The Gene Expression Database for Mouse Development

GXD maintains an extensive, up-to-date and searchable index of publications with mouse developmental expression data.

For each reference, the records include:
- all genes examined for expression
- assay types
- ages analyzed
- bibliographic information

Gene Expression Literature Search

Mouse Anatomy Browser

Anatomical information is annotated using terms from the developmental mouse anatomy ontology (EMAPA)

The anatomy browser enables text-based searches for anatomical terms, as well as hierarchical views of the anatomy

Anatomy terms are directly linked to expression result summaries

Expression Data Acquisition and Curation

- GXD systematically curates mouse gene expression data from published literature and large-scale data projects
- GXD provides detailed records of expression assays and assay results

Detailed Expression Results

Assay Results pages provide:
- genetic/allelic background and age of specimens
- anatomical structures
- strength and pattern of expression
- experimental conditions, including description of probe or antibody used
- primary expression images when available

Gene Expression Image Details

Image Detail pages display figures from original publications along with links to data curated by GXD.

Expression Image Details

GXD is a freely available community resource that:
- collects and stores extensive mouse expression data, including images
- contains data curated from journal articles and large-scale projects
- is integrated with other data within Mouse Genome Informatics (MGI)
- provides effective search and display capabilities
- enables interactive data summaries and iterative query refinement

www.informatics.jax.org/expression.shtml

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Gene Expression Data Query enables basic and complex searches using one or multiple parameters.

GXD also enables:

• Differential Expression Searches
• Batch Searches for expression data using lists of gene symbols or IDs

Overview of Gene Expression on Gene Detail pages:

- Interactive Matrix Views
- Image Summaries
- Expression Data Summaries for Genes, Assays and Assay Results

GXD provides multiple interactive search summaries and iterative query refinement.