Gene Expression Experiments

- From a statistical point of view, gene expression experiments are experiments in which thousands of response variables (mRNA levels) are measured for each experimental unit.
- In microarray experiments, each of the thousands of response variables is modeled as a continuous random variable.
- In next generation sequencing experiments, each of the response variables is a count.

Using Microarrays to Identify Genes Involved in Muscle Development

Belgian Blue cattle have a mutation in the myostatin gene.


Identifying Genes Involved in Pathways That Distinguish Compatible from Incompatible Interactions


An Example Gene of Interest

Gene Expression in Brains of Mice Selected for High Voluntary Exercise