

Carney Institute for Brain Science

The mission of The Robert J. & Nancy D. Carney Institute for Brain Science (<https://www.brown.edu/academics/brain-science/>) is to promote discovery and innovation in brain science by supporting a diverse community of experimentalists, theorists, engineers, and clinicians. The institute does this by recruiting and retaining world-class faculty, creating an outstanding collaborative training environment, seeding innovative projects, supporting collaborative teams, and raising the visibility and reputation of Carney researchers.

With more than 200 affiliated faculty members in 20 departments and clinical units, the Carney Institute is pursuing research that has real-life, human applications, including: brain-computer interfaces to aid patients with spinal injury and paralysis; innovative advances in computational neuroscience to address behavior and mood disorders; development of bioluminescent molecules to detect and control neuronal activity; development new methods for labeling neural circuits; and research into mechanisms of neurodegeneration as part of efforts to identify therapies for neurodegenerative diseases such as ALS, Alzheimer's, and Parkinson's disease. Critical to Carney's research efforts are the contributions of hundreds of graduate and undergraduate researchers and postdoctoral fellows.

The Carney Institute recruits and retains world-class faculty, funds innovative projects, establishes and supports state-of-the-art research facilities, and acquires shared equipment. The Institute also provides expertise and personnel to help faculty members garner and administer multi-investigator grants for research, infrastructure, and training, as well as to manage collaborative research projects.

Brain Science Graduate Program

Brown University provides a unique environment in which to pursue interdisciplinary brain science graduate training. Research at Brown emphasizes collaborative theoretical and experimental studies of the brain, from the molecular to the behavioral and cognitive levels. It unites researchers who study the fundamental mechanisms of nervous system function and those who seek to create devices with brain-like functions that can assist people. The faculty is also committed to translating fundamental knowledge into practical applications to the diagnosis and treatment of the devastating effects of disease and trauma of the nervous system. Brown is a leader in brain-related research and offers exceptional training and course work for those interested in pursuing careers in brain science.

The Robert J. & Nancy D. Carney Institute for Brain Science (<http://www.brainscience.brown.edu/>) partners with eight discipline-based graduate programs. Students interested in interdisciplinary brain science training enter through one of these graduate programs.

Carney-affiliated graduate programs include:

- Applied Mathematics Graduate Program (<https://www.brown.edu/academics/applied-mathematics/graduate-program/>)
- Biomedical Engineering Graduate Program (<https://www.brown.edu/academics/biomedical-engineering/academics/graduate-program/>)
- Biostatistics Graduate Program (<https://www.brown.edu/academics/public-health/biostats/academics/doctoral-program/>)
- Cognitive, Linguistic, and Psychological Sciences Graduate Programs (<https://www.brown.edu/academics/cognitive-linguistic-psychological-sciences/prospective-graduate-students/>)
- Computer Science Graduate Program (<http://cs.brown.edu/degrees/>)
- Molecular Biology, Cell Biology, and Biochemistry Graduate Program (<https://www.brown.edu/academics/biology/molecular-cell-biochemistry/graduate/degree-programs/phd-curriculum/>)
- Neuroscience Graduate Program (<http://neuroscience.brown.edu/graduate/>)

- Therapeutic Sciences Graduate Program (<https://www.brown.edu/academics/tsgp/home/>)

Carney offers a number of opportunities for graduate students in any program to stretch beyond their discipline. Carney Institute lunches are held several times per semester and feature broad seminars and informal discussion led by Brown faculty members. Graduate students can also apply for the Carney Institute Graduate Awards. The Institute also coordinates management of NIH institutional training grants that span departments and programs, including training grants in cognitive and computational neuroscience. The Institute also awards seed funding annually to launch new research projects, and graduate students are often involved in or initiate applications for these grants.