

Funded MSc/PhD Positions Available: Ecology of Antimicrobial Resistance in Agriculture

Within the context of better understanding the role that agriculture may play in promoting antibiotic resistance, graduate student positions are available for individuals who will conduct research on the dynamics of antibiotic-resistant bacteria and antibiotic resistance determinants in agroecosystems. Relevant areas of focus will include 1) Dynamics of genes associated with antibiotic resistance following land application of manures or biosolids; 2) Interactions of antibiotic drug residues with soil microorganisms; 3) The fate in an animal model microbiome of antimicrobial resistance genes and associated genetic elements following ingestion of environmental samples. A variety of microbiological, molecular and biochemical techniques are used in the laboratory, including, but not limited to, culture-dependent/independent techniques, antimicrobial susceptibility testing, nucleic acid extraction, and quantitative-real time PCR. Field experiments are undertaken on the Agriculture and Agri-Food Canada (AAFC) Research farm. Students will be registered in the Department of Biology at the University of Western Ontario, with research undertaken in the laboratories of Drs. Ed Topp and Michael Fruci at the AAFC Research Centre in London, Ontario.

Qualifications:

- Ideal candidates will have a strong interest in antibiotic resistance and microbial ecology
- Experience in bacteriology, molecular biology (cloning, PCR, quantitative real-time PCR), and animal handling are an asset
- Knowledge and interest in agriculture and food production are an asset
- Excellent written and oral communication skills
- Demonstrated leadership, organization, and interpersonal skills
- The ability to work both independently and in a team

Start date: Immediate for the fall, or the winter term of 2018.

For examples of our recent publications and further information on the University of Western Ontario consult:

https://www.researchgate.net/profile/Edward_Topp.

https://www.researchgate.net/profile/Michael_Fruci

<http://www.uwo.ca/biology/graduate/prospective/index.html>

Application Instructions:

Individuals who are interested in the position should submit (i) a curriculum vitae, (ii) a copy of official transcripts, (iii) and a letter indicating motivation, career interests and goals to:

Dr. Ed Topp

Principal Research Scientist, Agriculture and Agri-Food Canada

Department of Biology, University of Western Ontario

E-mail: ed.topp@agr.gc.ca