

Web watch

GENE EXPRESSION ATLAS

- <http://www.ebi.ac.uk/gxa>

As biologists we all face the same questions when choosing our experimental system. Are we using a representative cell line? Which cells and organs express our gene of interest? Does the expression level of our gene vary under different biological conditions and in different disease states? Researchers at the European Molecular Biology Laboratory's European Bioinformatics Institute (EMBL-EBI) have made these questions easier to answer following the launch of their freely accessible database, the Gene Expression Atlas, which allows scientists to compare gene expression data at an extraordinary level of detail.

The Atlas collates data from over 1,000 independent studies, mainly microarray experiments, with more than 30,000 samples in total. Using the advanced search function, scientists can query gene information for various situations, including, but not limited to, specific organisms, cell lines, cell types, developmental stages, organs and disease states and stages. An online tutorial is available to help you get started.

This database is founded on data from the ArrayExpress — a public archive of data from high-throughput functional genomic assays that is used by experts. However, in the Atlas database, the information is processed and presented in a way that makes it accessible to all biologists, from graduate students to experts alike. Indeed, Misha Kapushesky, the Atlas project leader, says “The Atlas takes data directly from the ArrayExpress Archive, which is then enriched by curation, re-annotation and statistical computations before the results are presented to the user in an easily accessible form.” (EMBL-EBI press release, 15 June 2009)

So, log on to the Gene Expression Atlas to get condition-specific expression patterns for all of your favourite genes.

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