



PHARMACEUTICAL INDUSTRY Fellow Program



PASSION | POWER
TO INNOVATE TO CHANGE

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1 PURPOSE AND OVERVIEW

2 FELLOWSHIP STRUCTURE

3 FIRST YEAR – UNIVERSITY OF WASHINGTON

6 ABOUT BAYER PHARMACEUTICALS

8 SECOND YEAR – BAYER PHARMACEUTICALS

PURPOSE

The Bayer Pharmaceuticals and University of Washington **Health Economics and Outcomes Research Fellow Program** is a two-year program that provides training and hands-on experience in a broad range of health economics and outcomes research topics. This program is structured to allow the fellow to gain proficiency in these areas of research as conducted in both the **academic and pharmaceutical industry settings**.

OVERVIEW

Bayer Pharmaceuticals and the University of Washington are pleased to offer a two-year Health Economics and Outcomes Research Fellow position for the academic years 2017–2019.

The first year of the fellowship will be spent at the University of Washington (Seattle, WA).

- The objective of the first year is to educate the fellow on principles and methods of health economics and outcomes research. In this first year, the fellow will take core courses to satisfy the Master's Degree requirements. Courses include biostatistics, health economics, and epidemiology. The fellow will be awarded a **Master's Degree** from the University upon completion of all course requirements and a thesis project.

The second year will be spent at Bayer Pharmaceuticals (Whippany, NJ).

- The objective of the second year is to provide the fellow with hands-on training and exposure to the process of **generating and utilizing strategically focused health economics and outcomes research** to support the development and commercialization of pharmaceutical products. This will be accomplished by working closely with colleagues in the US Health Economics and Outcomes Research group.

Compensation includes a competitive stipend, basic medical insurance, holiday and vacation time, plus other benefits associated with the academic institution.



FELLOWSHIP STRUCTURE – FIRST YEAR

The first year of the fellowship is conducted at the University of Washington School of Pharmacy in Seattle. **The objective of the first year is to provide the fellows with the intellectual tools necessary for pharmacoeconomic research.** They will receive an overview of pharmaceutical economics and general health policy and learn methods of economic assessment, health services research design, and statistical analyses.

Fellows will be expected to begin the program in the first week of July and complete didactic requirements by June of the following year. Formal course work will be provided primarily by the Departments of Pharmacy, Health Services, Epidemiology, and Biostatistics but will draw upon the multidisciplinary resources of the University of Washington.

During the first few months of the program, fellows will work with the program director, Josh Carlson, to design an individualized program to meet their goals. They will meet with their advisor on a regular basis to review progress, discuss their work, review and assign current research articles, or for other scholarly endeavors. In addition to their other classwork, fellows will participate in a research seminar designed to provide them with experience in evaluation, critiquing, preparing, and presenting scholarly research during each quarter of the first year and will be expected to present a report on their independent research once during the first year. The program is rigorous, requiring up to 45 hours a week in classwork and independent study.

Fellows will be required to participate in at least one ongoing research project with a member of the faculty and are encouraged to develop at least one research proposal under the supervision of the faculty mentor. Research projects shall be implemented while fellows are at the University of Washington but may continue into the second year of the program. Research will be managed by fellows under the supervision of University of Washington faculty and Bayer researchers.

The fellow will be awarded a Master's Degree from the University of Washington upon completion of all course requirements and a thesis project.

FELLOWSHIP STRUCTURE – SECOND YEAR

During the second year of training, the fellow will be part of Bayer's US HEOR team and will conduct an approved pharmacoeconomic study. **This part of the program is designed to allow fellows to learn about the role of pharmacoeconomic research in the drug development and evaluation process within the industry setting.** The research may be on an existing or experimental product, a therapeutic class of drugs, or a disease state of interest to Bayer (oncology, cardiology, and/or women's healthcare therapeutic areas, or others with Bayer approval).

In addition to completing their individual research project(s), fellows will participate in ongoing pharmacoeconomic evaluations or other projects assigned by their Bayer preceptor. They will have the opportunity to interact with departments involved in clinical research, commercial development, and regulatory affairs at Bayer to learn how economic analyses are used by the pharmaceutical industry, and will also learn how Bayer uses clinical, epidemiologic, and pharmacoeconomic data to support the utilization of its products. Fellows will be expected to present the results of any individual research projects to the University of Washington faculty, graduate students, and other post-doctoral fellows as well as to their colleagues at Bayer.

ABOUT THE UNIVERSITY OF WASHINGTON

The University of Washington is a **national leader in health sciences education** and has been consistently listed in *U.S. News and World Report* as one of the top ten such 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. It fosters a highly collegial atmosphere between disciplines, creating a particularly attractive environment for such partnerships between the public and private sectors as the UW/Bayer Fellowship.

To coordinate its strong existing program and better serve the pharmaceutical community, the UW School of Pharmacy has established the Pharmaceutical Outcomes Research and Policy Program (PORPP) within which this fellowship is located. PORPP has helped the University of Washington become a nationally recognized center for pharmacoepidemiology, pharmacoconomics, comparative effectiveness research, and pharmaceutical outcomes research.

The School's Department of Pharmacy faculty participating in the fellowship has been chosen both for their **dedication to teaching and their excellence in research**. Each is trained either as a health economist or health services research scientist, and all have an extensive history of effective pharmacoeconomic and pharmacoepidemiologic research.

FACILITIES

Fellows will be provided with work space and have access to the University's excellent research facilities, including health sciences and economic research libraries and computing facilities. In addition, during their time at Bayer Pharmaceuticals, they will be provided with office space and have access to the Health Economics and Outcomes Research (HEOR) Department's databases and data analytics team.

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 Bayer.

APPLICATION AND CONTACT INFORMATION

The application deadline is December 15, 2016.

Applicants must be permanent residents or citizens of the United States.

Program Information: <http://sop.uw.edu/porpp>

Contact: Penny Evans, pennye@uw.edu,

Josh Carlson, PhD
carlsojj@uw.edu

OR

Jean Malacan, PharmD, EM, MSc
jean.malacan@bayer.com

Website for information and application:
<http://sop.uw.edu/BayerFellow>



FELLOWS WILL BE EXPECTED TO BEGIN THE PROGRAM ON SITE WITH BAYER THE FIRST WEEK OF JULY 2018.

THE UNIVERSITY OF WASHINGTON TEAM



"The UW/Bayer Fellow Program showcases how we value cultivating strong, external collaborations to increase the professional development opportunities for our students."

Sean D. Sullivan, BScPharm, PhD

Professor and Dean, School of Pharmacy



"The UW/Bayer Fellow Program is an excellent example of how an academic/industry partnership can produce high-quality HEOR researchers."

Anirban Basu, MS, PhD

Stergachis Family Endowed Professor and Director
Pharmaceutical Outcomes Research and Policy Program, Department of Pharmacy



"The UW/Bayer Fellow Program benefits not only the student who receives the highest-quality HEOR education and training, and Bayer, which is able to employ a well-trained staff member, but also our society as more well-designed HEOR studies should lead to better healthcare resource allocation."

Louis Garrison, PhD

Professor Emeritus, Pharmaceutical Outcomes Research and Policy Program, Department of Pharmacy



"The Bayer/UW Fellow Program is an excellent and rewarding opportunity to meet talented recent graduates and help them transition into health economics and outcomes research professionals."

Josh J. Carlson, MPH, PhD

Associate Professor, Department of Pharmacy, Pharmaceutical Outcomes Research and Policy Program,
Bayer/UW Fellowship Director



"The UW/Bayer Fellowship offers an exciting opportunity for students to experience the best of both academia and the pharmaceutical industry, and to launch their professional career with a full complement of HEOR skills."

Beth Devine, PharmD, MBA, PhD

Associate Professor; Director of Graduate Programs, PORPP



"The UW/Bayer fellowship is a phenomenal opportunity to dive into the growing world of health economics research and policy, and learn from movers and influencers at its core."

Lucille Sun, Pharm D

Bayer / University of Washington 1st Year Fellow, 2016-2018
University of California San Francisco

UNIVERSITY OF WASHINGTON PROGRAM TEAM

- Josh Carlson, MPH, PhD, Associate Professor, Bayer/UW Fellowship Director
- Claire Forster, Assistant Dean of Advancement and Corporate Relations
- Penny Evans, Graduate Program Advisor



UNIVERSITY OF WASHINGTON, SCHOOL OF PHARMACY PORPP FACULTY MEMBERS

- Joseph Babigumira, MBChB, MS, PhD, Assistant Professor, Global Health; Adjunct, Dept. of Pharmacy
- Aastha Bansa, PhD, Research Assistant Professor, Dept. of Pharmacy
- Anirban Basu, MS, PhD, Stergachis Family Endowed Professor and Director, PORPP, Dept. of Pharmacy
- Carrie Bennette, MPH, PhD, Acting Assistant Professor
- Denise Boudreau, PhD, Affiliate Professor, Dept. of Pharmacy
- Brian Bresnahan, PhD, Research Assistant Professor, Dept. of Radiology; Adjunct, Dept. of Pharmacy
- Josh J. Carlson, MPH, PhD, Associate Professor, Dept. of Pharmacy; Bayer/UW Fellowship Director
- Beth Devine, PharmD, MBA, PhD, Associate Professor; Director of Graduate Programs, PORPP
- David Flum, MD, MPH, Professor and Associate Chair of Research; Director of the Surgical Outcomes Research Center (SORCE); Adjunct Professor, Dept. of Pharmacy
- Jacqueline Gardner, MS, PhD, Professor Emeritus, Dept. of Pharmacy
- Louis Garrison, PhD, Professor Emeritus, PORPP Dept. of Pharmacy
- Bernardo Goulart, MD, MS, Assistant Professor, Seattle Cancer Care Alliance, Thoracic/Head and Neck; Adjunct, Dept. of Pharmacy
- Shelly Gray, PharmD, MS, Professor, Vice Chair of Curriculum and Instruction; Director of Geriatric Pharmacy Program, Dept. of Pharmacy
- Ryan Hansen, PharmD, PhD, Research Assistant Professor, Dept. of Pharmacy
- Thomas Hazlet, PharmD, DrPH, Associate Professor & Director, MS in Biomedical Regulatory Affairs Program, Dept. of Pharmacy
- Jerry Jarvik, MD, MPH, Professor, Neuroradiology; Adjunct Professor, Dept. of Pharmacy
- Larry Kessler, ScD, Professor, Health Services; Adjunct Professor, Pharmacy
- Gary Lyman, MD, MPH, Co-Director, HICOR (Hutchinson Institute for Cancer Outcomes Research), Fred Hutch; Professor, School of Medicine; Affiliate Professor, Dept. of Pharmacy and School of Public Health
- Jeannine McCune, PharmD, Professor, Dept. of Pharmacy
- Donald Patrick, PhD, Professor, Health Services; Director of Social and Behavioral Sciences; Adjunct Professor, Depts. of Pharmacy, Epidemiology, Rehabilitation Medicine, and Sociology
- Scott Ramsey, MD, PhD, Adjunct Professor, Medicine and Pharmacy; Director, HICOR (Hutchinson Institute for Cancer Outcomes Research), Fred Hutch
- Andy Stergachis, PhD, Associate Dean for Research, Graduate Programs & New Initiatives, School of Pharmacy; Director, Global Medicines Program; Professor of Pharmacy and Global Health
- Lotte Steuten, PhD, Associate Professor, Pharmacy; Associate Member, HICOR (Hutchinson Institute for Cancer Outcomes Research), Fred Hutch
- Sean D. Sullivan, BScPharm, PhD, Professor and Dean, School of Pharmacy
- David Veenstra, PharmD, PhD, Professor; Associate Director, PORPP





Bayer's mission is to research, develop, manufacture, and market innovative products that improve the health of people and animals throughout the world. Throughout its 150-year history, Bayer has—and continues to—re-imagine science to transform lives, focusing on inventing new solutions that improve the health of patients, consumers, communities, and families. As one of the most recognized brands in the world today, Bayer considers innovation to be part of the company's DNA.

Bayer's healthcare business has operations in over 100 countries and employs 55,700 people worldwide. As one of the world's foremost innovators in the field of pharmaceutical and medical products, Bayer Pharmaceuticals provides products that healthcare providers and patients can trust. Its success is based on translating scientific findings into new medications and products that customers and society need. Doing this requires innovative thinking, dedication, and a relentless focus on doing the right thing. These core values set Bayer apart with an industry-leading portfolio of products and support that healthcare providers and their patients require.

Bayer has four operating divisions: Pharmaceuticals, Consumer Care, Crop Sciences, and Animal Health.



PHARMACEUTICALS

The US Bayer Pharmaceuticals business, headquartered in Whippany, NJ, provides specialty pharmaceutical products in the areas of Hematology, Neurology, Oncology, Cardiopulmonary, and Women's Healthcare. Multiple products have been approved recently in the US across all of Bayer's therapeutic areas. The company also recently expanded its Women's Healthcare portfolio, making Bayer the only company to offer a full range of contraception options to women—short-acting, long-acting, and permanent.

BAYER'S LIFE VALUES

By working sustainably and accepting our role as a socially and ethically responsible corporate citizen—and by committing to our Bayer values—we create benefits for the communities in which we live. Science For A Better Life: this is the promise we all give to our stakeholders.





Bayer



YOUR TIME AT BAYER

As a fellow at Bayer, you will be exposed to a variety of exciting opportunities that will enable you to become a leader in the pharmaceutical industry. Bayer's new employer brand promise describes what we expect from our employees and potential candidates and explains how each employee can succeed in the company. This employer brand promise, "Passion to Innovate | Power to Change" exemplifies our presence as a global giant and is supported by four underlying key promises that the fellow can expect upon entering the company. These four promises serve as pillars for what makes our working culture so special.

PASSION TO INNOVATE | POWER TO CHANGE

1

At Bayer, you have the freedom and the license to question the status quo and think ahead.

2

At Bayer, you can engage in open and inspiring work with people who share your passion to turn pioneering ideas into life-changing solutions.

3

At Bayer, our ideas are inspired by society's most fascinating challenges to enhance the lives of many, and our thinking is driven by our customers' needs.

4

At Bayer, you are empowered to make an impact by being part of a leading company that has the power and endurance it takes to improve life—not only in today's, but in tomorrow's world.

THE BAYER PHARMACEUTICALS TEAM



"Bayer Pharmaceuticals Medical Affairs in collaboration with the University of Washington Fellow Program provides graduates a great foundation to successfully launch a promising career into the healthcare industry. This program provides fellows with new ideas and valuable contributions to the company, allowing for professional and personal growth."

Dario Mirski, MD

Vice President/Head of Medical Affairs



"The Fellow Program is a fantastic opportunity for Bayer to attract and work with some of the top up and coming talent in the academic environment. Our two-year programs give the students a year at their school to settle in, conduct research, and begin to know their sponsor through a series of meetings regarding their ongoing work at the University but also about their interests in what they want to study when they arrive at Bayer for their second year. The second year, the fellows spend on site at Bayer giving them first-hand experience on the inner workings of a pharma company but also giving us (Bayer) an extremely bright and highly motivated person to work with over the course of the year."

Todd Williamson

Vice President, US Health Economics and Outcomes Research



"The Bayer fellowship program offers an excellent training opportunity in health economics and outcomes research, such as carrying out real-life evidence studies, developing economic models, and working with multidisciplinary US and global functions to support the development and commercialization of products. It is a very comprehensive program that opens the door for a successful career in the pharmaceutical industry."

Adriana Valderrama, PhD

Deputy Director, US Health Economics and Outcomes Research



"The UW/Bayer Fellow Program provides a unique opportunity to develop a research methodology in health economics and outcomes research at a leading university, work across a variety of therapeutic areas in an innovative pharmaceutical company, and receive success-building mentorship at both the University of Washington and Bayer."

Jean Malacan, PharmD, EM, MSc

Bayer / University of Washington 2nd Year Fellow, 2015-2017
Université Paris Sud, ESSEC Business School

BAYER PHARMACEUTICALS PROGRAM TEAM

- Todd Williamson, Vice President, US Health Economics and Outcomes Research
- Adriana Valderrama, PhD, Deputy Director, US Health Economics and Outcomes Research
- Jennifer Cameron, Associate Director, Operations and Projects, US Health Economics and Outcomes Research

FELLOWSHIP ALUMNI



"The UW/Bayer fellowship provided me with an excellent combination of academic and practical experience that has allowed me to succeed in my current role. This fellowship helped me further develop both a business and research-oriented mindset that allows me to flourish and innovate in an evolving healthcare landscape increasingly characterized by discussions on cost and value."

Justin Yu, PharmD, MSc

Bayer / University of Washington Fellow, 2014-2016
Principal Research Associate, Neuroscience TA, GHEOR, Allergan



Bayer

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11/16 Printed in USA



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