Available PhD Project:

**Supervisor:** Dr Frances Henson

**Supervisor profile page:**
https://www.research.vet.cam.ac.uk/research-staff-directory/principal-investigators/systems-pathology/Frances-Henson

**Project Title:** Novel methods of pain evaluation using remote telemetry in ovine preclinical orthopaedic models.

**Description:** Preclinical models are commonly used in Arthritis Research and the choice of animal model must be ethically justifiable with clear, robust outputs that map to the clinical human patient. Large animal models of Osteoarthritis (OA) are more similar than small animal models to humans in e.g. anatomy and biomechanics, however, one of their major limitations is that the experimental output derived is primarily structural joint information. Pain, a hugely important aspect of OA to the human patient, is rarely addressed, with any potential analgesic effects of drugs/devices possibly being missed. The aim of this studentship is to develop novel methods of understanding and quantifying pain in sheep that have undergone experimental orthopaedic procedures using telemetric (tracking) methods. Establishing and disseminating these methods will significantly enhance the quality of the data that is generated from these animals. This will lead to a reduction and refinement of these experiments, demonstrating an ethically responsible approach to animal experimentation. The studentship is a collaboration between two ARUK Centres of Excellence, (Tissue Engineering Centre, University of Cambridge) and pain (Pain Centre, University of Nottingham).

This student will learn experimental design, data collection, storage, processing, interpretation and presentation. In addition the student will learn laboratory based techniques including immunohistochemistry and histology. Transferable skills that will be acquired include record keeping, methodical methods of work, inter-personal skills and presentation skills.

**Funding:**
This project is not funded. Prospective students would be expected to apply for funding opportunities either through the University (http://www.vet.cam.ac.uk/grad/Prospectivestudents/funding) or other sources.

**How to apply:**
Contact the Supervisor to discuss before submitting an application.

More details on how to apply here: http://www.vet.cam.ac.uk/grad/Prospectivestudents/apply