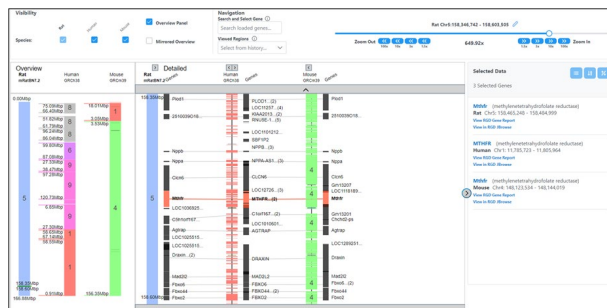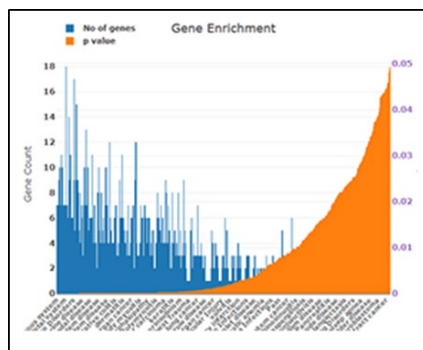# New/Updated Tools
VCMap

The Virtual Comparative Map tool has been updated and expanded to include multiple species and genome assemblies. Improvements to performance and navigation have been made for syntenic region comparisons across species. Tracks such as genomic variant densities have been added.

Multi-species JBrowse 2

RGD is migrating to JBrowse2, an updated genome browser for localizing and analyzing genomic features of all 10 RGD species in context. Substantial sets of tracks, particularly for rat, are available.

MOET

Enter a gene list into the Multi-Ontology Enrichment Tool to find terms from Disease, Pathway, GO, Phenotype or ChEBI ontologies over-represented in annotations for those genes and/or their orthologs in any RGD species.

Rat Genome Database

The Rat Genome Database (RGD) curates and integrates genetic, genomic, functional and phenotype data for rat and nine other species, and provides access to this data to support research using the rat or other housed species as genetic models for the study of human disease.

Rat Genome Database
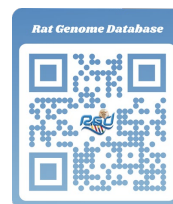
Department of Physiology

Medical College of Wisconsin

1000 N. 92nd Street

Milwaukee, WI 53226

Telephone : 414-955-8871

https://rgd.mcw.edu/contact/index.shtml

Rat Genome Database

MEDICAL COLLEGE OF WISCONSIN

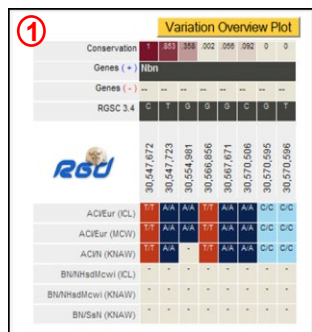## https://rgd.mcw.edu

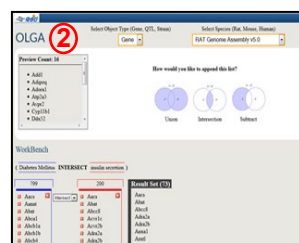*An abbreviated tour of the Rat Genome Database (RGD)*

Variant Visualizer

Visualize and compare sequence variations in ~50 sequenced rat strains, with many more soon to come, or in any of 5 other species.
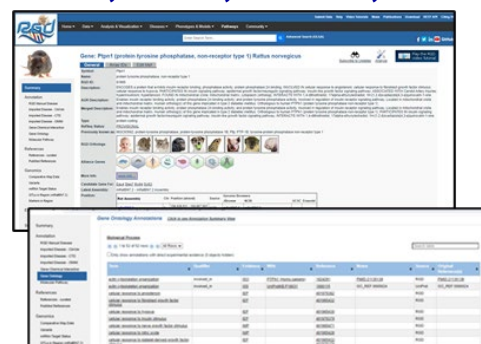
OLGA

The Object List Generator & Analyzer tool finds genes in any RGD species, or rat QTLs or strains, based on criteria such as genomic position or annotations to any of 5 ontologies.
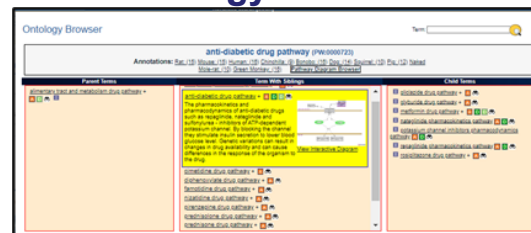
Rat Genome Database home page

OntoMate

The powerful stand-alone version of the text-mining tool that streamlines curation at RGD tags PubMed abstracts with gene and organism names, and eleven ontologies to facilitate abstract searching and sorting. Full manuscript tagging coming soon.

Gene Annotator

Use the GA Tool to retrieve and analyze annotations to rat, mouse or human genes for any or all of five ontologies used at RGD.

Disease Portals

Find rat, mouse, human and seven other species' genes, rat and human QTLs, and rat strains associated with a particular disease in one of fifteen portals. Access gene, QTL and strain report pages from the disease portal's lists of hyperlinked symbols. The ontology browser, a genome viewer with genes, strains and QTLs indicated, MOET gene/ontology annotation enrichment and other resources are embedded.

Quantitative Phenotypes

Use the redesigned PhenoMiner tool to analyze specific, quantitative phenotype data across multiple methods, experimental conditions, strains and datasets. Expected phenotype ranges in selected rat strains can also be viewed.

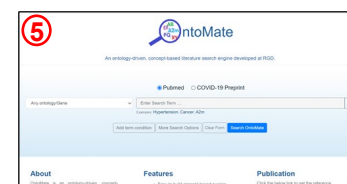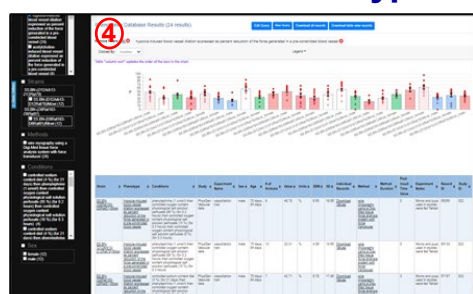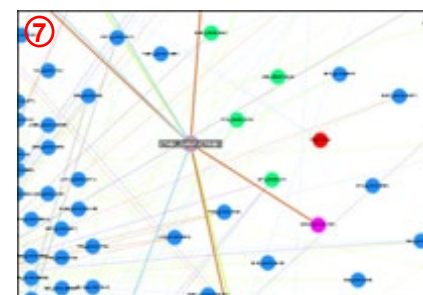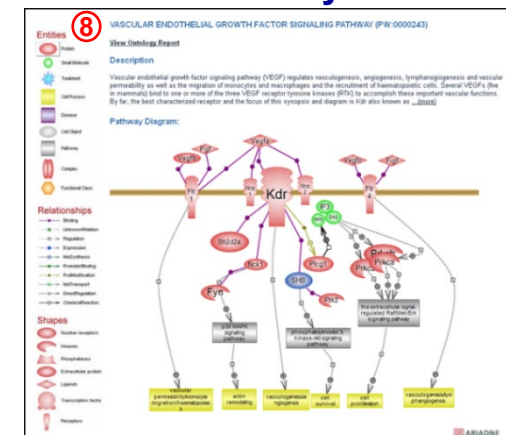## Object Reports
(Genes, QTLs, Strains, Variants)

Report pages for genes in rat (shown) and all other species, QTLs, strains, and rat, human, mouse, dog and pig variants provide annotations, sequence and expression information and more.

Ontology Browser

Functional information is encoded in controlled vocabularies (ontologies). Navigate them using the Ontology Browser. Clicking a term icon [A] accesses the objects annotated to that term, and for the Pathway Ontology, [D] links to interactive pathway diagrams.

InterViewer

RGD's Cytoscape-based protein-protein interaction viewer takes protein or gene IDs for rat, mouse, dog and/or human and displays pairwise protein interactions, with information about the interaction types, and links to the genes in RGD and original IMEX records.

Pathways

Interactive pathway reports and suites allow exploration of metabolic, signaling, regulatory, disease and drug pathways. Mapping of the PW ontology to Reactome and GO is underway.