

CELL BIOLOGY & NEUROSCIENCE

COLLEGE OF LETTERS & SCIENCE | MONTANA STATE UNIVERSITY



1



2

KELLY GORHAM



3

KELLY GORHAM



4

KELLY GORHAM



5

SUSAN GIBSON

1 Eric Halverson, Grant Evje and Robert Merkouris study abroad at the University of Exeter **2** Bridget McNulty received a \$30,000 NIH fellowship to study inner ear development **3** Frances Lefcort is an award-winning professor and researcher who studies nervous system development **4** Students gain valuable experience by conducting an undergraduate research project **5** A CBN student participates in a health services project in Mongolia

AN EXCITING OPPORTUNITY TO EXPERIENCE UNCOMMON LEARNING

The Department of Cell Biology and Neuroscience at Montana State University offers an innovative and exciting approach to undergraduate education. Students gain real world experience and develop practical skills for their future careers. Starting the first semester of their freshmen year, students are immersed in small, hands-on lab sections learning advanced technical skills and truly experiencing the information presented in lecture. Award-winning faculty teach lectures, many of whom have dual appointments as professors in the WWAMI Medical School program here at MSU.

Every semester presents the opportunity for students to experience learning at an uncommon depth, guided by professors who are passionate about student success. Upper division classes allow students to spend an entire semester learning more about cancer, neuroscience, molecular biology, embryology and genetics while being mentored by accomplished researchers who are experts in their fields. Students graduating in Cell Biology and Neuroscience are well prepared for a successful career in research or entry into medical, dental, other health professions and graduate school. All of our students have access to pre-health professions and pre-veterinary professions advising offices; both organizations have exemplary records in helping students achieve their goals.

HIT THE GROUND RUNNING: WHAT SETS US APART

The first year of your college experience will include Integrative Physiology, a medically focused course that teaches human physiology for students considering a career in medicine or research. Students will gain an understanding of fundamental cellular mechanisms responsible for the physiological control of health and disease while learning human anatomy in a fascinating cadaver-based laboratory.

Our curriculum provides a strong foundation in the sciences with an emphasis on developing skills competencies. During inquiry-based labs, students develop technical writing ability and gain collaborative research experience by solving real scientific problems. Upper-division students take specialized classes focused on their area of interest; courses have been offered with an eye towards what the students want to study, rather than what faculty members want to teach.

UNIQUE STUDY ABROAD OPPORTUNITIES

Our students have the ability to complete study abroad programs in a stunning array of potential destinations while meeting their academic goals and fulfilling course requirements. Montana State University offers study abroad programs at more than 235 universities in more than 50 countries. Many students have completed study abroad trips to the University of Exeter in Great Britain where we enjoy a unique partnership that seamlessly coordinates with graduation requirements.

For additional information, contact:

Department of Cell Biology & Neuroscience
Montana State University
510 Leon Johnson Hall
P.O. Box 173148
Bozeman, MT 59717-3148

Tel: 406-994-5120

Fax: 406-994-7077

www.montana.edu/cbn/



Options within Major

- Biomedical Sciences
- Cell Biology & Neuroscience

Specialized Areas of Study/Minors

- Genetics

The Department of Cell Biology & Neuroscience participates in MSU's Genetics Minor and recommends this minor to students particularly interested in genetics.

What can I do with a degree in Cell Biology & Neuroscience?

- Bioethics
- Bioinformatics
- Biomechanics research
- Biomedical research
- Biophysicist
- Chiropractic school
- Dental school
- Embryologist
- Forensics
- Genomics research
- Graduate school
- Grant writer
- Health care sales
- Intellectual property & patent law
- Laboratory manager
- Laboratory technician
- Medical school
- Microscopist
- Molecular biology research
- Museum curator
- Naturopathic medical school
- Ophthalmology school
- Optometry school
- Osteopathic medical school
- Pharmacy sales
- Pharmacy school
- Physiologist
- Physician assistant school
- Process development/process science
- Quality control & quality assurance
- Regulatory affairs
- Research & development
- Research assistant
- Science teacher
- Science writer
- Scientific advisor
- Scientific business development
- Scientific sales
- Technical writer
- Toxicologist
- Veterinary school

6 *Carla Hutson works on an undergraduate research project*

OPTIONS WITHIN THE MAJOR

Biomedical Sciences Option

The curriculum of the Biomedical Sciences Option provides a strong background for students who plan on a career in medicine or other health professions, or are interested in a biomedical sciences career in research or teaching. The curriculum has sufficient breadth to introduce the student to a wide range of disciplines, but is flexible enough so that students can focus in their last two years on areas of specific interest. The Biomedical Sciences Option is designed to allow students to take basic courses in physical sciences while tailoring the courses in life sciences to meet their personal objectives and interests.

All students interested in a career in a health science profession or veterinary medicine have access to specialized advising centers and student organizations.

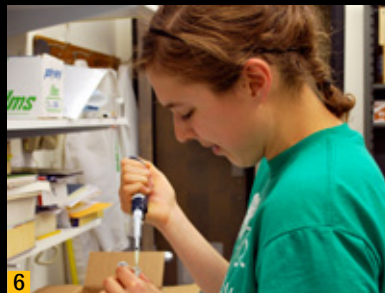
Cell Biology and Neuroscience Option

The curriculum in the Cell Biology and Neuroscience Option provides a strong background for students who are interested in a career in research or teaching in cell biology, molecular biology, developmental biology or neuroscience. This option provides the opportunity to take the courses necessary to make a competitive application to graduate school or to obtain a technical position. Advisor approved substitutions are possible for upper division courses to tailor the degree to the student's interests.

UNDERGRADUATE RESEARCH EXPERIENCE

The Carnegie Foundation for the Advancement of Teaching classifies MSU as one of 108 research universities with "very high research activity." One of the many advantages to being at a top-tier research institution is the opportunity to participate in ground-breaking research as an undergraduate. Many of our students conduct scientific research in labs throughout the department and across campus. A variety of research opportunities abound for students in Cell Biology and Neuroscience, including courses such as BIOL 490: Undergraduate Research and BIOL 492: Individual Problems, summer research programs, internships and employment, including work-study appointments.

Undergraduate research is celebrated here at MSU with an annual university-wide poster symposium to showcase student findings. Some of our undergraduate researchers have attended scientific meetings and have even achieved authorship on papers published in scholarly journals. Such experiences are useful for both an appreciation of the research effort required in graduate school and for gaining experience in technical methods for a technical position. Students have the opportunity to earn valuable experience, build credentials and develop marketable skills while working with their faculty mentors.



6

