relocation assistance for out-of-state fellows
- Financial support to attend professional conferences and events
- Delivering lectures to pharmacy students
- Recruiting prospective graduate and professional students to the Fellowship Program

Fellowship Mentors



Jillian McCumber, M.S.
*Head of Regulatory Affairs
Strategy, Facial Aesthetic*



Francisco J. López, M.D., Ph.D.
*Executive Medical Director,
Chief of Staff,
Eye Care Development*



Jimmie Overton, Pharm.D.
*Vice President,
Global Medical Information*



James Cunningham, Ph.D.
*Executive Director,
Drug Delivery*



Kathy Held, Ph.D.
*Associate Director,
Eye Care Research*



Aniket Badkar, Ph.D.
*Director, Neurotoxin and
Biologics Product
Development*



Renee S. Garrett
*Global Head Evidence
Solutions, Global Medical
Operations*



Warren Tong, Pharm.D., M.S.
*Associate Director, Clinical
Development, Aesthetic Medicine*



Jie Shen, Ph.D.
*Executive Director,
Clinical Pharmacology*



Alexandra Traut, Ph.D.
*Executive Director, Global
Scientific Publications,
Neuroscience*



**Sara Cabrera-Ghayouri,
M.S./M.A.**
*Senior Scientist,
Biological Research*

Medical Affairs

The one-year Medical Affairs Fellowship focuses on providing exposure to three pillars of functionality: Evidence Solutions, Global Medical Information, or Global Medical Communications. The fellow will then be able to develop firsthand experiences in management of post-marketing clinical research, medical information functional operations, or global strategic publication planning. This program will provide the fellows the necessary tools to become successful professionals within the pharmaceutical industry, as well as the opportunity to network with a lasting legacy of Allergan alumni fellows.

Objectives



- Establish and maintain collaborative relationships with Medical Directors, Medical Science Liaisons, Key Opinion Leaders (KOLs), Health Economics and Outcomes Research, Marketing, and Principle Investigators
- **Global Scientific Publications:** Partner with internal and external global stakeholders to develop a research-based strategic publication plan to maximize the reach and impact of AbbVie's science through publications. Manage a cross-functional team and a vendor to execute the scientific communication plan for a therapeutic area. Lead research projects that help AbbVie better understand the impact of scientific communications.
- **Evidence Solutions:** Partner with all AbbVie therapeutic areas and geographies to strategize on filling evidence gaps and execute new and ongoing post marketing clinical research to provide valuable information to physicians, patients, and payors on AbbVie products around the world. Provide transparency of trial status to key stakeholders, and oversee financial standings for Non-interventional, IIS, Collaboration, and Epidemiology studies.
- **Global Medical Information:** Develop scientifically-balanced global response letters to address unsolicited medical inquiries, provide scientific support to the global affiliates, and provide insights to the organization identified from medical inquiries.

Application Requirements

- Pharm.D., M.D. or Ph.D. from an accredited university or equivalent
- Attendance and interviewing at the 2021 ASHP Midyear meeting is highly recommended
- Excellent oral and written communication skills, ethics, professionalism, leadership, and an interest in the biopharmaceutical industry are required for all fellowship positions



Brittani Hewitt, Pharm.D.
*Medical Affairs Fellow,
Global Scientific Publications*



Austin Mullins, Pharm.D.
*Medical Affairs Fellow,
Evidence Solutions*



Parker Wade, Pharm.D.
*Medical Affairs Fellow,
Global Medical Information*



Regulatory Affairs

The one-year Global Regulatory Affairs (GRA)-Strategy Fellowship provides fellows with an overview of Regulatory Affairs (RA) responsibilities, including application of regulations and health authority guidance to help develop regulatory strategies. The fellow will have hands-on experience developing the skills to prepare various global regulatory submission documents for products in drug development and life cycle management. The fellow is an active contributor of the Asset Strategy Team and shares the responsibility for facilitating timely submission of these documents to regulatory agencies worldwide. In addition, the fellow has the unique networking opportunity to manage several projects inside and outside of GRA as part of a comprehensive training program.

Objectives

- Lead and contribute to projects within GRA including assembly and management of regulatory documents for various FDA and other Health Authority (HA) submissions that meet regulatory standards
- Obtain experience in preparing for FDA or other HA meetings including development of meetings requests, briefing packages, and coordinating FDA rehearsal meetings
- Cross functional interactions with key development stakeholders such as Clinical Development, Project Management, Manufacturing, Research and Development, RA-Chemistry, Manufacturing and Control (CMC), Drug Safety, Toxicology, Clinical Pharmacokinetics, Labeling, Quality Assurance, Publishing, and Marketing to discuss issues specific to drug development and enhance the practical application of the information acquired
- Obtain insight on developing regulatory strategies for drug development, clinical study planning, and project implementation with Asset Strategy Team and RA leadership
- Become knowledgeable on US regulations, FDA guidance documents and ICH guidelines that are relevant to assigned projects
- Complete assessments of regulatory landscape to generate regulatory intelligence relevant to assigned therapeutic areas

Application Requirements

- Pharm.D., Ph.D., or DRSc from an accredited university or equivalent
- Completion of MS in Regulatory Science, pharmacy industry-track courses and/or industry internship desirable
- Excellent oral and written communication skills, ethics, professionalism, leadership, and an interest in the biopharmaceutical industry are required for all fellowship positions



Cynthia Sassenberg, Pharm.D.
*Global Regulatory Affairs Fellow,
Strategy*

Clinical Development

This one-year Clinical Development fellowship provides an immersive introduction to clinical research in global drug development. As an active member of multiple clinical teams, the fellow will develop an understanding of the principles and challenges in developing novel therapeutics, while operating within GCP, ICH, and other agency guidelines. Under mentored guidance, the fellow will gain broad exposure to many interdisciplinary functional areas, while individualized objectives will tailor their involvement to projects of particular interest.



Objectives

- Develop expertise in novel therapeutics and their clinical applications
- Support the execution of the clinical development plan, regulatory submissions and development of associated clinical trial documents (e.g., protocols, investigator brochures, procedure manuals, informed consent forms, and clinical study reports)
- Learn operational aspects of clinical trial design from startup, through execution, and closeout
- Participate in processes of ongoing data review, analysis, and report
- Prepare and present clinical data at internal team meetings as needed
- Contribute to the timely performance of clinical trials by collaborating in a cross-functional team setting

Application Requirements

- Pharm.D., Ph.D., or M.D. degree from an accredited university or equivalent
- Completion of pharmaceutical industry rotation, internship, or previous exposure to clinical research is desirable
- Excellent oral and written communication skills, ethics, professionalism, leadership, and an interest in the biopharmaceutical industry



Masara Issa, Pharm.D.
Clinical Development Fellow
Eye Care



Tam Nguyen, Pharm.D.
Clinical Development Fellow
Aesthetic Medicine



Clinical Pharmacology

This non-laboratory based one-year Clinical Pharmacology Fellowship focuses on developing skills of a modern clinical pharmacology scientist. The fellow will be provided opportunities to gain expertise in nonclinical and clinical development through honing skills in areas such as nonclinical pharmacokinetics/toxicokinetics, clinical pharmacology, translational strategies, modeling and simulation/pharmacometrics. As part of the training, the fellow will be provided with opportunities to engage in various activities such as: design and execution of nonclinical pharmacokinetic/toxicokinetic studies, design and execution of clinical pharmacology studies, development of translational strategies in support of target engagement and biomarker/ dose/regimen selection, preparation of regulatory documents, and PK/PD and pop-PK modeling. The candidate will also participate in cross-functional team interactions spanning all of AbbVie's therapeutic areas. This advanced hands-on training program can be tailored towards the specific needs and background of the candidate.

Objectives

- Collaboratively design and oversee execution of nonclinical pharmacokinetic/toxicokinetic studies and/or clinical pharmacology studies
- Analyze, interpret, and present data derived from nonclinical and clinical studies
- Serve (alongside a senior mentor) as a representative on nonclinical and clinical project teams to guide
- clinical pharmacology and translational efforts
- Contribute towards drafting regulatory documents
- Execute, interpret, and present results from PK/PD and/or pop-PK analyses at internal meetings
- If applicable, present work at professional meetings and/or author a scientific publication

Application Requirements

- Pharm.D. or Ph.D. from an accredited university or equivalent
- Experience and coursework in pharmacology, pharmacokinetics, toxicology, or similar
- Excellent oral and written communication skills, ethics, professionalism, leadership
- An interest in the biopharmaceutical industry



Irene Sunwoo, Pharm.D.
Clinical Pharmacology Fellow

Research Pharmacology

This one-year Research Pharmacology Fellowship focuses on developing the pre-clinical translational skills required of a pharmacology scientist. As part of the training program, the fellow will participate in pre-clinical study activities including study conceptualization through study design, protocol development, study execution, and cross functional team interactions across multiple therapeutic areas within AbbVie. Additionally, interested fellows can gain expertise in pharmacology sections of regulatory submissions, and interact with scientists from other functions such as formulation development, clinical pharmacology and clinical development. The fellowship is intended to enhance the postdoctoral research training of the applicant with hands-on application of core biological principles and techniques to move programs from preclinical stages to clinical development for key AbbVie programs.

Objectives

- Independently design and conduct pharmacology studies to support program projects
- Research, design and validate novel platforms or targets
- Be able to execute, interpret, and deliver data analyses
- If applicable, present work at internal AbbVie meetings, a professional meeting and/or author a scientific publication



Application Requirements

- Ph.D. from an accredited university or equivalent
- Experience and coursework in pharmacology, biochemistry, molecular biology, cell biology, neuroscience, a plus
- Good oral and written communication skills, teamwork, professionalism, and an interest in biopharmaceutical industry are required for all fellowship positions



Brianna Hoover, Ph.D.
*Research Pharmacology Fellow,
Eye Care Research*



Myan Do, Ph.D.
*Research Pharmacology Fellow,
Eye Care Research*

Drug Delivery Sciences

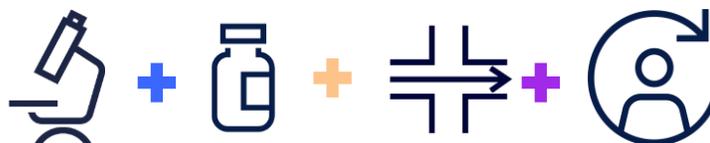
Core AbbVie therapeutic areas, such as Eye Care and Aesthetic Medicine, are highly reliant on local delivery of drugs to enable the desired therapeutic effect. AbbVie's Drug Delivery Sciences Department, part of Development Sciences, has established industry-leading drug delivery capabilities (e.g., bio-erodible sustained release, delivery devices) to support a diverse portfolio of small molecules and biologics. The one-year Drug Delivery Sciences fellowship focuses on the design and development of new drug delivery systems and related capabilities including new technologies and novel adaptations of existing systems. This fellowship is intended to give postdoctoral researchers exposure to conducting R&D in the pharmaceutical industry, while advancing the fellow's own scientific and professional growth. The fellow will also have the opportunity to collaborate with colleagues in other departments and disciplines within R&D.



Ammar Al Khafaji, Ph.D.
Drug Delivery Sciences Fellow

Objectives

- Contribute to the advancement of AbbVie's science and capabilities in one or more areas of drug delivery.
- Collaborate with other scientists, both within and outside the department, to design and evaluate drug delivery systems and enable new products that address unmet medical need.



Application Requirements

- Ph.D. in chemical engineering, biomedical engineering, mechanical engineering, materials science, polymer chemistry, colloidal chemistry, physical chemistry, pharmaceutical chemistry or a similar field.
- Subject matter expertise in areas relevant to drug delivery such as, formulation, physical and chemical characterization, drug targeting and associated biology, or medical devices is also desirable.
- Excellent oral and written communication skills, ethics, professionalism, and an interest in the biopharmaceutical industry.

Pharmaceutical Sciences

The one-year Pharmaceutical Sciences Fellowship focuses on the design and evaluation of novel oral, ophthalmic, and dermal formulations. As part of the training program, the fellow will be provided opportunities to gain first-hand experience with the different functional areas of the Pharmaceutical Sciences organization. This fellowship program is intended to give postdoctoral research training to support the fellow's professional and career growth.

Objectives

- Design and evaluate novel oral, ophthalmic, and dermal formulations
- Evaluate the effect of excipients and processing parameters on quality and performance
- Investigate new formulation platform technologies
- Expand technical writing skills by developing, reviewing, and writing protocols and technical reports



Application Requirements

- PhD in pharmaceutical chemistry, pharmaceutical sciences, biomedical engineering, chemical engineering, materials science, polymer science and engineering, physical chemistry or a similar field
- In-depth understanding of basic science principles, physical chemistry and material properties
- Excellent oral and written communication skills, teamwork, professionalism, and an interest in biopharmaceutical industry are required for all fellowship positions



Andrella King, Ph.D.
Pharmaceutical Sciences Fellow

Immunology

The one-year Immunology Fellowship mainly focuses on immunogenicity studies against biologics and toxins to support drug development programs. As part of the training, the fellow will be provided with opportunities to participate in various activities like designing experiments, executing experiments and data analysis. It also involves cross functional team interactions across multiple therapeutic areas within AbbVie. Additionally, interested fellows can gain expertise in flowcytometry, Luminex, ex vivo/in vivo assays. The fellowship is intended to enhance the postdoctoral research training of the applicant and develop the skills required to excel in their field.



Objectives

- Collaborate and conduct a thorough review and build a knowledge base (ARCH/Convergence collaboration) of the immunogenicity data across all internal ophthalmology, Toxin and device programs
- Build knowledge base (collect, analyze data) for immunogenicity data and potential risks from publications on commercial biologics across all ophthalmology, Toxin and device areas.
- Building knowledge base from literatures around in silico and in vitro assays and identify the most promising ones for immunogenicity prediction specific for different modalities
- Proposing fit-for-purpose in vitro/ex vivo/in vivo assays to investigate potential risk evaluation and relevant outcome measures for devices

Application Requirements

- PhD from an accredited university or equivalent
- Experience and coursework in immunology and Biochemistry
- Good oral and written communication skills, ethics, professionalism and an interest in the biopharmaceutical industry
- Note: off-cycle fellowship, start date may vary

Toxicology

The one-year Toxicology Fellowship focuses on developing the skills needed to identify the toxicology and safety pharmacology studies required to support drug development programs, to independently design toxicology studies and to be able to interpret and integrate data from toxicology studies into risk assessments in support of product safety and dose selection for initiating clinical investigations or regulatory submissions. As part of the training, the fellow will engage as Toxicology Representative on project teams, prepare regulatory documents, learn about the assessment of testing facilities and participate in cross-functional team interactions.

Objectives

- Learn about requirements for nonclinical safety testing of pharmaceutical drugs to support conduct of clinical trials and marketing authorization
- Learn how to independently design and conduct toxicology studies
- Acquire experience as Toxicology Representative on projects teams to guide the nonclinical safety strategy
- Be able to interpret data from toxicology studies
- Become familiar with global regulatory agency interactions and regulatory document submissions
- Participate in/observe nonclinical safety study activities

Application Requirements

- PhD from an accredited university or equivalent
- Experience and coursework in biological sciences, biochemistry and/or toxicology
- Good oral and written communication skills, ethics, professionalism and an interest in the biopharmaceutical industry
- Note: off-cycle fellowship, start date may vary



Fellowship Alumni Alma Mater



Current Fellows

Austin Mullins, Pharm.D.

Medical Affairs, Evidence Solutions Fellow
The Ohio State University

Brittani Hewitt, Pharm.D.

Medical Affairs, Global Scientific Publications
Hampton University

Parker Wade, Pharm.D.

Medical Affairs, Global Medical Information
East Tennessee State University

Cynthia Sassenberg, Pharm.D.

Global Regulatory Affairs, Strategy
Marshall B. Ketchum University

Masara Issa, Pharm.D.

Eye Care Development
University of California, San Diego

Tam Nguyen, Pharm.D.

Aesthetic Medicine Development
University of Minnesota, Twin Cities

Irene Sunwoo, Pharm.D.

Clinical Pharmacology
University of California, San Francisco

Brianna Hoover, Ph.D.

Research Pharmacology, Eye Care Research
University of California, Irvine

Myan Do, Ph.D.

Research Pharmacology, Eye Care Research
University of California, San Diego

Ammar Al Khafaji, Ph.D.

Drug Delivery Sciences, Small Molecule Product Development
University of Iowa

Andrella King, Ph.D.

Pharmaceutical Sciences
MCPHS University



Application Process

The USC-AbbVie Pharmaceutical Industry Fellowship program provides exceptional preparation and education for postdoctoral graduates entering the pharmaceutical industry. Entry into the program is competitive and applicants are encouraged to review all admission requirements and deadlines prior to beginning the application process.

The University of Southern California is an Equal Opportunity/Affirmative Action employer. USC-AbbVie Fellows are classified as students and are affiliated with AbbVie for the purpose of training and career development.

DEADLINE

Candidates must submit the online application by

**December 11th,
2021**

REQUIREMENTS

To be admitted to the USC-AbbVie Pharmaceutical Industry Fellowship program, you must have obtained:

- A Pharm.D., Ph.D., M.D. or equivalent doctorate degree from an accredited college or university within five years of the initial appointment

ADMISSION

To apply, go to <https://provost.sma.usc.edu/prog/fellowship/> (opens on Oct 1st, 2021) where you will be asked to provide:

- The email addresses of three references
- Curriculum Vitae (CV)
- Letter of intent
- Official pharmacy school, medical school, or graduate school transcript

CONTACT INFORMATION

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1985 Zonal Avenue, PSC B-15
Los Angeles, CA 90033

Additional information available at:

<http://pharmacyschool.usc.edu/programs/fellowship/>

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