

Rat Genome Database (RGD, <http://rgd.mcw.edu>)

A database for comparative genomics using the rat model organism

The Rat Genome Database (RGD, <http://rgd.mcw.edu>) curates and integrates rat, mouse, and human genetic and genomic data and provides access to this data to support research using the rat as a genetic model for the study of human diseases. The Rat has a long history of research in the biochemical, neurological, nutritional, pharmacological, and physiological components of biology and pathobiology. This research has made the rat one of the best 'functionally' characterized mammalian model systems. The rat model has the capability to play a substantial role in enabling the Human Genome Project to fulfill its promise for the development of new therapies and cures for complex human diseases via comparative genomics. RGD has a goal to evolve into a phenome database by adding new types of data and new tools with a focus on comparative genomics. This demo will show tools including ones that use multiple ontologies to map biology onto the genome:

GBrowse – the open source GMOD genome browsing tool

Gviewer – a novel genome-wide viewer for gene, pathway, phenotype, and disease data

VCMaP - a multi-species comparative mapping tool

RGD Advanced Search Tool – a comprehensive database searching tool
that uses multiple ontologies