Biology 4999E

Potential Supervisors 2026-2027

Biology Department Website: http://www.uwo.ca/biology/
Check web sites for detailed information of research area
STUDENTS MUST BRING A COPY OF THEIR UNOFFICIAL TRAN SCRIPT TO INTERVIEWS .
Projects in Biology cover a wide range of options including Biochemistry, Development, Ecology, Evolution, Genetics, Molecular Biology, Physiology. Studies are performed with huge range of organisms from animals to plants, bacteria and fungi.
The potential supervisors are not restricted to this informal list. Please also check the Biology faculty webpage for options.

Main Campus:

Dr. Robert Buchkowski, Ext. 88969, rbuchkow@uwo.ca, BGS2074
Research Area: Animal effects on nutrient cycling, especially soil animals, please see our webpage for more details: https://nmuwo.wordpress.com/
We especially encourage students interested in modelling/data analysis projects to reach out.

Dr. Thomas DeFalco, Ext. 81475, tdefalc@uwo.ca, NCB404
Research Area: Decoding the molecular signalling downstream of cell surface receptors in plants.

Dr. Alice Boyle, aboyle7@uwo.ca, Collip 107
Research areas: avian dispersal and migration ecology, grasslands, consequences of rain on endotherms

Dr. Martin Duennwald, Ext. 86874, martin.duennwald@schulich.uwo.ca, MSB4 1014
Research Area: Using yeast models to study neurodegenerative diseases, cellular protein quality control, protein-protein interactions and protein folding.

Dr. Vojislava Grbic, Ext. 86898, vgrbic@uwo.ca., WSC341
Research Area: Are you fascinated by how tiny herbivores outsmart plants? Our lab unravels the molecular chess match between plants and the two-spotted spider mite, a globally important pest. We combine omics, molecular biology, and biochemistry to reveal how mites adapt, detoxify, and resist plant defenses.

Dr. Christopher Guglielmo, Ext. 81204, cguglie2@uwo.ca, Collip 110
Research Area: Avian Physiology and Biochemistry.

Dr. Tim Hain, thain@uwo.ca, NCB 301F
Research area: Behavioural and community ecology of fish and birds.

Dr. Hugh Henry Ext. 81548, hhenry4@uwo.ca, BGS3021
Research area: Plant, soil and ecosystem ecology, with a focus on winter biology and global change.

Dr Kathleen A. Hill, Ext 81337, khill22@uwo.ca, WSC333
Research Area: Genetics, Mutagenesis, Mutational Mechanisms, Mutational Signatures and Landscapes
Projects: New Mutations in Mouse Families: inherited and acquired mutations identified and characterized through whole genome sequencing with bioinformatics software used for variant detection and statistical software used for analyzing patterns in mutation spacing.

Dr. Jim Karagiannis, Ext. 80975, jkaragia@uwo.ca, BGS 3080
Research Area: Quantitative analysis of genetic buffering relationships.

Dr. Susanne Kohalmi, Ext. 86485, skohalmi@uwo.ca, WSC 319
Research area: Gene families and their regulation using ADTs in *Arabidopsis thaliana* as a model system.

Dr. Natasha Mhatre, Ext. 84505, nmhatre@uwo.ca, BGS 3023/3027
Research Area: We study how different animals, particularly spiders and crickets, communicate using sound and vibration. Our work is interdisciplinary, combining biology, physics and includes experimental and simulation based approaches.
Further details are at https://www.natashamhatre.net/

Dr. Amanda Moehring, Ext. 55597, amoehrin@uwo.ca, WSC307
Research area: Behavioural genetics and neuroscience.

Dr. Yolanda Morbey, Ext. 80116, ymorbey@uwo.ca, Collip 209Research Area: In the Morbey lab, we study the movement ecology of migratory birds and fishes. In 2026, Bio 4999E projects will focus on the ecology of small-bodied fishes in Medway Creek, on Western University's main campus. The main methods will include field work to sample fish from September through November followed by ecological modelling. Field work will require blocks of 4-6 hours, and could include weekends.

Dr. Bryan Neff, 519-850-2532, bneff@uwo.ca, Collip Bldg. CB 204
Research area: Molecular and behavioural ecology of fishes.

Dr. Michael Pyne, Ext.mpyne3@uwo.ca, 85802, BGS 2080
Research Area: Projects will be related to engineering brewer's yeast for the discovery and synthesis of plant natural product pharmaceuticals.

Dr. Ben Rubin, Ext. 87475, brubin2@uwo.ca, BGS 3072
Research Area: Forest Ecology. Field-based projects are available to study the ecology of forest canopy gaps. Data analysis projects are available to study patterns of tree mortality.

Dr. Vera Tai, Ext. 86209, vtai4@uwo.ca, BGS 2028
Research Area: Environmental microbiology and bioinformatics

Dr. Graeme Taylor, Ext. 81467, gtaylor8@uwo.ca, BGS 3072
Research Area: Evolution and ecology of animal design (biomechanics)

Dr. Alexander Timoshenko, Ext. 88900, atimoshe@uwo.ca, BGS-3032
Research Area: Molecular cell biology and biomedical application of galectins.

Dr. Raymond Thomas, Ext.86470, rthoma2@uwo.ca, MSA 3203
Research Area: Functional foods production, sensory perception, development, safety and preservation; use of nanotechnology to enhance plant performance or remediation in Boreal Ecosystem; lipid metabolism in environmental stress biology; Influences of gut microbiome on brain lipid metabolism and brain health; chemometrics and lipid modeling/lipid bioinformatics/foodomics/food metabolomics; Increase yield, nutritional and value-added production in control systems agriculture and alternative forage production systems; sustainable functional food production in hydroponics (sprouted fodder, herbs and vegetable production).

Dr. R. Gregory Thorn, Ext. 88647, rgthorn@uwo.ca, BGS 3047
Research Area: Various projects in fungal systematics and ecology.

Dr. Liana Zanette, Ext. 88317, lzanette@uwo.ca, CB 207
Research Area: Predator-prey interactions and the 'Ecology of Fear' in wildlife: from birds to elephants. For more information on the research we do in my lab, please see my webpage: lianazanette.com .

Agriculture and Agri-Food Canada Potential Supervisors [1391 Sandford St., London, ON N5V 4T3]

Dr. Sangeeta Dhaubhadel, Ext. 226-678-5916, Sangeeta.Dhaubhadel@agr.gc.ca
Research Area: Phenylpropanoids in legumes. Phenylpropanoid pathway produces a plethora of plant specialized metabolites with human health benefits. They play important roles as chemical signals in plant-environment interaction such as plant defense against biotic and abiotic stresses. We study biosynthetic pathway genes and their regulators involved in the biosynthesis of a subset of these compounds such as phytoalexin isoflavonoids in soybean, field pea and lentil. Knowledge of the plant chemical signals against pathogens will allow us to develop disease management strategies and tailor their production to aid human health, nutrition and crop yield.
Prospective 4999 students can look forward to working with direct mentorship of a PhD candidate. During the course of the project the student will be exposed to a broad range of molecular biology, bioinformatics and genetics and analytical chemistry techniques and equipment. My research lab is situated at the Agriculture and Agri-Food Canada Research Station, which houses state of the art facilities and is located just 10 minutes from the University of Western Ontario campus.

Dr. Frédéric Marsolais, 226-234-3450, Frederic.Marsolais@agr.gc.ca
Research Area: Molecular biology and biochemistry of sulphur amino acid biosynthesis in legume seeds.

Dr. Ian Scott, 226-378-1961, ian.scott2@agr.gc.ca
Research Area: projects would be in the area of plant-insect interactions, biopesticides or insecticide resistance.

Dr. Aiming Wang, 519 200-3786 aiming.wang@agr.gc.ca or awang45@uwo.ca
Research Area: Virus-induced immunity response and counteracting mechanism in plants; Molecular virus-plant interactions; Fruit tree biotechnology.