COLLEGE OF SCIENCES
ANIMAL-RELATED RESEARCH PROJECTS
POSTGRADUATE RESEARCH PROJECTS FOR STUDENTS IN 2008

The following are a selection of research projects that are available for postgraduate students in 2008. The list is not exhaustive, so if you have a particular project in mind, please contact the staff member who is most likely to supervise the area you are interested in. If you do not know whom that person is, contact Professor Kevin Stafford who is the Subject Coordinator for Animal and Veterinary Science: Room 3.04, IVABS Tower. Phone: 350 5548. K.J.Stafford@massey.ac.nz

Project Title	Staff Member
What is the genetic basis of the differences in birth weight in crosses between Cheviot and Suffolk sheep?	Prof. Hugh Blair
Design of dog breeding schemes to improve health.	Prof. Hugh Blair
Breeding strategies for improving the profitability of Chinook salmon farming in NZ.	Prof. Hugh Blair
Finding the chromosomal location of a recessive gene known to cause a motor neuron disorder.	Prof. Hugh Blair
Modelling the feed requirements of different sized beef cows.	Prof. Steve Morris
Effect of sward height on intake of sheep and cattle.	Prof. Steve Morris
Intensive beef production systems on grass.	Prof. Steve Morris
Breeding ewes out of season.	Dr. Paul Kenyon Prof. Steve Morris
Modelling year round lamb production systems and lamb supply.	Prof. Steve Morris
Improving lamb growth in the autumn.	Prof. Steve Morris Dr. Paul Kenyon
Improving lamb growth in triplet bred lambs.	Prof. Steve Morris Dr Paul Kenyon
Control of birth weight in Angus heifers.	Prof. Steve Morris
Modelling the costs of improved animal welfare.	Prof. Kevin Stafford, Prof. David Mellor
The behaviour and welfare of greyhounds.	Prof. Kevin Stafford
Horse welfare.	Prof. Kevin Stafford, Prof. David Mellor
Pain thresholds and chronic pain in livestock.	Prof. Kevin Stafford
Role of prolactin during pregnancy.	Dr. Sam Peterson
Measuring variation in immune status of pregnant mammals.	Dr. Sam Peterson
How do twins differ from each other and from singles?	Dr. Sam Peterson
Mammary gland development in autumn- and spring-lambing ewes.	Dr. Sam Peterson
Wool and skin growth in autumn- and spring-lambing ewes.	Dr. Sam Peterson
Trophectoderm development (embryology).	Dr. Sam Peterson
Dairy sheep industry investigation.	Dr. Sam Peterson
Endocrine differences between single- and twin-bearing ewes.	Dr. Sam Peterson
Ensuring full lactation in induced cows.	Dr. Sam Peterson
Rate of loss of condition of lactating dairy cows relative to milk yield.	Dr. Sam Peterson
The effect of variation in immune status of the dam on the growth and development of the foetus.	Dr. Sam Peterson
The effect of variation in immune status on nutrient partitioning in the pregnant mammal.	Dr. Sam Peterson
Nutritional effects on mammary gland development at puberty.	Dr. Sam Peterson
Why does shearing pregnant ewes increase milk yields?	Dr. Sam Peterson
Use of a growth model and optimisation mathematics to reduced nitrogen excretion in growing pigs.	Dr. Patrick Morel
Analysis of growth pattern of New Zealand horses kept on pasture.	Dr. Patrick Morel
Use of a growth model and optimisation mathematics to reduced nitrogen and phosphorus excretion in growing pigs.	Dr. Patrick Morel
Use of a growth model to estimated new selection parameters for lean growth in pigs.	Dr. Patrick Morel
Development of a biological broiler chicken growth model.	Dr. Patrick Morel
Piglets as a model to measure iron bioavailability of meat.	Dr. Patrick Morel
Nutritive value of Biodiesel by-products for pigs.	Dr. Patrick Morel
A new energy system for broiler chickens.	Dr. Patrick Morel
Modelling foetal growth in sheep	Dr. Patrick Morel
Modelling lamb growth on pasture	Dr. Patrick Morel
Modelling year round lambing system	Dr. Patrick Morel
Dietary manipulation of pork fatty acid profile and flavours	Dr. Patrick Morel
Measurement of amino acid catabolism in the cat.	Dr. Tim Wester
Regulation of amino acid catabolism by dietary protein intake in the cat.	Dr Tim Wester
Measurement of whole body protein turnover and use in cats.	Dr Tim Wester
Measuring gluconeogenesis in the cat.	DrTim Wester
Regulation of gluconeogenesis in the cat.	Dr Tim Wester
Effect of prepubertal nutrition and body composition at mating on subsequent lactation.	Dr. Tim Wester
Comparisons of Jersey x Friesian, Hereford x Friesian, and Angus cattle for beef production: a modelling study.	A/Prof. Roger Purchas, Prof. Steve Morris
Studies into the effect of nutrition and final weight on the quality of pork from female pigs (gilts).	A/Prof. Roger Purchas, Dr. Patrick Morel
Gut development in young growing ruminants.	Dr. Simone Hoskin
Effect of dietary fibre type on hind gut acidosis in horses.	Dr. Simone Hoskin
Effects of diet composition on methane production of ruminants.	Dr Simone Hoskin
Proving we have a new Trichostrongyle in NZ farmed deer.	Dr. Simone Hoskin
Evaluating weaning strategies for deer.	Dr. Simone Hoskin
Nutrition for velveting stags.	Dr. Simone Hoskin
Anthelmintic resistance in deer nematodes	Dr. Simone Hoskin Prof. Bill Pomroy
Copper supplementationand requirements of elk vs. red deer.	Dr. Simone Hoskin
Epidemiology of internal parasites in farmed deer.	Dr Simone Hoskin Prof. Peter Wilson
Dietary preference of farmed deer for native trees and shrubs	Dr. Simone Hoskin
Evaluating vitamin and mineral supplements for horses.	Dr. Simone Hoskin
Investigating ryegrass staggers in horses and deer.	Dr. Simone Hoskin
Factors affecting uptake of production and health advisory services to deer, sheep and beef farms. (Masterate)	Prof. Peter Wilson

Evaluation of the need for post-velveting analgesia in stags. (PhD or Masterate)	Prof. Peter Wilson
Production effects of internal parasites in commercial beef herds. (Masterate)	Prof. Peter Wilson
Epidemiological investigation of foot lameness on commercial deer farms. (Masterate)	Prof. Peter Wilson
Dynamics of nematode larvae in cattle faeces.	Prof. Bill Pomroy
Anthelmintic resistance in cattle nematodes.	Prof. Bill Pomroy
Investigate the role of *Neospora caninum* infections in sheep.	Prof. Bill Pomroy
Comparison of use of moxidectin vs. a triple combination anthelmintic for selection of resistant parasites.	Prof. Bill Pomroy
Does hogget mating cause higher rates of embryo loss.	Prof. Dave West
Venereal campylobacteriosis in beef cattle.	Prof. Dave West
Seasonal changes in nerve growth factor in the gonadotrophin-releasing hormone neuronal system.	Prof. Tim Parkinson
Can supplements of forage trees reduce methane production in sheep?	Prof. Tom Barry Dr Carlos Ramirez (AgResearch)
Antibiotic resistance in indicator organisms from pigs.	A/Prof. Mary Nulsen
Effect of lamb birth rank on the value of the fleece.	Mr Ric Sherlock
Is hogget mating way of the future?	Dr. Paul Kenyon
Will intensive lambing beats improve lamb survival rates to weaning?	Dr. Paul Kenyon
Improving ram breeding performance.	Dr. Paul Kenyon
Management of hoggets before and during breeding to maximize performance.	Dr. Paul Kenyon
Managing triplets to maximise lamb survival.	Dr. Paul Kenyon
Evaluation of sward mixes to maximise lamb growth.	Dr. Paul Kenyon
How can we get young lambs to grow faster?	Dr. Paul Kenyon
Does under nutrition *in-utero* have long term effects?	Dr. Paul Kenyon
Does the *in-utero* environment affect the resulting offsprings metabolism?	Dr. Paul Kenyon
Does the triplet-born lamb or a lamb born to a hogget differ from one born to a single or twin bearing mature ewe in terms of metabolism or long term production levels?	Dr. Paul Kenyon
Neospora caninum research: epidemiology, hosts or molecular genetics.	Prof. Norm Williamson
Oestrus synchronsiation research testing novel hormonal control regimes.	Prof. Norm Williamson
Oestrus detection in dairy cows.	Prof. Norm Williamson
Neospora caninum molecular genetic studies.	Prof. Norm Williamson
Mastitis control in dairy cows in the dry period.	Prof. Norm Williamson
Genetic evaluation for somatic cell count in New Zealand dairy goats.	Dr. Nicolas Lopez-Villalobos
Breeding objectives for New Zealand dairy goats.	Dr. Nicolas Lopez-Villalobos
Mate selection in dairy cattle considering multiple criteria objective optimization.	Dr. Nicolas Lopez-Villalobos
Examination of management differences between small and large commercial horse studs in New Zealand.	Prof. Elwyn Firth Dr Chris Rogers
The identification of oestrogen receptors on equine bone.	Prof. Elwyn Firth Dr. Chris Rogers
The modelling of foal growth.	Dr. Patrick Morel

	Dr.Chris Rogers
The measurement of foal activity with a GPS based system.	Dr. Chris Rogers Prof. Elwyn Firth
Is it possible to calculate breeding values for the New Zealand sport horse?	Dr. Chris Rogers
How are New Zealand racehorses trained?	Dr. Chris Rogers, Prof. Elwyn Firth
How are New Zealand event horses trained?	Dr. Chris Rogers, Prof. Elwyn Firth
Do older event horses have a reduced range of motion?	Dr. Chris Rogers, Prof. Elwyn Firth
Methods to reduce weaning associated decreases in growth rate in foals.	Dr. Chris Rogers, Prof. Elwyn Firth
The use of electrosonophoresus as a practical non invasive method to measure stress in the performance horse.	Dr. David Thomas, Dr. Chris Rogers
The economics of racing horses in New Zealand.	Prof. Elwyn Firth, Dr. Chris Rogers
Quantification of stride frequency and relationship to workload in the thoroughbred racehorses.	Dr. Chris Rogers Prof. Elwyn Firth
Changes in the trot of thoroughbred racehorses during their 2-year-old racing season.	Dr. Chris Rogers Prof. Elwyn Firth
Comparison of CT derived measurements of bone strength and actual bone strength in the third metacarpal bone.	Dr. Chris Rogers Prof. Elwyn Firth
The relationship of clinical score and workload in 3-year-old thoroughbred racehorses.	Dr. Chris Rogers Prof. Elwyn Firth
Differences in clinical scores between the 2- and 3-year old racing season.	Dr. Chris Rogers Prof. Elwyn Firth
Quantification of the workload of 3-year-old thoroughbred racehorses and its relationship to training theory.	Dr. Chris Rogers Prof. Elwyn Firth
How are New Zealand endurance horses trained?	Dr. Chris Rogers Prof. Elwyn Firth
Quantification of workload of endurance horses.	Dr. Chris Rogers Prof. Elwyn Firth
Quantification of the training workload of New Zealand Event horses and its relationship to competition workload.	Dr. Chris Rogers Prof. Elwyn Firth
Somatosensory evoked potentials (SEPs) in trigeminal mediated headshaking in horses.	Dr Craig Johnson Prof. John Madigan Dr. Kirstie Dacre
Investigation of the prevalence of inflammatory airway disease in NZ racehorses.	Prof. Nigel French Dr. Kirstie Dacre
Incidence of inflammatory airway disease in New Zealand racehorses.	Dr H Carslake Dr. Kirstie Dacre
Environmental dust burdens in New Zealand horses at pasture	Dr H Carslake Dr. Kirstie Dacre
Is environmental dust exposure an aetiological factor in pasture associated respiratory disease in NZ horses?	Dr. Chris Rogers Dr. Harry Carslake Dr. Kirstie Dacre
How can we measure pain in animals?	Dr. Craig Johnson
Can the electroencephalogram measure pain experience in people?	Dr. Craig Johnson

	Dr. John Podd
Does coat colour effect pain perception?	Dr. Craig Johnson Prof. Hugh Blair
Osteoporosis in inflammatory bowel disease	Prof. Keith Thompson
Inherited rickets in Corriedale sheep.	Prof. Keith Thompson
Intestinal carcinoma in sheep as a model for human colonic adenocarcinoma	Dr. John Munday
The role of high sugar grasses in pasture-based systems.	Dr. Jennifer Burke
Dairy production from high legume pastures.	Dr. Jennifer Burke
Colostrum, for the calves or for the factory?	Dr. Jennifer Burke
Improving animal performance on brassica crops.	Dr. Jennifer Burke
Comparison of the Jersey, Friesian and Friesian x Jersey crossbred cow.	Dr. Jennifer Burke
The economic benefit of growing heifers better.	Dr. Jennifer Burke
The pathogenic role of intestinal protozoa in New Zealand herpetofauna	Dr. Brett Gartrell
The biomechanics of large seed swallowing in kereru and tui.	Dr. Brett Gartrell
Pain in reptiles	Dr. Brett Gartrell Dr. Craig Johnson
Management strategies to reduce Aspergillosis in a zoological collection	Dr Brett Gartrell A/Prof. Maurice Alley Katja Geschke
Imaging anatomy of the tuatara	Dr Brett Gartrell Katja Geschke Mark Owen
Corynebacterium infections in Yellow-eyed penguins.	A/Prof. Maurice Alley
Avian malaria in captive indigenous species.	A/Prof. Maurice Alley
The effect of shearing on the nasal carriage of bacteria in sheep.	A/Prof. Maurice Alley
Leptospirosis from sheep in abattoirs.	A/Prof. Cord Heuer
Sero-conversion to leptospirosis among abattoir workers. (MVS)	A/Prof. Cord Heuer
Bovine viral diarrhoea virus in dairy herds.	A/Prof. Cord Heuer
Inhibitory substances in bulk tank milk in New Zealand.	A/Prof. Cord Heuer
Beef herd fertility.	A/Prof. Cord Heuer
Production and disease monitoring in a large sheep farm. (MVS)	A/Prof. Cord Heuer
Epidemiology of neosporosis in dairy herds. (MVS)	A/Prof. Cord Heuer
Chronic progressive pneumonia in lambs in New Zealand. (PhD)	A/Prof. Cord Heuer
Diagnostic value of herd level indicators for PMWS. (MVS)	A/Prof. Cord Heuer
Johne's disease in dairy herds. (PhD)	A/Prof. Cord Heuer
Enterococci in milk and milk products. (MVS)	A/Prof. Cord Heuer
Diagnostic value of animal level indicators for PMWS (MVS)	A/Prof. Cord Heuer
Diagnosis of PMWS in New Zealand pig herds.	A/Prof. Cord Heuer
Neospora caninum infection in beef herds in New South Wales.	A/Prof. Cord Heuer
Ewe wastage on a large sheep farm in Wairarapa.	A/Prof. Cord Heuer
Seroconversion of abattoir workers to *Leptospira Pomona* and *Hardjo* .	A/Prof. Cord Heuer
Epidemiology of heifer mastitis in New Zealand. (MVS)	A/Prof. Cord Heuer
Prevention of heifer mastitis in New Zealand. (MVS)	A/Prof. Cord Heuer
Livestock disease surveillance in small holder systems in Samoa. (MVS)	A/Prof. Cord Heuer
Avian influenza. (PhD)	Dr. Mark Stevenson
National livestock disease surveillance. (PhD)	Dr. Mark Stevenson
Epidemiology of bovine tuberculosis. (PhD)	Dr. Mark Stevenon
Surveillance and control of rabies in Bhutan. (MVS)	Dr. Mark Stevenson
Regional risk of organochlorine (OC) residues in sheep.	Dr. Mark Stevenson
Ovine Johne's disease in Victoria 1995 to 2004.	Dr. Mark Stevenson
Stress responses and coping styles in birds.	A/Prof. John Cockrem
Stress in chickens in different commercial housing systems.	A/Prof. John Cockrem
Immunopathology of parasitic infections.	Dr. Ian Scott
Influence of breed on resistance and resilience of sheep to helminth infection.	Dr. Ian Scott
Diagnosis of parasitic infections.	Dr. Ian Scott
Parasites in dogs and cats.	Dr. Ian Scott
Parasites in horses.	Dr. Ian Scott
Helicobacters in the ruminant stomach.	Dr. Ian Scott
Blood vessel formation during early foetal organ development.	Dr. Alastair Smith
Cerebral blood flow in the developing foetal brain.	Dr. Alastair Smith
Blood vessel related gene expression in placental tissues.	Dr. Alastair Smith
Diet of Hector's dolphins based on fatty acid analysis of blubber.	Wendi Roe
Parasites and stomach ulcers in New Zealand fur seals and sea lions.	Wendi Roe
Parasites and cetaceans strandings – can parasites of the head sinuses and brain lead to strandings?	Wendi Roe
Comparative gastric anatomy of beaked whales.	Wendi Roe
Characterisation of freezing artefact in pinniped carcasses.	Wendi Roe
Role of disease in stranded cetaceans on New Zealand coastlines.	Wendi Roe
Pathology of drowning in marine mammals.	Wendi Roe
Environmental health of New Zealand waters: Analysis of marine mammal tissues as an indicator.	Wendi Roe Dr. Brett Gartrell
Determining the association between EHV-2 and respiratory infections in foals. (Honours with possible extension).	Dr Laryssa Howe
Polycystic kidney disease in Perendale sheep: The nature of the primary cilia defect.	Dr Alastair Johnstone
Inherited neuroaxonal dystrophy of Romney sheep: Pathogenesis and molecular biology of spheroids.	Dr Alastair Johnstone
What factors are required for myelin formation in the mammalian nervous system?	Dr Christine Thomson

Updated 5/12/07