**MSc position: innate immune responses in bovine respiratory disease**

An MSc position is available to begin in September 2021 or January 2022. The advisor is Dr. Jeff Caswell in the Department of Pathobiology. The research focuses on the biologic mechanisms that make housed dairy calves so susceptible to bacterial pneumonia in the winter months, and in particular the role of airborne particulates in inducing harmful inflammatory responses and dysregulating immune responses in the respiratory tract. The hypothesis builds on our prior findings that inflammation in the respiratory tract of healthy calves negatively affects how they respond to subsequent bacterial infection.

The project involves clinical sampling of dairy calves including blood and bronchoalveolar lavage, as well as in vitro testing of the effects of airborne particulates on cultured macrophages using cytokine analysis and flow cytometry. The research is expected to improve understanding of how well-known risk factors lead to development of this common disease of cattle, and identify novel opportunities for disease prevention. Selection of the successful candidate is based on a combination of academic criteria, relevant interest and experience, referees’ evaluations, and an assessment of the applicant’s career goals. The application deadline is 15-Apr-2021 or until a suitable candidate is identified.

Admission requirements and the application process are described at https://graduatestudies.uoguelph.ca.

As an expression of interest, please send your resume, statement of intent, and transcripts to: Dr. Jeff Caswell, jcaswell@uoguelph.ca