



THE UNIVERSITY
of ADELAIDE

Summer Research Scholarships

SCHOOL OF ANIMAL AND VETERINARY SCIENCES

Below is a list of research topics available in the School of Animal and Veterinary Sciences for both the 2018-2019 Adelaide Summer Research Scholarships and the School of Animal and Veterinary Sciences Summer Scholarships.

We highly recommend you apply for both Scholarships.

PLEASE NOTE – This list is not exhaustive and you are invited to contact Academics directly (whether or not they are listed in this document) to discuss other projects of mutual interest under their supervision. For Research areas visit <http://www.adelaide.edu.au/vetsci/research/>

Project Titles 2018/19

Companion Animal

How healthy is that Pomeranian dog? An Australia-wide analysis of Pomeranian health through the VetCompass Australia database of veterinary clinic records

Supervisor: [Dr Anne Peaston](#)

Production Animal

Validation of an enzyme-linked immunosorbent assay (ELISA) for ovine Immunoglobulin G (IgG)

This project is laboratory focussed working in the Biochemistry laboratory at the Roseworthy Campus. The successful candidate will work with an endocrinologist to develop an ELISA from scratch, then validate the ELISA by analysing serum and colostrum samples. The results from this ELISA will be compared to the already validated radial immunodiffusion method and prepared for publication as either a short communication or technical paper with the candidate listed as a contributing author.

Supervisor: Dr Alyce Swinbourne - alyce.swinbourne@adelaide.edu.au

Does melatonin influence ewe-lamb interaction during the first three days of life?

Melatonin has shown to have beneficial effects for improved vigour and vitality in neonates as well as reducing stress in adults. As part of a larger feed supplementation study to improve lamb survival in Merino sheep, we wish to determine if daily melatonin treatment influences ewe-lamb interactions during the lamb's first three days of life.

The successful candidate will conduct a retrospective behavioural analysis analysing footage recorded during an intensive lambing period. The student will be involved in the development of a behavioural ethogram and analyse the behaviours of ewes, including parturition (giving birth), the early bonding behaviours immediately following birth, how the ewe assists the lamb to stand and suck, and if the ewe maintains that maternal bond. Students will also learn about on-farm sheep husbandry and handling techniques for research purposes.

The data collected from this study will be incorporated into a larger ewe behavioural study. The results will be prepared for publication with the candidate listed as a contributing author.

Supervisor: [Dr Will van Wettere](#)

Pathobiology, Public and Population Health

In conjunction with Zoos SA and the Australian Wildlife Conservancy, this project provides veterinary expertise for the reintroduction of many endangered species into wildlife protected areas.

Preference will be given to a Veterinary student

Description: Part of the project is to develop a Disease Risk Analysis for the safe and biosecure translocation of these endangered species. This is ground breaking and very exciting conservation work and we are very privileged to be considered for this work. To undertake this work, we need to research the disease issues we need to consider for each species and each location. We are VERY keen to get a student to help with researching the disease information so we can make informed decisions on health and disease checks that need to be undertaken before animals are translocated.

Supervisor: [Dr Wayne Boardman](#)

***Campylobacter* and *Salmonella* species: the two most common causes of foodborne gastrointestinal disease**

Campylobacter and *Salmonella* species are the two most common causes of foodborne gastrointestinal disease. Isolates of *Salmonella* are known to vary significantly in aspects of their ability to cause disease but this has not been so well characterised for isolates of *Campylobacter*. In addition, how *Salmonella* and *Campylobacter* species interact during intestinal invasion has largely not been explored. To explore these aspects, we will use an *in vitro* intestinal invasion model (cell culture) to characterise the differential invasion potential of different *Campylobacter* isolates and explore how co-infection with *Salmonella* may alter overall virulence of both bacterial species. We will label each bacteria with a fluorescent plasmid and use fluorescent microscopy to characterise these phenomena.

Supervisor: [Dr Andrea McWhorter](#)

Supervisor: [Dr Kapil Chousalkar](#)

Veterinary Business and Entrepreneurship

Project would suit a Vet Bioscience, DVM or Animal Science student

Australian veterinary students are much more interested in learning about veterinary business when practicals use the board game, Footsteps™. The Footsteps™ board game is a monopoly like board game in which teams of students race each other round the board gaining and losing active clients as per their dice throws and their answers to the cards. Footsteps™, developed by Associate Professor Alison

Lambert, Nottingham Veterinary School, uses 5 - 8 year old United Kingdom pet and veterinary business data. This project requires research to obtain Australian data to replace the UK data across the 48 chance cards and the 28 segment cards so that an Australian set of cards can be produced and increase the quality of the learning experience for Australian veterinary students. This work will be in collaboration with Associate Professor Lambert in the UK. This is very exciting work for a veterinary student OR an animal science student interested in veterinary or pet related service entrepreneurship. The focus is on the relationship between customer experience and business success. We are very privileged to be collaborating with Associate Professor Lambert for this work. There may be opportunity for the student to spend one or two weeks in the UK based at the Onswitch premises, Grantham, should they wish. We are VERY keen to have a student help with researching the information so we can make informed decisions to create the Australian set of cards for this educational intervention.

Supervisor: [Dr Adele Feakes](#)

