MSc Position in Poultry Breast Myopathies

A 2-year MSc position is available commencing September 2018 in the laboratory of Dr. Leonardo Susta, Department of Pathobiology, in collaboration with Dr. Shai Barbut, Department of Food Science, at the University of Guelph. The project focuses on determining the prevalence and severity of emerging breast muscle myopathies, such as the so-called Wooden Breast Syndrome (WBS) and White Striation (WS), in Ontario broilers. Although not a concern for food safety, WBS and WS cause loss of myofibers and fibrosis in the breast muscle, leading to poor meat processability, economic losses at the processing plant, and negative customer perception. The prevalence of these myopathies has increased in many countries, leading to an estimate $200M losses per year in the US alone. The project will address the problem with a Canadian perspective, through 1) Assessment of the prevalence of WBS and WS in selected processing plants throughout Ontario, 2) Refine a histological grading scheme to evaluate the severity of WBS and WS from samples derived from processing plants, 3) Validate diagnostic methods (e.g., impedance) that can be applied on-line at the processing plant.

The program will offer the candidate opportunities to become familiar with several aspects of poultry production, methodologies such as histology, histomorphometry, immunohistochemistry, and epidemiology. The selected student will also interact with stakeholders and collaborators at meat processing plants, OMAFRA representatives, and the poultry industry personnel. The ideal candidate will fully participate in all aspects of the research project, and will be a motivated and ambitious team member. Selection of the successful candidate is based on a combination of academic criteria, relevant interest and experience, referees’ evaluations, and an assessment of the candidate’s career goals and motivation. *Experience with histotechnology is preferred but not required.*

The stipend is $22,000 / year. Additional funds can be sought by the applicant through various scholarships, which may be available through the Ontario Veterinary College or other opportunities, such as Natural Sciences and Engineering Research Council (NSERC), Ontario Graduate Scholarship (OGS), and Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) HQP scholarship. Please contact Donna Kangas (contact information below) for details.

Review of applications will begin immediately, and continue until the position is filled.

Additional information regarding admission requirements and the application process can be found at:

https://www.uoguelph.ca/Registrar/Calendars/Graduate/2013-2014/GradProg/Path-MSc.shtml

Further inquiries can be directed to Mrs. Donna Kangas, Graduate Program Assistant, OVC Graduate Program Services, Building 174, University of Guelph, Guelph, ON N1G 2W1, Canada; phone 519-824-4120 ext. 54725; e-mail (pathgrad@uoguelph.ca).

Research-related inquiries should be directed to Dr. Leonardo Susta (lsusta@uoguelph.ca).