

MOUSE GENOME INFORMATICS ROADSHOW:



Mouse Genome Informatics (MGI, <http://www.informatics.jax.org>) is the international database resource for the laboratory mouse, providing integrated genetic, genomic, and biological data to facilitate the study of human health and disease. MGI is a free, highly curated resource, and provides searchable web and programmatic access to a complete catalog of mouse genes and genome features, functional annotations, a comprehensive catalog of mutant and knockout alleles, phenotype and human disease model annotations, gene expression, variation (including SNPs), and sequence data.

This workshop will be composed of a 20min seminar overview and 1h hands-on, interactive tutorial.

Objectives (may be customized):

- A brief introduction to allele nomenclature
- A brief introduction to gene trap alleles, classical and conditional knockout mice and the cre/Lox technology
- How to find a mouse model for a human disease
- How to find a gene ortholog or syntenic region
- How to find information about the phenotype of a transgenic mouse and to find a list of publications that have used that strain or line.
- How to find out when (during development) or where (specific organs and tissues) a gene is expressed.
- How to choose a cre strain to generate a tissue specific knockout
- How to retrieve a list of polymorphic SNPs between two strains across a specific genetic interval
- How to compare the whole-mouse tumor profile of two inbred strains
- How to find a mouse model to study a specific tumor type

Benefits:

- Familiarize research staff and trainees with common mouse genetics concepts and technology
- Learn how to navigate the MGI website to efficiently answer biological questions and obtain data

Cost:

The workshop is free, however, funding for travel expenses may be required. Contact: mgi-help@jax.org