

Disease Portals: A Platform for Genetic and Genomic Research

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ABSTRACT: The Disease Portals at the Rat Genome Database (<http://rgd.mcw.edu>) provide a comprehensive platform for physiological genomics discovery through the integration of heterogeneous datasets into the context of the genome using multiple ontologies and sophisticated data mining and visualization tools. RGD serves a disparate community of users often defined by specific disease research areas. The Disease Portals provide both the novice and experienced user with easy access to a comprehensive, integrated knowledge base that can be tailored to the particular interests of the user. In addition, these initiatives define the focus and scope for data acquisition and curatorial projects. Components of the Disease Portals include: 1) comprehensive rat, human, and mouse gene sets associated with disease, related phenotypes, disease pathways, and related biological processes; 2) Summary of gene, QTLs and disease, as well as associated mouse and human QTLs; 3) Gbrowse, enhanced gviewer and VCMAP tools; 4) Genome wide view of associated genes and QTLs; 5) Synteny viewer; 6) Gviewer detailed chromosome display; 7) Gene, QTL and Strain reports; 8) analysis and visualization of function and cellular localization of gene products. The current portals are designed to highlight genetic and genomic data generated from rat research in diseases related to the cardiovascular and nervous systems, obesity/metabolic syndrome, diabetes and breast/urogenital cancer. Future portals will include other systems such as digestive, endocrine, immune, and musculoskeletal.

Choose a disease, phenotype, biological process or pathway category, from our newest diabetes portal

Summary by species and category

Summary	Rat	Human	Mouse
Genes	413	427	421
QTLs	90	89	
Strains	67		

Gbrowse, enhanced gviewer and vcmapp tools

Genome wide view of associated genes, QTLs
Shift click to view individual reports

View human, rat, mouse syntenic regions

Number of annotations by gene ontology category

Clicking on a chromosome will isolate it!
Mouse over a gene or QTL to display symbol and position

Gene, QTL and Strain reports

