



BRAIN
RESEARCH
INSTITUTE
UCLA

The **UCLA Brain Research Institute (BRI)** stimulates neuroscience research and provides educational programs with the goal of accelerating the translation of neuroscience research into medical interventions and new technologies. The Institute, which was established in 1959, has grown to nearly 300 academic senate faculty members from 26 different departments throughout the UCLA community. The mission of the BRI is:

- to increase understanding of how the brain works, how it develops, and how it responds to experience, drugs, injury and disease, and

- to help make UCLA the preeminent center for translating basic knowledge into medical interventions and new technologies.

To execute this mission, the BRI is actively involved in research, education, and outreach programs.

Research: The BRI sponsors conferences, guest lectures, and scientific meetings; funds and operates shared laboratories to make high-end equipment available to all researchers across campus; provides laboratory space, organizational support and funding to outstanding faculty and programs in the UCLA neuroscience community.

Education: The BRI plays a major role in neuroscience education at UCLA: It is home to the largest neuroscience graduate program at UCLA – the Interdepartmental Ph.D. Program for Neuroscience (<http://www.neuroscience.ucla.edu>). It is also the administrative home for the Undergraduate Neuroscience Program, which encompasses approximately 380 Neuroscience majors, and for a variety of specialized graduate and postdoctoral training programs, including neuroengineering and neural repair.

Outreach: The BRI outreach programs aim to extend scientific knowledge into the community and the schools, and to stimulate interest in science among students of all ages. The BRI's "Project Brainstorm" involves UCLA graduate and undergraduate students in bringing neuroscience education programs to local schools at all levels.

Progress in understanding the brain in many ways parallels the progress in understanding the universe – the levels of analysis keep expanding, and we expect them to expand for many decades to come. Study of the brain thus requires multidisciplinary research at all levels, and a vision for the future.

Major areas of inquiry include neurogenetics, neuroplasticity, and neural repair. Neurogenetics, a powerful marriage of neuroscience and genetics, is opening a rich flow of new information by seeking relationships of our genes with disease susceptibilities, such as autism, neurodegeneration, addiction disorders, depression, etc. Neurogenetics represents one of the cutting-edge knowledge areas vigorously supported by the BRI. Another major and interactive research area promoted by the BRI is neuroplasticity, the understanding of how neurons communicate and respond to changes. This encompasses a huge field that includes how we learn, develop, and change; how we repair neural function after damage; how neural networks adapt to stress or drugs of abuse; and how we perceive and analyze our external and internal environment. The combination and interaction of all areas of neuroscience form the foundation for understanding the brain and nervous system, and using this understanding to prevent or repair neurological damage and disease.

The Institute's missions in **research**, **education**, and **outreach** need support to succeed at the highest level. The BRI ensures that the very latest knowledge, technical resources, education and support can be shared and available to enhance the multidisciplinary science that is absolutely required for the next advances at the frontiers of neuroscience.

Additional information is available at www.bri.ucla.edu



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