



Course outline

This one-week course will be delivered by scientists from the MRC Harwell Institute who use mouse genetics to study the relationship between genes and disease. The course is aimed at post-graduate researchers and early-stage postdoctoral researchers, with some knowledge of genetics, who are starting or planning to use mouse genetics within their research.

It will give an overview of mouse genetics and tools that can be used to manipulate the genome, along with an introduction to phenotyping approaches and mouse bioinformatics resources. The course will be delivered as a combination of lectures and workshops where participants will have a chance to work through problems and examples.

Researchers from the Institute will give talks which outline how they use mouse genetics and phenotyping in their research areas. There will be a poster session for the course participants, joined by MRC Harwell PhD students and post docs, and a chance to tour the Institute's Mary Lyon Centre, to see the mouse production, breeding and phenotyping suites. Tutors from the course will be available for questions and further discussions during breaks, the poster session and at the course evening meal.

Outline programme

DAY 1

Introduction to mice in research - Prof Steve Brown, FRS
History of GA mice - Dr Sara Wells
Genetic Background and reproducibility - Michelle Stewart
Workshop: Transgenesis & CRISPR
Mary Lyon Centre tour (optional)

DAY 2

Mouse resources and repositories - Dr Martin Fray
Mouse genetics terms & definitions - Dr Sara Wells
Welfare and severity assessment - Mark Gardiner, Michelle Stewart
Workshop: Conditionals & recombinases
Mary Lyon Centre tour (optional)

DAY 3

Diabetes - Prof Roger Cox
Otitis Media - Prof Steve Brown, FRS
Workshop: Experimental design
Workshop: Mouse phenotyping
Poster session

DAY 4

Ethics of animal experimentation - Dr Andy Greenfield
Development and cilia - Dr Dominic Norris
Sexual development - Dr Andy Greenfield
Neurobehavioural genetics - Dr Pat Nolan
IMPC (International Mouse Phenotyping Consortium) - Prof Steve Brown, FRS
Workshop: Big data
Course dinner

DAY 5

Workshop: Embryo development
Imaging - Dr Henrik Westerberg
Late onset phenotypes - Dr Mike Bowl
Neurological Disease - Dr Pete Oliver

Costs

The course costs £850 per delegate. This includes accommodation, local transport to and from the accommodation, lunches, refreshments and one formal course evening meal.

Location

The course will be held at the MRC Harwell Institute, Harwell Campus, Oxfordshire, UK, OX11 0RD.

Apply for a place on the course



To apply for a place delegates will need to complete a short [application form](#) to outline their current role, relevant past education and experience and their reasons for wanting to attend the course. *Application deadline: Friday 8th December 2017.*

Contact training@har.mrc.ac.uk to register 



For more information on the MRC Harwell training programme, visit:
www.har.mrc.ac.uk/training-courses

