

**Thematic Program:** Neuroscience  
**Program Director:** Lori McMahon, Ph.D.

**Thematic Program Description** (*provided by Program*)

The goal of the Neuroscience Graduate Program is to develop outstanding future leaders in basic and translational neuroscience research. The Program design provides trainees with advanced education in neuroscience and in the scientific method to ensure their success in the profession of modern basic science and translational research. Flexibility in the curriculum offers students an opportunity to enroll in courses outside the field of neuroscience, including genetics and cell biology, to enhance their knowledge and expertise. Under the umbrella of the Comprehensive Neuroscience Center, the Program fosters interactions between students, postdoctoral fellows, and faculty with broad research interests including, learning and memory, synaptic physiology, neurodegenerative diseases, psychiatric disorders, glial biology, vision science, and fMRI. Access to the Neuroscience Blueprint Core facilities permits training and use of state-of-the-art technical approaches. Students are also encouraged to interact with faculty in other research areas which allows them to take advantage of the highly skilled technical and scientific expertise that exists at UAB.

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**Thematic Program:** Pathobiology & Molecular Medicine  
**Program Director:** Ralph Sanderson, Ph.D.  
**Program Co-Director:** Kevin Kirk, Ph.D.

**Thematic Program Description** (*provided by Program*)

The Pathobiology and Molecular Medicine (PBMM) theme, as with its forerunner the IBS Program, will encompass an interdisciplinary approach to training students in the mechanisms of disease pathogenesis and progression with the goal of preparing them for competitive research and teaching careers in academia or industry. Core coursework will provide training in the fundamentals basic to all biomedical research and specialized courses will be offered to ensure students have a strong foundation to pursue their specific research interests. Broad based faculty participation in the program will provide students with the opportunity to choose from mentors that span the breadth of disease-based research - from the understanding of basic disease mechanisms, to the pathobiology of specific diseases, to translational medicine. In research areas or specific diseases where a critical mass of researchers exist, faculty will have the opportunity to lead the development of specific "tracks" or "focus areas" to enhance training opportunities for students and promote collaborations between cooperating labs. These tracks will be comprised of specialized coursework, seminars, journal clubs and other opportunities as determined by participating faculty. Ideally, some of the new tracks within the PBMM theme will be developed in collaboration with various existing UAB centers to maximize student training, enhance center development and provide a foundation for competitive T32 applications. Other tracks or focus areas might arise from smaller groupings of researchers that seize this opportunity to foster development of their common interests.