Department of Cell Biology and Neuroscience

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The Department of Cell Biology and Neuroscience offers exciting opportunities to work with nationally and internationally recognized faculty on a wide range of research topics, including cognitive neuroscience, neurophysiology, developmental biology, cell biology and biophysics. It is the goal of the faculty to prepare our students for successful careers in academic research, government, and/or the biotechnology industry. Successful applicants to the program will have already established a commitment to excellence through academic achievements and prior research experience.

We offer Ph.D. or M.S. degrees in Neuroscience or Biological Science to our graduate students. The Ph.D. Degree Program is designed for students who are committed to a scientific research career and are willing to commit an average of 5 to 6 years in pursuit of the training that is necessary to qualify for this degree. Prospective student should secure a faculty sponsor prior to applying for admission.

The M.S. degree is for students who wish to increase their knowledge base in basic research through an intensive 2- to 3-year training period. Students must identify a faculty sponsor prior to application to the CBN Graduate Program.

Admission
A Bachelor’s degree in an area of Biology, Chemistry, Physics, Applied Math or Psychology is recommended. Students with Bachelor’s degrees outside these areas are also encouraged to apply; such students will generally be required to complete appropriate courses while enrolled at MSU to make up subject matter deficiencies prior to full acceptance into the Ph.D. and Masters programs. Factors that the department uses in its admissions process include GRE scores, TOEFL scores (for non-native English speakers), reference letters, GPA and previous coursework and research experience.

The department of Cell Biology and Neuroscience also participates in the Molecular Biosciences Program at MSU (http://mbprogram.montana.edu/index.asp). This is an interdisciplinary graduate training program that includes faculty from a wide range of departments specializing in aspects of biology on the MSU campus. For more information, and details about applying, please refer to http://www.montana.edu/cbn/.

Research Facilities
Graduate research will be performed primarily in the laboratory of the student’s thesis adviser. Additional facilities will be available from the department and in laboratories collaborating with the student’s adviser. Cell Biology and Neuroscience is housed in the 5th floor of Leon Johnson Hall, the basement of Lewis Hall and in the Cooley Laboratories.

Financial Assistance
A number of research and teaching assistantships are available for qualified graduate students. These appointments are normally for half-time assignments (20 hours per week) during the academic year. Some appointments may also be available during the summer. Assistantships will only be offered to formally admitted graduate students. Fellowships are available through MBS program.

Degrees Offered
- Master of Science in Biological Sciences (http://catalog.montana.edu/graduate/letters-science/cell-biology-neuroscience/ms-biological-sciences)
- Master of Science in Neuroscience (http://catalog.montana.edu/graduate/letters-science/cell-biology-neuroscience/ms-neurosciences)
- Doctor of Philosophy in Biological Sciences (http://catalog.montana.edu/graduate/letters-science/cell-biology-neuroscience/phd-biological-sciences)
- Doctor of Philosophy in Neuroscience (http://catalog.montana.edu/graduate/letters-science/cell-biology-neuroscience/phd-neuroscience)

Program Requirements
M.S. Degree
Students may pursue the Master’s degree under either Plan A or Plan B. Plan A requires the completion of 20 credits of acceptable graduate-level coursework and 10 credits of thesis. Under Plan B, a 4-credit project and 26 credits of acceptable graduate-level coursework must be completed. For more information, please refer to http://www.montana.edu/cbn/Graduate_Program.html.

Master’s candidates must take an oral comprehensive exam near the completion of their graduate program. Required curriculum will be tailored to the needs and interests of each student in consultation with their graduate adviser and advisory committee.

Ph.D. Degree
A Ph.D. student must complete a minimum of 35 dissertation credits and a minimum of either 25 credits of graduate-level coursework beyond the Bachelor’s degree or 10 credits of graduate-level coursework beyond the Master’s degree. Accepted students will be assigned an advisory committee upon entering the program to assist them in tailoring a curriculum that best fits their educational needs, research interests, and career plans.

Research Experience
Plan A (thesis option) Master’s degree students gain research experience through their thesis and are expected to submit the results of their thesis work to at least one journal or conference. Plan B (project option) Master’s degree students gain some research experience in the context of their project. Ph.D. students will gain research experience through their doctoral work, journal or conference submissions, and attending conferences.