FACULTY

John C. Bentiez, MD, PhD
Associate Professor of Emergency Medicine
Managing Director, Translational Research Center

Indo Bhatnagar, MD
Professor of Medicine and Pharmacology

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Research Associate Professor of Pharmacology

Alan R. Brown, PhD
Professor of Pharmacology

Nancy J. Brown, MD
Chief, Jackson-Murphy Department of Medicine

Erica Carriere, PhD
Research Associate Professor of Medicine

Wei Chen, MD, PhD
Research Assistant Professor of Medicine

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Director of the Clinical Pharmacology Laboratory

Susan D. Darves, PhD
Associate Professor of Pharmacology

Andre Dichtri, MD, PhD
Research Assistant Professor of Biomedical Engineering

Serge Dikoou, PhD
Associate Professor of Medicine

Fleming Ehrlich, PhD
Assistant Professor of Medicine and Pharmacology

Jay V. Guiner, III, MD
Assistant Professor of Medicine

Amruth Gopinath, MD
Research Assistant Professor of Medicine

Emily M. Garland, PhD
Research Assistant Professor of Medicine

David W. Haeo, MD
Professor of Medicine

Peevitha Radhakrishnan, MD
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Professor of Medicine and Pharmacology

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Ginger Miura, PhD
Assistant Professor of Medicine and Pharmacology

Katherine Miron, MD
Associate Professor of Medicine and Pharmacology

John A. Oates, MD
Thomas F. Kostis Professor of Medicine

ADJUNCT FACULTY

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Research Associate Professor of Medicine

Sarah R. Raj, MD, MSCI
Assistant Professor of Medicine and Pharmacology

Jennifer Rabara, MD
Clinical Associate Professor of Medicine

David Robertson, MD
Director of the Clinical Research Center

Dana Red, MD
Chair, Division of Anesthesiology

Chao Schneider, PhD
Assistant Professor of Pharmacology

Jena Seper, MD
Assistant Professor of Medicine

Cindy Shibbo, MD
Assistant Professor of Medicine

Charles (Mike) Stein, MBC/B
Clinical Professor of Medicine

Dana S. Steuer, PhD
Research Associate Professor of Medicine

Russell A. Wilke, MD, MPH
Assistant Professor of Medicine

Benjamin Williams, MD
Research Associate Professor of Medicine

Huiying Yin, PhD
Research Associate Professor of Medicine and Pharmacology

CONTACT INFORMATION

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SCHOOL OF MEDICINE
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Fellowship in Clinical Pharmacology

TRANSLATIONAL SCIENCE
CLINICAL PHARMACOLOGY

Eighty-two percent of adults in the United States take at least one medication, including prescription and nonprescription drugs and vitamins and supplements. The scientific mission of the Vanderbilt Division of Clinical Pharmacology is to understand how drugs act in order to improve therapeutics. This provides the basis for “Personalized Medicine,” or “giving the right drug to the right person at the right time.”

Faculty members in the Division include members of the Oates Institute for Experimental Therapeutics and the Vanderbilt Bone Center. Investigators within the Division collaborate with investigators in Pharmacology, Biochemistry (including Molecular Toxicology), Chemistry, Molecular Physiology, Vanderbilt Institute of Chemical Biology, the Cancer Center, as well as with clinical and basic scientists in other divisions of the Department of Medicine.

THE FELLOWSHIP PROGRAM

The primary goal of the fellowship is to provide trainees with experience in contemporary research in clinical pharmacology under the mentorship of an individual faculty preceptor. This comprises 80% of the training period. In addition, fellows participate in a core curriculum, in order to gain exposure to a broader range of fundamental principles important to the discipline of Clinical Pharmacology and the evaluation of drug actions in humans.

Key skills and knowledge include:

- Biostatistics and study design
- Pharmacogenetics
- Drug regulation and development
- Pharmacokinetics and pharmacodynamics
- Biomarkers and drug analytic methods
- Molecular pharmacology
- Drug effects and disposition
- Drug safety
- Toxicology and poisoning
- Research ethics and IRB processes
- Writing and reviewing a paper
- Data presentation and teaching skills
- Grant writing and strategy
- Career planning

A small number of trainees, interested in delving into some of these topics in more depth, may choose to enroll in the Master of Science in Clinical Investigation (www.mc.vanderbilt.edu/msci).

The training period requires at least two years. Those who enroll in the MSCI typically require 3 years. Some physician-scientists combine their two-year research fellowship in clinical pharmacology with subspecialty clinical training to meet the categorical subspecialty fellowship requirements. Our training program is registered with the American Board of Clinical Pharmacology and thus qualified trainees are eligible to sit for the board exam.

APPLICATION PROCESS

The Division uses a rolling admission process. Interested MD, Ph.D., or PharmD-trained applicants should send a CV and letter of interest to Fellowship Program Director, Dr. C. Michael Stein at: Michael.stein@vanderbilt.edu. Dr. Stein’s office will contact qualified applicants to set up an interview and to obtain references.

Trainees meet first with the Division Director (Dr. David G. Harrison) and the Associate Director and Fellowship Director (Dr. Mike Stein) in order to discuss their interests and the research interests of investigators in the Division, and subsequently with faculty members of the Division. The purpose of these meetings is to determine the appropriateness of the candidate, but also, to enable prospective fellows to choose a mentor and research project. Prior research is not a requirement, but there should be some evidence of a commitment to research.

VANDERBILT CLINICAL PHARMACOLOGY DISCOVERY TIME LINE

1940 John Oates describes one of the early important anti-epileptic drugs that became alpha-methyl dopa (Adalind). 1973 Grant Wilkinson and David Shand describe CYP2C9, which has become a common feature for the processing of many drugs.

1981 Rose Robertson, John Oates, and colleagues describe the relationship between thrombosis, A1, and coronary vasospasm.


1998 Nancy Brown, Jason Morrow, and Jay Gardner demonstrate the effect of genetic variation on response to blood pressure.

2001 Mike Sjölin and Alistair Wood define the effect of genetic variation on response to blood pressure.

2002 Jeff Bakker, Dan Roden, Mark Anderson, and colleagues identify a novel mechanism of the short-term effects of the human body on blood pressure.

2003 Mike Sjölin, Dan Roden and Uri Schwartz describe the effect of genetic variation on response to blood pressure.

2008 John Oates and David Adler describe the effect of genetic variation on response to blood pressure.

2009 Kathy Murray and Mike Sjölin, together with Wayne Ray and colleagues, report the emergence of novel genetic variants contributing to cardiac arrhythmias.

2010 Dan Roden, Dwayne Darby, and others identify novel genetic variants contributing to cardiac arrhythmias.

The scientific mission is to understand how drugs act in order to improve therapeutics.