what is neuroscience?

Neuroscience investigates the structure, development, genetics, biochemistry, physiology, pharmacology, functionality and pathology of the nervous system.

Research Environment

Research is highly collaborative, bringing together scientists, clinicians and patients. Broad areas of research include cellular, molecular and developmental neurobiology, systems and integrative neuroscience, clinical and computational neuroscience.

Several important research centers have been created to help focus attention, efforts and resources. These include:

- The McDonnell Center for Cellular and Molecular Neurobiology
- The McDonnell Center for Higher Brain Function
- The Hope Center for Neurological Disorders
- The Alzheimer’s Disease Research Center
- The Neurofibromatosis Center
- The Washington University Pain Center
- The Washington University Center for the Study of Itch
- Conte Center for Neuroscience of Mental Disorders
- The Washington University Center for Investigation of Membrane Excitability Diseases
- The Center for Innovation in Neuroscience and Technology

program overview

Washington University in St. Louis has a long tradition of excellence in the Neurosciences. Here, Joseph Erlanger first measured nerve conduction velocity and its relation to axon diameter. In the 1950s, Rita Levi-Montalcini, Stanley Cohen and Viktor Hamburger discovered the first neuronal trophic factor: nerve growth factor.

Today, a large and interactive faculty from numerous basic and clinical science departments study nearly every area of modern Neuroscience - ranging from molecular analysis of ion channels to positron emission tomography of the human brain. Here students enjoy a challenging and productive environment in which to define and pursue their professional goals. The superb resources and remarkable breadth of research possibilities at Washington University guarantees a student’s exposure to the most fundamental issues in the field and the tools to address them.

For More Information:

http://dbbs.wustl.edu/divprograms/neuro/

To request information: dbbs-info@wustl.edu
Benefits

- Health, life and disability coverage are provided.
- Students in the Division enjoy access to all of Washington University’s educational, entertainment and recreational resources.
- The University’s MetroPass provides all students with free use of Metro-Link light rail and Metro buses. MetroLink connects students to all Washington University campuses, Forest Park, Clayton, Lambert Airport and downtown.

Stipend and Support

- Each student accepted into the Division is guaranteed a generous stipend and tuition is provided for the duration of training as long as all academic standards are upheld.
- Many students hold national fellowship awards, such as those offered by the National Science Foundation.
- Funds are provided for students to attend and participate in a scientific meeting.

DBBS celebrates diversity in all of its forms. We invite all students to apply, especially those from backgrounds historically underrepresented in the sciences such as African, Latin and Native Americans, those with disabilities and individuals from low-income backgrounds.

To learn more about diversity initiatives in DBBS please visit [http://dbbs.wustl.edu/divoutreach/Pages/DiversityOutreach.aspx](http://dbbs.wustl.edu/divoutreach/Pages/DiversityOutreach.aspx)

Admissions Information:

- September 1 - December 1
- No Application Fee

Faculty Honors

- Alfred P. Sloan Foundation Research Fellow (2)
- Annual Award of the American Academy of Neurological Surgery
- Burroughs Wellcome Fund Clinical Scientist Award in Translational Research
- Burroughs Wellcome Fund Career Award in the Biomedical Sciences (2)
- Congress of Neurological Surgeons Cushing Fellowship Award
- W. M. Keck Foundation Distinguished Young Scholar
- Korean Overseas Compatriots Award from the Korean Broadcasting System (KBS)
- McKnight Endowment Fund for Neuroscience Scholar
- MetLife Foundation Award for Medical Research in Alzheimer’s Disease (3)
- Pew Scholar in Biomedical Sciences
- Potamkin Prize for Alzheimer’s Research
- Searle Scholar (2)
- NIH Director’s Pioneer Award
- Society for Neuroscience, President
- Tourette Syndrome Association Humanitarian Award

Typical Schedule

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- Required Courses
  - Cellular Neurobiology
  - Molecular Cell Biology
  - Neural Systems
  - 1st Year Fundamentals
  - Ethics
  - Presentation Workshop

- Advanced Electives
  - Neurobiology of Disease
  - Biological Neural Computation
  - Advanced Cognitive, Computational and Systems Neuroscience (CCSN)
  - Biology and Pathology of the Visual System

- Teaching Assistantship (one semester)
- Journal Clubs: Choice of many

Find information on Neurosciences faculty research by visiting:

[http://dbbs.wustl.edu/divprograms/neuro/Pages/Faculty.aspx](http://dbbs.wustl.edu/divprograms/neuro/Pages/Faculty.aspx)