The Department of Microbiology & Immunology at Montana State University has a unique combination of expertise in pathogen biology, bioremediation, biofuels, immunology, cell and developmental biology, microbial ecology, host/pathogen interactions, biofilm biology, and geomicrobiology. With this diverse expertise, the department strives to provide a broad and thorough curriculum to both undergraduate and graduate students. Our students are encouraged to cross boundaries and push their studies and research further via interactions across departments and colleges.

**CURRICULUM OPTIONS**

There are three curriculum options for undergraduate students to choose from, leading to a Bachelor of Science degree in Microbiology.

**Microbiology and Pre-med**

This option covers all areas of microbiology and prepares students to be professional microbiologists. The curriculum is also excellent preparation for those who wish to attend medical, dental, and veterinary schools, and other related professional programs.

**Biotechnology, Microbial Systems Option**

This option is ideal for students interested in working in emerging biotechnology industries. These industries are involved in developing products to maintain biodiversity, restore soil and water quality, develop new pharmaceuticals or vaccines to combat disease, decrease our dependence on nonrenewable resources, provide tools and skills for investigative and forensic sciences, and improve food and fiber production. Biotechnology uses organisms to produce commercial products, either through natural processes, or through genetic manipulation.

**Environmental Health**

Environmental health specialists are concerned with general environmental sanitation, food and waterborne disease control, air and water quality, water and wastewater treatment, solid and hazardous waste disposal, rodent and insect control, consumer product safety, recreational and occupational safety, radiological hygiene, epidemiology, and health education.

**Medical Laboratory Science**

This option is for students interested in careers that involve the performance of clinical laboratory tests. These tests provide data that are used in the diagnosis and treatment of disease. To become a medical laboratory scientist, students must train in a year-long program and become accomplished professionals in microbiology, chemistry, blood banking, and hematology. Students can now receive their training through the Montana Medical Laboratory Science Training Program at MSU.

Josh Carter received a 2016 Goldwater Scholarship
RESOURCES AND FACILITIES

Cooley Lab
Cooley Lab is a newly renovated lab, which serves as the primary hub for biomedical research at Montana State University. The building is LEED certified and serves as a state-of-the-art facility for faculty and students researching everything from treatments for infectious diseases to safeguards against bioterrorist attacks.

Molecular Biosciences Building
The Molecular Bioscience building houses state-of-the-art facilities with core laboratories for flow cytometry, cell biology, and molecular sciences, as well as pathogen containment facilities for small (BSL-3) and large animal research (ABSL-2). Instrumentation suites house equipment for DNA sequencing, genomic analysis, flow cytometry and cell sorting, and confocal microscopy.

CAREERS WITH A DEGREE IN MICROBIOLOGY AND IMMUNOLOGY
Projections for the next 20 years suggest that there will be a demand for trained microbiologists to fill positions in all aspects of microbiology.

Students interested in microbiology, animal or plant science, biochemistry, biotechnology, and animal or human medicine will find challenging careers in the diverse areas of microbiology and immunology in either an academic or industrial setting. Students successfully completing this curriculum will also be prepared to enter graduate or medical professional schools for further study.

ACCOMPLishments AND DISTINCTIONS
Faculty research accomplishments boost the department to consistently rank in the top tier of research expenditures at MSU, and the department is known as one of the university's primary research engines.

For additional information:
Department of Microbiology & Immunology
Montana State University
P.O. Box 173520
Bozeman, MT 59717
Tel: 406-994-2902
Fax: 406-994-4926
mbi@montana.edu
www.montana.edu/mbi/
Location: 109 Lewis Hall