

Animal Reproduction

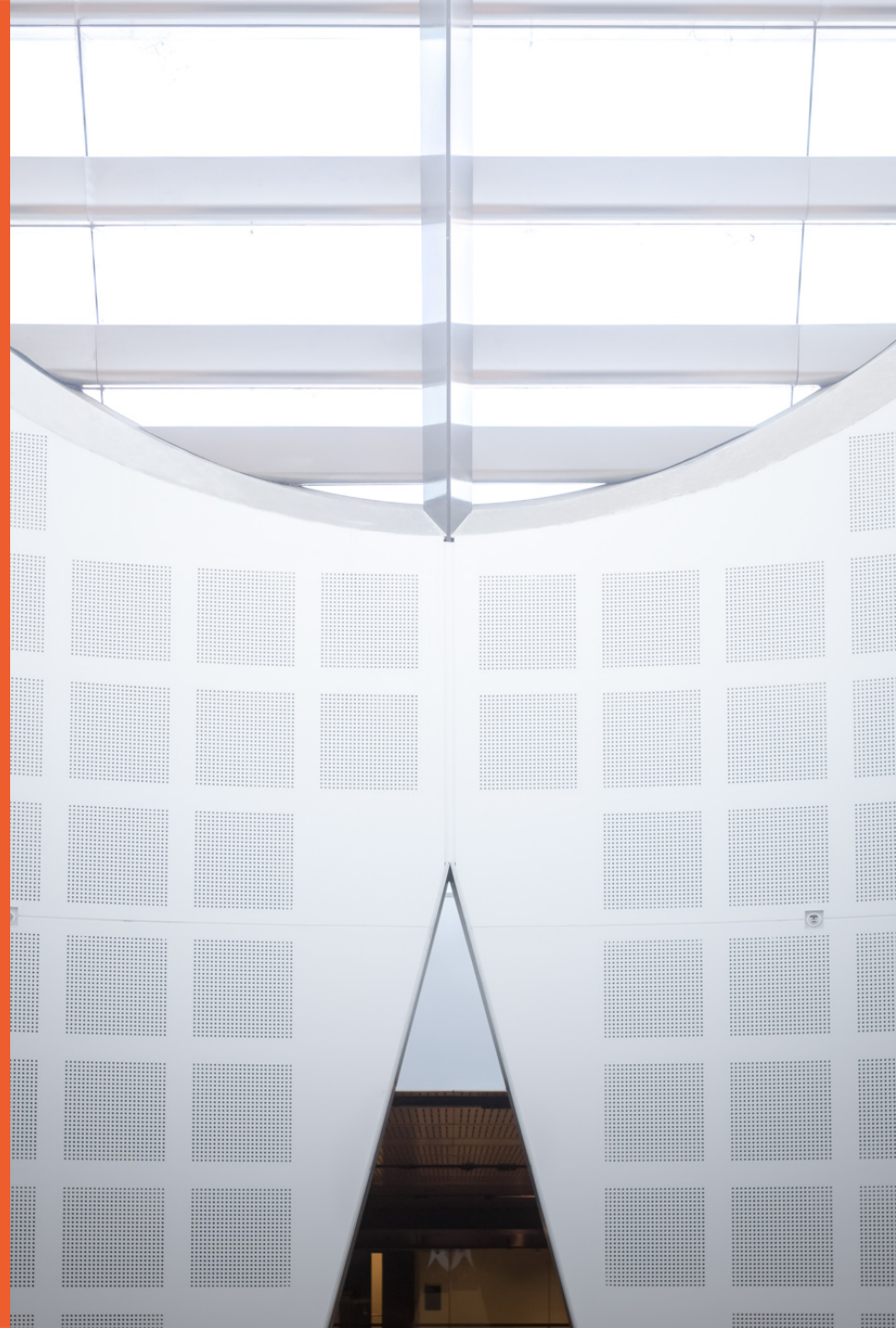
Presented by

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THE UNIVERSITY OF
SYDNEY





Roslyn Bathgate

Tamara Leahy

Simon de Graaf

Jessica Rickard

Chris Grupen

Angela Crean

Who are we?

- Kelsey Pool – melatonin and ram sperm function
 - Samir Al-Bulushi – developing ARTs in camels
 - Dannielle Glencorse – oestrous detection in pigs
 - Charley-Lea Pollard – pregnancy detection in horses
 - Taylor Pini – sheep seminal plasma proteins
 - Cameron Negus – sperm preservation in elephants
 - Naomi Bernecic – capacitation of sheep sperm
 - Alicia Steel – predicting fertility in pigs
- Honours, Masters and professional placement students

What do we do and why?

Basic and applied aspects of reproduction in farm and wildlife animals, particularly the development and application of assisted reproductive technologies (e.g. AI, IVF, MOET and sperm sexing) to animal production and conservation.



Current major agricultural-based projects

Associate Professor Simon de Graaf

Drs Tamara Leahy and Jessica Rickard

- Improving fertility of frozen ram semen after non-surgical cervical artificial insemination (AI)
- Methods to increase semen production, sperm quality and libido of rams
- Reducing early embryo loss of sheep
- Development of sperm sexing in sheep
- Improved oestrus synchronisation of sheep to increase AI success
- Thermoregulation by ewes during heat stress and its impact on fertility
- Preservation of camel semen and AI

Current major agricultural-based projects

Associate Professor Chris Grupen

- Identifying markers of future reproductive performance in sows
 - Are serum hormone levels in juvenile females associated with their lifetime breeding productivity?
- Reducing the incidence of early embryonic death in mares
 - The impact of vitamin B3 supplementation on oocyte quality: in vitro and in vivo fertility studies
- Improving the health of embryos produced in vitro
 - The role of oocyte secreted factors during the in vitro maturation of pig oocytes
- Genome editing in livestock species
 - Generation of a sheep model of Batten disease using the CRISPR-Cas9 genome editing system

Current major agricultural-based projects

Associate Professor Roslyn Bathgate

- Increasing accuracy of oestrus detection in sows
 - Identification of pen-side testing to enable single dose artificial insemination

- Improving post-thaw fertility of boar spermatozoa
 - Addition of supplements to the cryomedium that protect spermatozoa from damage during the freezing process

Interested in knowing more?

- Our website

<http://sydney.edu.au/vetscience/research/animal-reproduction/index.shtml>

- Our twitter

ARGUS_oz



- Our YouTube site

<https://www.youtube.com/channel/UCxCJgUyu4Bb-VUSW8irlwng>