### PHARMACEUTICAL INDUSTRY

# Fellowship Program

USC School of Pharmacy 2015 - 2016







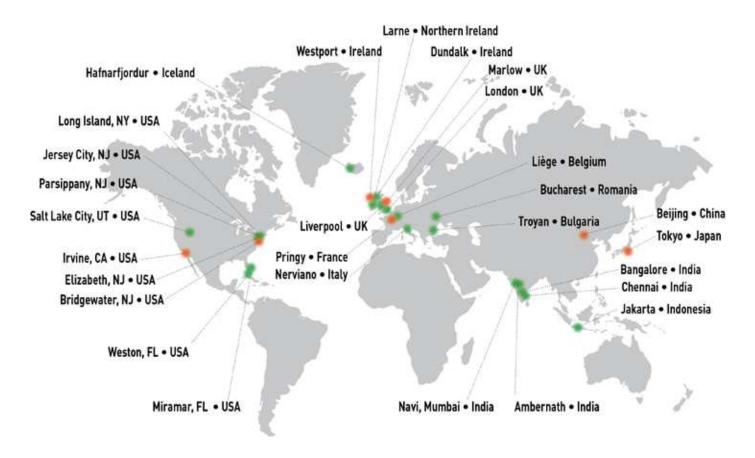
# ABOUT OUR COMPANY

Allergan, headquartered in Dublin, Ireland, is a unique, global pharmaceutical company among the leaders in Growth Pharma. Our company is focused on developing, manufacturing and commercializing innovative pharmaceuticals, high-quality generic and over-the-counter medicines and biologic products for patients around the world. Allergan markets a portfolio of best-in-class products that provide valuable treatments for the central nervous system, eye care, medical aesthetics, gastroenterology, women's health, urology, cardiovascular and anti-infective therapeutic categories. Our company also operates the world's third-largest global generics business, providing patients around the globe with increased access to affordable,

high-quality medicines. We are an industry leader in research and development, with one of the broadest innovative development pipelines in the pharmaceutical industry and a leading position in the submission of generic product applications globally. With commercial operations in approximately 100 countries, our company is committed to working with physicians, pharmacists, healthcare providers and customers to provide patients with pharmaceuticals that help people around the world live longer, healthier lives.



#### **OUR WORLD-CLASS R&D NETWORK**





# ABOUT OUR FELLOWSHIP

Allergan partners with the University of Southern California School of Pharmacy to give you a distinctive fellowship advantage- a unique environment that develops your skills and fast-tracks your career.



# THE FELLOWSHIP PROGRAM

The USC-Allergan 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 may be included in the program, in addition to hands-on project activities in Allergan 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. All fellowships begin July 1 and end on June 30.

#### **KEY HIGHLIGHTS**

- Access to USC Regulatory Science courses and tuition remission, up to 4 units per semester
- 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



William C. Gong, PHARM.D., FASHP, FCSHP Director, Residency and Fellowship Training Associate Professor of Clinical Pharmacology USC School of Pharmacy



Kevin Kerr, PHARM.D., MS Fellowship Coordinator Manager, Clinical Development Allergan, plc.



# Global Pharmaceutical Sciences Fellowship

Jesse Ho, Pharm.D.
Global Pharmaceutical Sciences Fellow - University of Southern California

Ryan Werner, Pharm.D.
Global Pharmaceutical Sciences Fellow - University of Illinois at Chicago

The one-year Global Pharmaceutical Sciences (GPS) fellowship provides hands-on experience constructing global regulatory submission documents from the initial stages of document preparation to final submission. The fellow becomes a key component of the Core Team and shares the responsibility for facilitating timely submission and publishing of these documents to regulatory agencies across the globe. In addition, the fellow has the unique networking opportunity to manage several projects inside and outside of GPS as part of a comprehensive training program.

#### **OBJECTIVES OF THE GLOBAL PHARMACEUTICAL SCIENCES FELLOW**

- Assemble and manage regulatory documents in electronic Common Technical Documents (eCTD) format that meet regulatory standards
- Interact with Global Regulatory Affairs, Clinical Development, Project Management, Clinical
  Manufacturing, Method Development, Process Development, Analytical Testing, Research and
  Development, Drug Safety, Toxicology, Clinical Pharmacokinetics, Labeling, Quality Assurance, Publishing,
  and Marketing to discuss issues specific to Pharmaceutical Sciences, and enhance the practical application
  of the information acquired
- Review and discuss analytical method development, validation, and implementation with CMC team leaders and analytical scientists

- 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
- Good oral and written communication skills, ethics, professionalism, and an interest in biopharmaceutical industry are required for all fellowship positions

# Clinical Development Fellowship



Jeff Penzner, Pharm.D.
Clinical Development Fellow - University of Southern California

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, 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 OF THE CLINICAL DEVELOPMENT FELLOW**

- Explore the pharmacology of therapeutics and their clinical use
- Learn operational aspects of clinical trial design from startup, through execution, and closeout
- Develop and optimize study documents (eg. protocols, investigator brochures, procedure manuals, clinical development plans, informed consent forms, clinical study reports)
- Participate in processes of ongoing data review, analysis, and reporting
- Understand the roles and responsibilities of clinical team members

#### **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
- Good oral and written communication skills, ethics, professionalism, and an interest in biopharmaceutical industry are required for all fellowship positions

# Pharmacokinetic & Pharmacodynamic Fellowship



Wayne Chen, Pharm.D.

Pharmacokinetic and Pharmacodynamic Fellow - University of Washington

The one-year Pharmacokinetic and Pharmacodynamic fellowship focuses on translational sciences and clinical pharmacology. The fellow will be provided with opportunities to analyze and translate nonclinical and clinical data to guide dose regimen selection. As part of the training program, the fellow will participate in early clinical study activities which include study conceptualization through protocol development, study execution, data analysis and reporting. As part of the translational effort the fellow will mine existing nonclinical and clinical data to guide nonclinical model development in an effort to better predict human response. This fellowship is intended to enhance the postdoctoral research training of the applicant with hands-on training in the application of pharmacokinetic and drug disposition principles and modeling techniques to better characterize the PK/PD relationship understanding for Allergan programs.

#### **OBJECTIVES OF THE PHARMACOKINETIC & PHARMACODYNAMIC FELLOW**

- · Participation in clinical study activities
- Integration of data from multiple sources to build a comprehensive PK/PD and toxicokinetic database in relations to Allergan candidate compounds
- · Hands on training and experience with modeling and graphical software
- Creating and delivering presentations to guide project team discussions with respect to dose selection and clinical pharmacology strategy
- Opportunities to learn, plan and participate in departmental meetings and seminars

#### **APPLICATION REQUIREMENTS**

- Pharm.D. or Ph.D. from an accredited university or equivalent
- · Experience and coursework in pharmacokinetics
- · Good oral and written communication skills, ethics, professionalism, and an interest in biopharmaceutical industry



The one-year Pharmaceutical Development fellowship focuses on the design and evaluation of novel 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 Small Molecule Product Development organization. This fellowship program is intended to give postdoctoral research training to support the fellow's professional and career growth.

#### **OBJECTIVES OF THE PHARMACEUTICAL DEVELOPMENT FELLOW**

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

- Ph.D. 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
- Good oral and written communication skills, ethics, professionalism, and an interest in the biopharmaceutical industry are required for all fellowship positions



The one-year Drug Delivery Sciences fellowship focuses on the design of new drug delivery systems and process development—including inventing new drug delivery systems and exploring novel adaptations of existing systems.

This fellowship is intended to give postdoctoral research graduates exposure to the pharmaceutical industry while advancing the fellow's own research and professional growth. The focus of the program is to enhance the postdoctoral research training of the applicant and to provide an opportunity to integrate with the various departments and disciplines within the pharmaceutical industry. With an individualized plan based on input from the fellow, the fellow participates as a member of Allergan's Drug Delivery Center of Excellence within Pharmaceutical Development.

#### OBJECTIVES OF THE DRUG DELIVERY SCIENCES FELLOW

- · Design and evaluate drug delivery systems for sustained release and targeted distribution to physiological sites of interest. This can encompass opportunities for innovation and discovery of novel technologies and methods for controlled therapeutics
- · Investigate and develop new delivery systems based on polymers, emulsions or related disciplines. This may include training with life sciences personnel to evaluate and improve upon system prototypes

- Ph.D. in chemical engineering, biomedical engineering, materials science, polymer chemistry, colloidal chemistry, physical chemistry, pharmaceutical chemistry or a similar field
- · An in-depth understanding of basic science principles, physical chemistry and material properties. Knowledge and experience in cell biology or biochemistry is also desirable
- · Good oral and written communication skills, ethics, professionalism, and an interest in biopharmaceutical industry



Kevin Pham, Pharm.D. Medical Affairs, Medical Information Fellow - University of Southern California, School of Pharmacy Nicole Naccara, Pharm.D.

Medical Affairs, Global Phase IV, Fellow
- University of Iowa, College of Pharmacy & Health Sciences

Sarwang Shah, Pharm.D.

Medical Affairs, External Scientific Communications Fellow
- Albany College of Pharmacy & Health Sciences

The one-year Medical Affairs fellowship focuses on providing exposure to the following three pillars of functionality: Medical information, Global Phase IV Trials and External Scientific Communications. The fellows will develop first-hand experiences in medical information database operations, management of post-marketing clinical research, and 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 OF THE MEDICAL AFFAIRS FELLOW**

- Establish and maintain collaborative relationships with Medical directors, Medical Science Liaisons, Key Opinion Leaders (KOLs), Health Outcomes and Economics Research (HEOR), Marketing, and Principle investigators
- Assist in the providing transparency to trial status, milestone progress and other trial metrics.
- Partner with internal and external global stakeholders to strategically plan and disseminate Allergan's key scientific data through high quality and medically relevant publications
- · Provide information to support field-based MSL teams as needed for key opinion leaders

- Pharm.D., M.D. or Ph.D. in applicable study focuses from an accredited university
- Attendance and Interviewing at the 2015 ASHP Midyear meeting is highly recommended
- Good oral and written communication skills, ethics, professionalism, leadership, and an interest in biopharmaceutical industry are required for all fellowship positions



# FELLOWSHIP MENTORS



Loren Wagner, M.S.
Senior Director, Global Pharmaceutical Operations
Global Pharmaceutical Scienes Fellowship Mentor



Jimmie Overton, Pharm.D.
Senior Director, Medical Information and Library Services
Medical Affairs Fellowship Mentor



Susan Schneider, M.D.
Vice President and Therapeutic Area Head Glaucoma and Retina
Clinical Development Fellowship Mentor



Miles McLennan, M.B.A Senior Director, Global Phase IV Trial Managment Medical Affairs Fellowship Mentor



Mayssa Attar, Ph.D.
Senior Director, Translational PK/PD
Pharmacokinetic and Pharmacodynamic Fellowship Mentor



Eric Forssen, Pharm.D., Ph.D.
Manager, Drug Delivery Sciences
Drug Delivery Sciences Fellowship Mentor



Wil Glass, Ph.D.
Senior Director, External Scientific Communications
Medical Affairs Fellowship Mentor

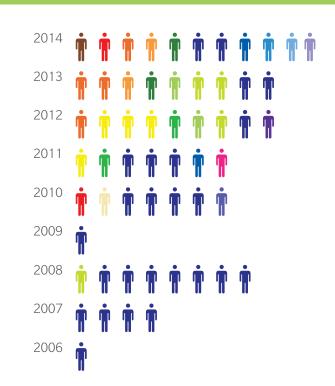


Kevin S. Warner, Ph.D.
Principal Scientist, Small Molecule Product Development
Pharmaceutical Development Fellowship Mentor

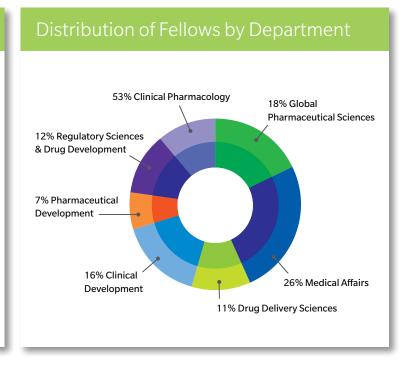
# **PAST FELLOWS**

#### **SCHOOLS**

- Albany College of Pharmacy
- Long Island University
- MCPHS
- Purdue University
- Rutgers University
- UC Berkeley
- UC Irvine
- UCLA
- UCSF
- UC San Diego
- USC
- University of Colorado
- University of Illinois, Chicago
- University of Iowa
- University of Maryland, Baltimore
- University of Oklahoma
- University of Washington
- University of South Carolina



# 2% PharmD, MBA 2% PharmD, PhD, MS 14% PharmD, MS 30% PhD



POST-FELLOWSHIP PLACEMENT

Pharmaceutical Companies

Pharmacy Practice Pharmacy Benefit Managed Care

# **APPLICATION PROCESS**

The USC-Allergan 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-Allergan Fellows are classified as students, and are affiliated with Allergan, plc for the purpose of training and career development.



**REQUIREMENTS** 

 $\label{total continuous} To be admitted to the USC-Allergan\ Pharmaceutical\ Industry\ Fellowship\ program,\ you\ must\ have\ obtained:$ 

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

#### **ADMISSION**

 $When you are \ ready \ to \ apply, go \ to \ the \ USC \ School \ of \ Pharmacy \ online \ application. \ You \ will \ be \ asked \ to \ supply:$ 

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

#### **CONTACT INFORMATION**

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1985 Zonal Avenue,

PSC B-15 Los Angeles, CA 90033

Additional information and application available at: http://pharmacyschool.usc.edu/programs/fellowship/



