

OHSU School of Medicine

# Department of Physiology and Pharmacology

Want to make a difference? Then come and work with the Department of Physiology and Pharmacology. We are a diverse group of investigators who share a common fascination with how things work; molecules, cells and organs; and how small molecules (drugs) can be used to modify function and treat disease.

Our collective research interests are motivated by the desire to make a difference in the treatment of human diseases such as hypertension, cystic fibrosis, heart failure, cancer, endocrine and neurological disorders. We recently created a Program in Chemical Biology that emphasizes the design of novel small molecules that represent the first

step in drug discovery. In our program, chemists interface with biologists who use physiological, biochemical, and biophysical techniques to study:

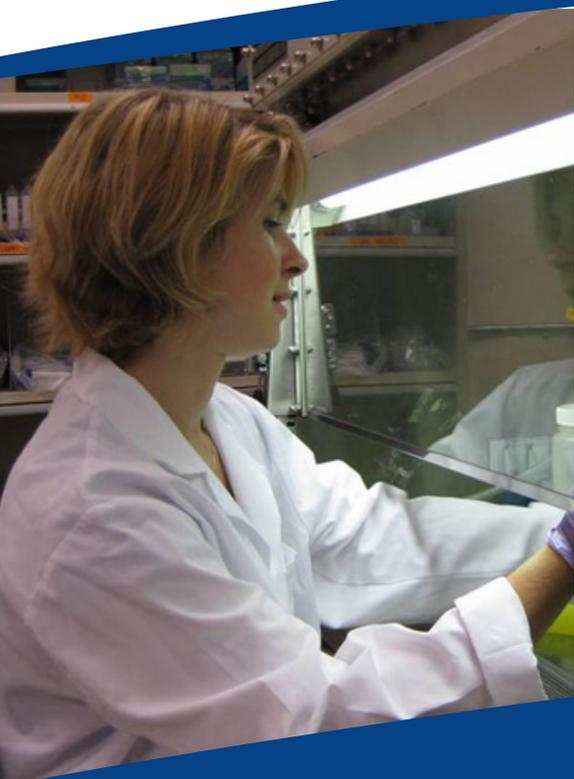
- Autonomic neurobiology
- Ion channel biophysics
- CNS neuroendocrinology
- Molecular pharmacology
- Signal transduction
- Chemical biology
- Cancer

Graduate training is guided by our desire to equip students with the broad scientific background and intellectual tools required of today's independent

scientists. The investigators of today and tomorrow will increasingly conduct their research in an interdisciplinary environment where the vision of a single investigator must span the range of single molecules to the whole organism.

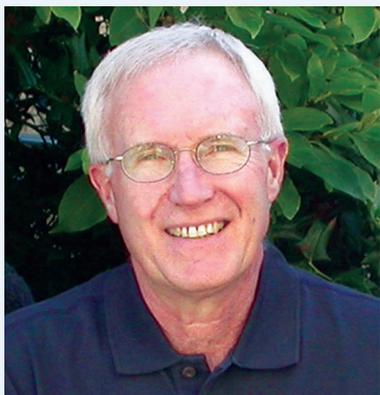
Research and graduate study take place in state-of-the-art laboratories on "The Hill" in Portland, where we are inspired by views of Mt. St. Helens and Mt. Hood.

We invite you to visit our Web site or, better yet, to come and visit us in Portland and see how you can make a difference through biomedical research.



[www.ohsu.edu/physpharm](http://www.ohsu.edu/physpharm)





*David C. Dawson, Ph.D.,  
department chair, Physiology and  
Pharmacology*

## Physiology and Pharmacology Faculty

Sue Aicher, Ph.D.  
Nabil Alkayed, M.D., Ph.D.  
Michael Andresen Ph.D.  
Neal Barmack, Ph.D.  
Kimberly Beatty, Ph.D.  
Virginia Brooks, Ph.D.  
Michael S. Cohen, Ph.D.  
David Dawson, Ph.D.  
Daniel Dorsa, Ph.D.  
Robert Duvoisin, Ph.D.  
David Ellison, M.D.  
Allison Fryer, Ph.D.  
David Grandy, Ph.D.  
Beth Habecker, Ph.D.  
Stephen Hall, M.D.  
Susan Ingram, Ph.D.  
David Jacoby, M.D.  
Martin Kelly, Ph.D.  
Dennis R. Koop, Ph.D.  
Catherine Morgans, Ph.D.  
Shaun Morrison, Ph.D.  
Stephanie Nonas, M.D.  
Michael K Riscoe, Ph.D.  
Oline Ronnekleiv, Ph.D.  
Charles Roselli, Ph.D.  
James Rosenbaum, M.D.  
Thomas Scanlan, Ph.D.  
Show-Ling Shyng, Ph.D.  
William Skach, M.D.  
Stephen Smith, Ph.D.  
Charles Springer Jr., Ph.D.  
Francis Valiyaveetil, Ph.D.  
John Williams, Ph.D.  
Xiangshu Xiao, Ph.D.

## Training

Scientists in the Physiology and Pharmacology Graduate Program are working to uncover the basis for hypertension, heart failure, depression, endocrine disorders, cystic fibrosis, asthma, cancer, and are developing new drugs to treat those diseases and others. We are looking for smart, dedicated young scientists with undergraduate training in biology and chemistry who want to understand how the body works, and to apply that knowledge to generating new cures for disease.

We believe that scientists in the 21st century need to understand the molecular and cellular mechanisms underlying normal and diseased states, and to connect those mechanisms to function in larger systems. Our research-based program develops knowledge of molecular targets, the nature and design of molecules that interact with those targets, and the ability to use experimental and computational tools to test those interactions in the context of physiological systems. This breadth of investigation – from molecules to whole animals – is represented by the diverse research programs of the participating faculty. The Department

is also the focal point for the training program in Chemical Biology that provides the foundation for the discovery and development of novel therapeutic agents.

Our trainees are uniquely equipped to pursue job opportunities in the biotech and pharmaceutical industries in addition to the academic career path. Recent graduates have moved on to post-doctoral positions at Harvard, U of Utah, U of Pennsylvania, Weill-Cornell Medical College, NIH, MIT, and other world class institutions. Our “older” alumni are on the faculty of medical schools, research universities, and liberal arts colleges, and are scientists in pharmaceutical and biotech companies.

## Want to Know More?

[www.ohsu.edu/physpharm](http://www.ohsu.edu/physpharm)

[www.ohsu.edu/chembio](http://www.ohsu.edu/chembio)

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