GLOBAL HEALTH ECONOMICS AND OUTCOMES RESEARCH

Fellowship Program

University of Washington 2016 - 2018
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

GLOBAL HEALTH ECONOMICS AND OUTCOMES RESEARCH (GHEOR) MISSION

Allergan GHEOR Vision: To drive optimal access for Allergan products everywhere.

1. **Product Value Proposition**
   - OR Strategy based on product value, stakeholder needs & insights

2. **Evidence Generation and Tool Development**
   - through clinical and health economics & outcomes research (HEOR) data

3. **Value Communication**
   - about evidence informing the Value Proposition to Stakeholders
   - informs health care decision making

GHEOR Fellowship Program 2016 - 2018
ABOUT OUR SCHOOL

The University of Washington is a world-class leader in health sciences education and has been consistently listed in US News and World Report as one of the top 10 institutions for its graduate programs. The University is particularly noted for its strong research programs and since 1974 has received more federal funds for research and training than any other public university in the United States. It fosters a highly collegial atmosphere between departments and academic units, creating a particularly attractive environment for such partnerships between the public and private sectors.

The Pharmaceutical Outcomes Research and Policy Program (PORPP) is housed within the University of Washington School of Pharmacy, which boasts nearly 120 years of academic and research success. Faculty in the program (1) provide advanced research training for graduate students, post-doctoral fellows and clinicians (PharmDs, MDs); (2) conduct rigorous scientific research in the pharmacoconomics and outcomes of pharmaceuticals and other health technologies, and (3) translate and disseminate the results of research into clinical practice and healthcare policy, with the goal of improving patient care.

PORPP faculty participating in the fellowship have been chosen both for their dedication to teaching and their excellence in research. Each is trained either as a health economist or health services researcher and all have an extensive history of effective pharmacoeconomic and pharmacoepidemiologic research.
ABOUT OUR FELLOWSHIP

The Allergan/University of Washington GHEOR Fellowship is a two-year program that provides training and hands-on experience in a broad-range of health economics and outcomes research topics. The program is structured to allow fellows to gain proficiency in health outcomes strategy and research as conducted in both academic and pharmaceutical industry settings.

THE FELLOWSHIP PROGRAM

Allergan and the University of Washington are pleased to offer two, 2-year GHEOR Fellowship positions for the academic year 2016-2018. Fellows will spend their first year at the University of Washington (Seattle, WA), and the second year at Allergan (Irvine, CA). The objective of the first year is to educate fellows on the principles and methods used in health economics and outcomes research. During the second year, fellows are provided with opportunities to gain practical knowledge and experience with the use of clinical, economic, and humanistic data by supporting the development and commercialization of pharmaceutical products. This will be accomplished by participating in work activities undertaken by the GHEOR team.

Compensation includes a competitive stipend, basic medical insurance, and holiday/vacation time. A Master’s Degree is awarded upon completion of all course requirements and thesis project.

FELLOWSHIP DIRECTORS

University of Washington
Beth Devine, PharmD, MBA, PhD, BCPS, FASHP
Associate Professor
Pharmaceutical Outcomes Research & Policy Program
1959 NE Pacific Avenue, H-375D
Box 357630
Seattle, WA 98195-7630
E-Mail: bdevine@uw.edu

Allergan, Inc.
Vaishali Patel, PharmD, MS
Senior Director, GHEOR
2525 Dupont Drive
Irvine, CA 92612
E-Mail: Patel_Vaishali@Allergan.com
Phone: (714) 246-6679
Fellowship Structure - First Year

FIRST YEAR OBJECTIVES

The objective of the first year is to provide the fellow with the research tools necessary for pharmacoeconomic and policy assessment. The fellow will be given an overview of pharmaceutical economics and general health policy, and taught methods of economic assessment, health services research, epidemiology, clinical research design, and biostatistical analyses.

The fellow will be assigned a Master's thesis project which is selected based on input from both Allergan as well as the University of Washington mentors. Fellows are highly encouraged to complete their MS project during their first year. Additionally, fellows will also engage in ongoing projects with Allergan throughout their first year, applying skills from previous pharmacy training as well as integrating new techniques developed from University of Washington courses. Applying learning to solve real-world problems is a constant focus of the fellowship.

The fellow's actual course of study will be developed on an individual basis with the Program Director, Dr. Beth Devine, but will consist of courses in biostatistics, epidemiology, pharmacoeconomics and outcomes research, and health and Pharmaceutical Policy.

AFTER COMPLETION OF THE FIRST-YEAR, THE FELLOW WILL HAVE A CLEAR UNDERSTANDING OF:

- General principles of economics and in particular how economics influences the use, cost, and availability of pharmaceuticals.
- The complex structure of drug policy and how it determines relationships between consumers, health care providers, insurers, payers, and government agencies.
- The breadth and scope of analytical methods needed for the assessment of Patient Reported Outcomes (PROs), economic modeling, retrospective database studies, and observational studies.
- Formulary development, maintenance and evaluation in institutional, managed care, and state-level government programs.
Fellowship Structure - Second Year

SECOND YEAR OBJECTIVES

The second year of training will be at Allergan in Irvine, CA with the GHEOR department. This part of the program is designed to allow the fellow to learn about the role of pharmacoeconomics and outcomes research in the drug development and commercialization process within the industry setting. The research may be on an existing or experimental product, for a disease state that is of interest to Allergan.

In addition to completing individual research project(s), fellows will participate in ongoing pharmacoeconomic evaluations, outcomes research, and other projects in collaboration with the GHEOR team. These experiences will provide the fellow with opportunities to interact with team members in other departments at Allergan to learn how economic analyses and outcomes research are used throughout the pharmaceutical industry. Fellows will see firsthand how outcomes research is utilized to demonstrate the place of Allergan products in treatment pathways and its value.
ALLERGAN FELLOWSHIP MENTORS

Jan E. Hansen, PhD  
Vice President, GHEOR

Jonathan W. Kowalski, PharmD, MS  
Vice President, GHEOR

Sepideh Varon, PhD  
Senior Director, GHEOR

Vaishali Patel, PharmD, MS  
Senior Director, GHEOR

Patrick Gillard, PharmD, MS  
Director, GHEOR

Joanna Campbell, PhD  
Director, GHEOR

Zsolt Hepp, PharmD, MS  
Manager, GHEOR

UNIVERSITY OF WASHINGTON PROGRAM FACULTY

- Anirban Basu, PhD  
  Professor and Stergachis Family Endowed  
  Director of PORPP

- Denise Boudreau, PhD  
  Affiliate Associate Professor

- Beth Devine, PharmD, MBA, PhD,  
  BCPS, FASHP  
  Associate Professor

- Josh Carlson, MPH, PhD  
  Assistant Professor

- Louis P. Garrison, Jr., PhD  
  Professor

- Ryan Hansen, PhD, PharmD  
  Assistant Professor

- Thomas K. Hazlet, PharmD, Dr. PH  
  Associate Professor

- Scott D. Ramsey, MD, PhD  
  Professor

- Sean D. Sullivan, PhD  
  Stergachis Family Professor and Dean of School  
  of Pharmacy

- David L. Veenstra, PharmD, PhD  
  Professor, Director of Graduate Programs

GHEOR Fellowship Program 2015 - 2018
CURRENT FELLOWS

FIRST YEAR FELLOWS

Sarah Baradaran, PharmD
Sarah received her PharmD degree from the University of Washington (UW) School of Pharmacy in 2015. She completed a four-year clinical internship at The Everett Clinic, where she participated in P&T decision-making and conducted literature reviews and medication utilization evaluations. Sarah’s clerkships at the FDA Department of Pharmacovigilance in two therapeutic areas allowed her to explore different methods of tracking and identifying adverse events, post-authorization. Her clerkship with Evidera's Retrospective Observational Studies team provided additional experience with evidence generation methods in outcomes research and real-world data.

Current coursework in epidemiology, biostatistics, and economic modeling are providing Sarah with a strong methods foundation. She looks forward to applying her skills and knowledge to her thesis project, which explores the identification and costs of adverse outcomes associated with colistin in severe MDR gram-negative infections. Sarah looks forward to working with the PORPP faculty and Allergan team.

Amy Tung, PharmD
Amy received her PharmD degree from the UW in 2015. Her interest in health economics and outcomes research (HEOR) started from the desire to blend her background working in the technology industry as a market researcher with her interest in pharmaceutical outcomes and health policy. Her passion for HEOR continued to grow while taking various pharmacoeconomics and managed care electives in pharmacy school, serving as president of UW’s Academy of Managed Care Pharmacy chapter, and her experience writing dossiers for pharmaceutical companies as a consultant.

She is looking forward to building a strong foundation for becoming an effective health economics and outcomes researcher through coursework in biostatistics, epidemiology, economic evaluations, and patient-reported outcomes. For her thesis project, she will be conducting a retrospective claims-based analysis to assess the burden of Interstitial Cystitis in the US using a nationally representative dataset. Amy is excited for the opportunity to work with students and faculty at UW and Allergan.
Katelyn Keyloun, PharmD, MS
Katelyn R. Keyloun is a Washington State pharmacist (Graduated from University of Washington, June 2014) with a background in parasitology research. During the first year of the fellowship, she became involved with a health informatics project on use of pharmacogenomics testing in the UW health system under mentorship from Professor Beth Devine at UW. Her submitted thesis project is titled “A Retrospective Claims Analysis of Medication Adherence and Persistence Among Patients Taking Antidepressants for the Treatment of Major Depressive Disorder (MDD)”.

During the second year of the fellowship, Katelyn has been under the mentorship of Patrick Gillard, GHEOR Director with a therapeutic focus on infectious disease. She is currently developing a manuscript from her thesis project results for MDD and performing additional analyses to further understand adherence and persistence in this population. In tandem, she is beginning work in infectious disease through developing statistical analysis plans and a patient satisfaction survey for ongoing projects supporting the economic value of Dalvance®. Katelyn is excited to tackle new projects throughout the second fellowship year at Allergan.

ABSTRACTS FROM FELLOWSHIP:

MANUSCRIPTS FROM FELLOWSHIP:

Vanessa Shih, PharmD, MS
Vanessa received her doctorate of pharmacy from the University of California, San Francisco School of Pharmacy in 2014. In the first year of her fellowship, she completed her thesis titled “Assessing the burden of worsening self-reported vision in older Americans using the Health and Retirement Study” under the guidance of Professor Beth Devine.

During the second year of the fellowship, she has been under the mentorship of Joanna Campbell and Hitesh Chandwani in the ophthalmology therapeutic area. She has been performing additional analyses on her thesis project to estimate the association between onset of vision impairment and caregiving requirements to support the development of a manuscript. She has also been working on characterizing utilization of treatments for dry eye and will be working with electronic medical record data to understand real-world utilization of treatments for diabetic macular edema. She is excited to apply pharmacoeconomic principles to research in the industry setting during the second year of the fellowship.

ABSTRACTS FROM FELLOWSHIP:
MANUSCRIPTS FROM FELLOWSHIP
1. Yap T, Patel VD, Slezko JF, Devine EB. Comparing Total and Disease Related Healthcare Cost for Glaucoma Patients by Disease Severity: A Retrospective Claims Database Analysis. (In Progress)

ABSTRACTS FROM FELLOWSHIP

MANUSCRIPTS FROM FELLOWSHIP

MEETING ABSTRACTS FROM FELLOWSHIP

MANUSCRIPTS FROM FELLOWSHIP

MEETING ABSTRACTS FROM FELLOWSHIP
MANUSCRIPTS FROM FELLOWSHIP:

MEETING ABSTRACTS FROM FELLOWSHIP:

MANUSCRIPTS FROM FELLOWSHIP:

MEETING ABSTRACTS FROM FELLOWSHIP:

MANUSCRIPTS FROM FELLOWSHIP:

SELECT MEETING ABSTRACTS FROM FELLOWSHIP:

MANUSCRIPTS FROM FELLOWSHIP:

SELECT MEETING ABSTRACTS FROM FELLOWSHIP:

MANUSCRIPTS FROM FELLOWSHIP:

SELECT MEETING ABSTRACTS FROM FELLOWSHIP:
APPLICATION ELIGIBILITY

Applicants for this fellowship must have a degree in pharmacy or health-related discipline and have some research experience (preference will be given to those with a high academic standing). Excellent written and verbal communication skills are also essential. Applicants will be required to submit their curriculum vitae, a letter describing their career goals, and three letters of recommendation. Selection of fellows will be made by a steering committee composed of the University of Washington faculty members and representatives from Allergan.

DEADLINE

The application deadline is December 15, 2015 and the start date of the Fellowship is July 1, 2016.

APPLICATION INFORMATION

Interested students must apply to both the University of Washington Graduate School, as well as the Pharmaceutical Outcomes Research & Policy Program. The online application process can be found at:
http://sop.washington.edu/department-of-pharmacy/pharmaceutical-outcomes-research-policy-program-porpp/fellowship-opportunities/

CONTACT INFORMATION

If you have any questions, please contact:
University of Washington
Penny Evans
Graduate Program Coordinator Department of Pharmacy
Box 357630
University of Washington
Seattle, WA 98195-7630
E-Mail: pennye@u.washington.edu
Phone: (206) 616-1383
Fax: (206) 543-3835

Allergan, Inc.
Patrick Gillard, PharmD, MS
Director, GHEOR
2525 Dupont Drive
Irvine, CA 92612
E-Mail: Gillard_Patrick@allergan.com
Phone: (714) 246-2354