

**Subject:** Master's Program in Biology at Western Washington Univ

The Biology Department at Western Washington University has openings for graduate students starting Fall 2016. Faculty members in the department offer a wide range of expertise, from molecular biology to ecology. Graduate students are eligible for teaching assistantships, which fund the majority of tuition and provide a stipend of \$12,116 per year. WWU is located in Bellingham, WA, a coastal city north of Seattle at the base of Mt. Baker in the northwestern part of the state.

More information can be found at:

[http://www.biol.wvu.edu/biology/gradprog\\_brochure.shtml](http://www.biol.wvu.edu/biology/gradprog_brochure.shtml)

or by contacting Dr. Ben Miner, Graduate Program Advisor, at benjamin.miner at wvu.edu

### Potential advisors

Marion Brodhagen: Microbiology, molecular biology, and chemical ecology. Our lab studies the plant pathogenic fungus *Aspergillus* and aflatoxin, a potent toxin produced by this fungus. Our current projects involve the ability of certain plant secondary metabolites to stop growth and/or toxin production by *Aspergillus*. Future research directions will include investigations of the molecular mechanisms by which these plant compounds alter fungal metabolism. We also are interested in the role of *Aspergillus* in colonization of plastics labeled biodegradable, in agricultural settings. *Aspergillus* is a key colonizer of such plastics but its ability to break down polymers is unclear, as is the extent of toxin formation during plastic colonization.

Dave Hooper: Plant Community and Ecosystem Ecology. I will be accepting one graduate student in fall 2015. My local research is currently focused on assessing ecosystem services associated with different scenarios of riparian restoration in Whatcom County. Student work would combine GIS analyses of ecosystem services and field work, particularly on nutrient retention, to validate modeling results. I also have opportunities focused on analyzing large data sets to understand aspects of biodiversity loss and assembly of plant communities.

Robin Kodner: Marine Microbial Metagenomics. The Kodner lab does interdisciplinary work integrating marine microbial ecology with comparative genomics and bioinformatics for metagenomes. I am recruiting for one student for work on bioinformatics projects. Some experience with sequence analysis and programming required.

Craig Moyer: My interests are marine microbiology and geomicrobiology focusing on molecular approaches for exploring microbial diversity, community structure and ecological interactions. Presently, my lab and I are focused on the study of iron-oxidizing Zetaproteobacteria acting as the ecosystem engineers in microbial mats found at strong redox boundaries, including seep, spring and vent habitats. We are also examining the evolutionary divergence of surface and deep subsurface Zetaproteobacteria in hydrothermal systems.

Lynn Pillitteri: Plant Molecular and Developmental Biology. A potential graduate project in my lab would be aimed at understanding the molecular mechanisms driving cell type differentiation in the model organism, *Arabidopsis thaliana*.

Dan Pollard: Cellular Systems Genetics and Genomics. The Pollard lab has opportunities to study the molecular mechanisms of natural variation in protein expression dynamics in budding yeasts on an NSF supported project. The lab integrates microscopy, molecular biology, quantitative genetics, genomics, and computational biology, providing a broad and diverse graduate training experience.

Dietmar Schwarz: Ecological and Evolutionary Genetics and Genomics, Evolutionary Ecology. Schwarz's lab offers opportunities to study speciation, hybridization, and adaptation in host specific insects (apple maggot flies and relatives) on a USDA supported project.

Anu Singh-Cundy: Plant Cell Biology and Biochemistry. We study cell-cell interactions at the physiological, cellular, and molecular levels. Current projects are focused on understanding the role of HD-AGPs, which are extracellular glycoproteins that are expressed in the transmitting tissue of the pistil and in the vasculature of roots and shoots. We also study pectins and pectin-modifying enzymes found in the pistil of solanaceous species.