



## **Behavioral Brain (B2) Research Training Program**

The Behavioral Brain (B2) Research Training Program funded by National Institutes of Health is a graduate training program within the existing Center for Neural Basis of Cognition (CNBC), a joint program of the University of Pittsburgh and Carnegie Mellon University. The overall goal of this training program is to train the next generation of behavioral science researchers who can skillfully incorporate neuroscience perspectives and methods into their programs of research, based on an understanding of brain structure and function that bridges across traditional areas of behavioral research. The Behavioral Brain Research Training Program will focus on three major research themes to realize such integration in the next generation of behavioral scientists: 1) Representation and Communication; 2) Evaluation and Control; 3) Learning, Memory, and Plasticity.

The Behavioral Brain Research graduate program has the following specific aims for students committed to work at the interface of the behavioral and brain sciences:

- Foundational training in neuroscience methods and perspectives, through coursework and laboratory-based research rotation experiences.
- Deep training in behavioral science, through coursework, laboratory-based research experiences, and independent programs of research.
- Continued infusion of interdisciplinary perspectives, through co-mentoring, selection of courses and rotation experiences, and involvement in other program forums (e.g., journal clubs) that foster exposure to behavioral and brain science research that falls into one of three major cross-cutting research themes (representation and communication; evaluation and control; learning, memory, and plasticity).

All trainees in the B2 training program will be part of the CNBC training Program, with several specific requirements emphasizing depth of training in behavioral methods coupled with coursework and laboratory experiences that will provide a solid foundation for integrative contact with neuroscience findings and approaches.

Specifically,

- **Co-mentorship Committee.** A mentoring team of faculty consisting of behavioral and neuroscience faculty will supervise trainees. This will ensure trainees learn behavioral brain research from underlying principles to applications from faculty mentors with broad expertise.
- **Training in Neuroscience.** Students will complete the CNBC Core Curriculum to ensure training in basic neuroscience. Details can be found on the CNBC website, (<http://www.cnbc.cmu.edu>).
- **Deep Training in the Behavioral Sciences.** Students coming from one of the participating behavioral science departments will meet these requirements as part of fulfilling the obligations of their departmental PhD training programs. For students coming from a biomedical department, obtaining such training will require additional coursework, which will be developed by the student's Co-Mentorship Committee and approved by the Program Steering Committee such that training is undertaken in quantitative, methods, foundational and advanced topics in behavioral sciences.
- **Research Rotations.** Research rotations will provide "hands-on" immersion experiences in behavioral and neuroscience research labs and a broad perspective on lines of inquiry. Trainees have the option of completing one of two rotation models. In both models, trainees will be required to complete at least two rotation experiences and they will be strongly encouraged to undertake a third. One of the rotation experiences may be in the lab of their primary advisor; at least one must be in a laboratory that incorporates neuroscience methods. The composition and completion of the rotation experience requirement will be directly overseen by the Co-Mentorship Committee for each student.

**-Vertical Rotation Model.** Some students will enter the program with a strong commitment to a particular research advisor and area of research. These students may choose to focus on convergent approaches to a research topic within one of our major research themes. Trainees who adopt this model will be expected to propose and execute their rotation projects over the course of their first three years of training. The rotation projects, which may extend over different periods of time and vary in scope, must be approved in advance by the trainee's Co-Mentorship Committee. The student may organize these projects so that they are completed in parallel with ongoing work in the primary research lab, as long as trainees maintain a regular presence and a high degree of involvement in the rotation laboratory. Students will submit a report to their Co-Mentorship Committee when each rotation project is completed.

**-Horizontal Rotation Model.** Other highly qualified students will enter the program with a commitment to behavioral brain research, but they will not have settled on a specific research agenda or advisor. These students may choose to focus on gaining exposure to our research themes and training faculty. Specifically, the first year will be divided into two research rotation periods with an optional rotation period the summer before or the summer after. The student will spend all research time in the chosen laboratory. Students will submit rotation reports to the Co-Mentorship Committee at the end of each period and identify a primary research advisor by the end of the rotation periods.

- **Additional Training.** Cross-cutting extracurricular experiences will support training. Trainees will participate in the CNBC annual retreat, student-run colloquium series, multi-group lab meetings and journal clubs, student research presentation series, Friday Seminar Series, and will take survival skills and ethics workshops.
- **Home Department Requirements.** Trainees will complete the requirements of their home Ph.D. department.

To learn more about the B2 training program, please contact [Lori Holt](#), Carnegie Mellon University or [Julie Fiez](#), University of Pittsburgh for further information.