



Real-life Roslin Research: Which little piggy?

The workshop will reveal how they use molecular biology techniques to genotype engineered pigs.

This workshop gives a real insight and practical hands-on experience on what life in the lab is like here at The Roslin Institute. Students will be introduced to the current, cutting-edge research of Dr Christine Tait-Burkard and her team who have used genome-editing technology to engineer pigs that are genetically resistant to an infectious disease called porcine reproductive and respiratory syndrome (PRRS).

Learning Level: S6 (16+)*

Location: Easter Bush Science Outreach Centre, University of Edinburgh Easter Bush Campus, EH25 9RG

Availability: On demand

Minimum attendance: 16

Maximum attendance: 24

Cost: £12 per pupil (international)

Duration: 3 hours

* The participants need to be confident with the following terms: alleles, homozygous, heterozygous, mutation, transcription, translation, gel electrophoresis, recessive, dominant.

Learning objectives


- To understand how scientific research is used to solve global animal health and welfare problems
- To develop scientific thinking and critical analysis skills
- To understand how gene editing works and can be used in the lab
- To understand that we can identify genotypes using DNA profiling
- To interpret and discuss experimental results
- To reveal the world of work in scientific research

Techniques used

- Micro-pipetting
- DNA gel electrophoresis

Workshop activities

- Introduction to gene editing
- Introduction to micropipettes
- Preparation of DNA for fragment analysis
- DNA electrophoresis using agarose gels
- Analysis and interpretation of results
- Ethical discussion about use of genome edited animals in farming



Get hands-on
with real-life
science