

Name	Content	Structure	Host organisation	Links	Method of linking	Database URL	Information URL	Funding	Contact
Classification of databases	First line phenotyping SOPs		MGU / Eumorphia			http://www.eumorphia.org/EMPreSS/servlet/EMPreSS.FrameSet			
Mouse Phenome Database - Jackson Lab	Strain phenotypes, protocols,		Jax			www.jax.org/phenome			
NCBI Mouse Genome Resources	Portal of links to every NIH mouse resource on the web		NIH	Everything - links to all NIH & other mouse genome resources		http://www.ncbi.nlm.nih.gov/genome/guide/mouse/			
GMC Protocols	German Mouse Clinic Protocols used by phenotyping service		GSF / GMC			http://www0.gsf.de/ieg/gmc/info/protocols/allergy.html			
ICS	?	?	ICS	?		http://www.mci.u-strasbg.fr/service_intro.html			
University of Michigan Transgenic Animal Model Core - Protocols	Protocols for transgenic animal production & genotyping		University of Michigan			http://www.med.umich.edu/tamc/protocols.html	http://www.med.umich.edu/tamc/		
Consortium for Functional Glycomics - Mouse Line Phenotype Analysis	Mouse Lines & results from Mouse Phenotype Core - Protocols & raw data	Phenotyping experiments searchable by mouse strain	functional glycomics org	NIGMS (NIH) - funder		http://www.functionalglycomics.org/glycomics/publicdata/phenotyping.jsp		National Institute of General Medical Sciences (NIH)	
Multicentre Mouse Behaviour Trial	Behavioural phenotyping screens					http://www.albany.edu/psy/obsr3/			
Sloan-Kettering Institute Mouse Project	MarkerBase, MutantBase, Protocols					http://mouse.ski.mskcc.org/			
Rodent Phenotyping	Phenotyping info (incl. necropsy, histology, urinalysis, behavioural & haematology) for 7 strains.		Reasearch Animal Diagnostic Lab, University of Missouri			http://www.radil.missouri.edu/pheno/			
The Whole Mouse Catalog						http://www.rodentia.com/wmc/			
OMIM - Online Mendelian Inheritance in Man	comprehensive source of human gene defects and associated phenotypes, giving mouse counterparts		NCBI (NIH)			http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=OMIM			
ORNL Phenotype Screening - Oak Ridge National Laboratory	Phenotyping procedures - Behavioural, Biochem, Physiological, Molecular, Embryonic		ORNL (Life Sciences Division, Mammalian Genetics)			http://lsd.ornl.gov/mgd/phenotype/	http://lsd.ornl.gov/mgd/phenotype/overview.html		
Tennessee Mouse Genome Consortium	State-wide consortium - database of defined mutants, phenotype screening	Browse & order of 96 mutant lines. Phenotyping by application	tnmouse	ORNL	Uses ORNL mouse output.	http://www.tnmouse.org/tmge_public/mutant.php	http://tnmouse.org/		
BioMedNet's Mouse Knockout & Mutation database	SHUT DOWN. Was "the most comprehensive on-line resource linking gene to mouse phenotype", but...	Under discussion for re-hosting. Check back.				http://research.bmn.com/mkmd.html			
MyMouse	sites listed have volunteered their expertise and expressed an interest in collaborating with you in the evaluation of your mouse. A simple description of their assay is provided		The Neurobiology of Disease Program, Baylor College of Medicine			http://mymouse.org/centers/			

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Classification of databases	Searchable online database of mouse strains and stocks available worldwide		MGI / Jax	EMMA		http://www.informatics.jax.org/imsr/index.jsp			
EMMA	Central European repository for collection, archiving and distribution of mutant strains	Search strain lists, submit new strains, request cryopreserved or breeding	CNR-IBC Monterotondo	IMSR, Jax,		http://www.emmanet.org/index.php			
MGI (Mouse Genome Informatics)	Search for mutant or genetically engineered alleles, transgenes, or QTL variants by phenotype, disease, nomenclature, chromosomal location, or allele categories.		Jax			http://www.informatics.jax.org/			
Harwell Mutagenesis Programme			MRC MGU			http://www.mut.har.mrc.ac.uk/			
ENU Mutagenesis Programme			MRC MGU			http://www.mgu.har.mrc.ac.uk/facilities/mutagenesis/mutabase/index.html			
MMRC Mutant Mouse Resource Centre	repository of mouse stocks and ES cell line collections	five collaborating facilities. Single, multi-site repository for mouse lines with interesting phenotypes for researchers	MMRC	National Center for Research Resources (NCRR) at the National Institutes of Health (NIH, DHHS).	Funders	http://www.mmrc.org/		National Center for Research Resources (NCRR) at the National Institutes of Health (NIH, DHHS).	
CMHD ENU Database	Canada's Centre for Modelling Human Disease, ENU mutant search by phenotype, assays, protocols,		CMHD			http://www.cmhd.ca/enu_mutagenesis/mice_reports/mice_reports_phenotype.asp			
BCM Mouse Genome Project	Mutagenesis for Developmental Defects, Genome Mapping, mouse-human homology		BCM Baylor College of Medicine			http://www.mouse-genome.bcm.tmc.edu/			
ORNL Mutant Mouse database - Oak Ridge National Laboratory	Mutant Mouse stock database	Mouse lines search by locus symbol, locus name, Gene/Allele/Anomaly symbol, or Stock Name	ORNL			http://public.ornl.gov/mouse/SearchForm.cfm	http://bio.lsd.ornl.gov/mouse/		
GEM Phenotyping core Cornell University	Being constructed. Database for all genetically engineered mice maintained at MSKCC, WMC and RU- mouse strains & phenotypes					http://www.med.cornell.edu/research/cores/gem/gem_db.html			
Fred Hutchinson Cancer Research Centre, Soriano Lab	ROSA strains from Gene Trap mutagenesis					http://www.fhcr.org/science/labs/soriano/trap.html			
Toronto Centre for Phenogenomics CMMR	Searchable ENU mutants catalogue		Toronto Centre for Phenogenomics	CMHD		http://www.phenogenomics.ca/databases/index.html			
Jax IMR (Induced Mutant Resource)	Searchable Database & Lists of IMR Strains					http://www.jax.org/imr/notes.html			
MyMouse	database of genetically defined mice posted by researchers interested in potential collaboration		The Neurobiology of Disease Program, Baylor College of Medicine			http://mymouse.org/search/showallmice.cfm		National Institutes of Health (NINDS)	

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Classification of databases	Ontology database	Searchable controlled vocabularies (ontologies) that describe gene products in terms of associated biological processes, cellular components and molecular functions	gene ontology org	MGD (Jax MGI project)	MGD is collaborator in Gene Ontology Consortium	http://www.geneontology.org/index.shtml			
Reactome	curated resource of core pathways and reactions in human biology		Cold Spring Harbor Laboratory (CSHL) and the European Bioinformatics Institute (EBI).	Cold Spring Harbor Laboratory (CSHL) and the European Bioinformatics Institute (EBI).		http://www.reactome.org/cgi-bin/frontpage?DB=gk_current			

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Classification of databases	Europe's primary nucleotide sequence resources for DNA and RNA		EMBL EBI, Cambridge, UK	GenBank (USA) DNA Database (DDBJ)	The 3 databases exchange new and updated data on a daily basis to achieve synchronisation http://www.ebi.ac.uk/embldb/collaboration.html	http://www.ebi.ac.uk/embldb/Access/index.html	http://www.ebi.ac.uk/embldb/(Databases tab)		DataLib@ebi.ac.uk
Ensembl			EMBL / Sanger			http://www.ensembl.org/Mus_musculus/index.html			
UniProt (Universal Protein Resource)	Catalogue of information on proteins. Central repository of protein sequence and function created by joining the information contained in UniProtKB/Swiss-Prot, UniProtKB/TrEMBL and PIR		EMBL EBI, Cambridge, UK	UKUniProtKB/Swiss-Prot - Swiss Institute of Bioinformatics (SIB), and the PIR - Protein Information Resource, EBI		http://www.ebi.ac.uk/uniprot/	http://www.ebi.ac.uk/uniprot/index.html	UniProt is mainly supported by the National Institutes of Health (NIH) grant 1 U01 HG02712-01. Minor support for the EBI's involvement in UniProt comes from the two European Union contracts BioBabel (QLRT-2000-00981) and TEMBLOR (QLRI-2001-00015) and from the NIH grant 1R01HGO2273-01.	help@uniprot.org
EBI Macromolecular Structure Database	European project for the collection, management and distribution of data about macromolecular structures, derived in part from the Protein Data Bank (PDB).		EMBL EBI, Cambridge, UK	data is generated from a relational database of the entire PDB and integrated with databases such as UniProt, InterPro, SCOP, CATH, PFAM and others.		http://www.ebi.ac.uk/msd/index.html	http://www.ebi.ac.uk/msd/show.html		
SIGTR Sanger Institute Gene Trap Resource	1000s of gene trap ES cell lines publicly available	BLAST, Search or Browse	Wellcome Trust Sanger Inst						
ArrayExpress	Public repository for microarray data, which is aimed at storing well annotated data in accordance with MGED recommendations.	MAGE-OM is an object model of the microarray gene expression data domain, developed and submitted to Object Management Group (OMG) jointly by MGED and Rosetta to serve as a backbone for standardising gene expression data interchange format and possibly other aspects of gene expression data informatics.	EMBL EBI, Cambridge, UK	http://www.mged.org/		http://www.ebi.ac.uk/arrayexpress/query/entry	http://www.ebi.ac.uk/arrayexpress/	Funded by European Community Contract No. QLRI-CT-2001-00015 for "TEMBLOR" under the specific RTD programme "Quality of Life and Management of Living Resources" (1998-2002)	
TIGR Mouse Gene Index						http://www.tigr.org/tigr-scripts/tgi/T_index.cgi?species=mouse			
GGTC - German Genetrap Consortium	reference library of gene trap sequence tags (GTST) from insertional mutations generated in mouse embryonic stem (ES) cells					http://www.genetrap.de/			
Frontiers in Bioscience - Gene Knockout database	Data regarding the phenotypes rendered by the knockout of various molecules					http://www.bioscience.org/knockout/dualindx.htm			
Ensembl	Produces and maintains automatic annotation on selected eukaryotic genomes	joint project between EMBL - EBI and the Sanger Institute				http://www.ensembl.org/index.html			
FANTOM DB	Database of Functional Annotation of RIKEN Mouse cDNA Clones	contains 21 076 full-length cDNA sequences with rich functional annotations	RIKEN			http://fantom.gsc.riken.go.jp/db/			
SLAM	Comparative-based annotation and alignment tool for syntenic genomic sequences that performs gene finding and alignment simultaneously and predicts in both sequences symmetrically- human & mouse					http://bio.math.berkeley.edu/slam/mouse/			
Visigene	VisiGene is a virtual microscope for viewing <i>in situ</i> images. These images show where a gene is used in an organism, sometimes down to cellular resolution. With VisiGene users can retrieve images that meet specific search criteria, then interactively zoom and scroll across the collection					http://genome.ucsc.edu/cgi-bin/hgVisiGene			
NIA Mouse cDNA Project Home Page	Mouse models of ageing cDNA & gene index	NIH					http://lgsun.grc.nia.nih.gov/cDNA/cDNA.html		
Mammalian Gene Collection	Full-length open reading frame (FL-ORF) clones for human, mouse, and rat genes	Search by gene symbol or keyword, nucleotide BLAST, browse full clone list	NIH			http://mgc.nci.nih.gov/	http://mgc.nci.nih.gov/		
IGTC International Gene Trap Consortium	All publicly available gene trap data & cell lines, available on a non-collaborative basis for nominal handling fees.	Search & browse for cell lines of interest using accession numbers or IDs, keywords, sequence data, tissue expression profiles and biological pathways.	IGTC			http://www.genetrap.org/			
Swiss-Prot & Uni-Prot	protein sequence database		Swiss Institute of Biotechnology ExPASy (Expert Protein Analysis System)	SIB		http://ca.expasy.org/sprot/sprot-top.html			
UCSC Mouse Genome Browser	zooms and scrolls over chromosomes, showing the work of annotators worldwide					http://genome.ucsc.edu/cgi-bin/hgGateway?org=Mouse			
Mouse SNP Database			Roche			http://mousesnp.roche.com/			
SOURCE	pools publicly available data commonly sought after for any clone, GenBank accession number, or gene		Stanford Uni	UniGene, Swiss-prot		http://genome-www5.stanford.edu/cgi-bin/source/sourceSearch			
BayGenomics- Consortium of research groups in San Francisco Bay Area funded as part of NHLBI to identify genes relevant to cardiovascular and pulmonary disease	ES cell lines for producing knockout mice. In situ hybridization images for analyzing gene-expression patterns. New program GenMAPP, for analyzing DNA microarray data. Also generate limited number of knockout mice	Sequence Tags database, In situ images, genetrap vector sequences	University of California			http://baygenomics.ucsf.edu/overview/resources.html	http://baygenomics.ucsf.edu/index.html		
INTEGRATED MIT-ROCHE SNP DATABASE	Excel file formatted to illustrate SNP haplotypes and genetic contrasts		Neurogenetics Online (nervenet)	www.nervenet.org	Host (also Mouse Brain Library)	http://www.nervenet.org/XLFiles/SNP/MITROCHES/NPS.XLS			
Neurogenetics Online Mouse Genome Databases	Collection of Mouse Genome resources, most links offline but several files like one above		Neurogenetics Online (nervenet)	www.nervenet.org	Host	http://www.nervenet.org/mim/dictionary.html			
Centre for Modelling Human Disease (CMHD) Databases	ENU & Gene Trap Databases	Search by phenotype, heritability, expression pattern or GT sequences	University of Toronto	CMHD		http://www.cmhd.ca/databases/index.html			

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Classification of databases	database of histopathology photomicrographs and macroscopic images derived from mutant or genetically manipulated mice		eulep European Late Effects Project Group (coordinating radiobiology & dosimetry research)	Jax, LOTS OF PATHOLOGY links...		http://www.eulep.org/Pathbase/index.php			
Guide to Necroscopy of the Mouse	Vincenzo Covelli's detailed SOP for necroscopy of the mouse		eulep European Late Effects Project Group (coordinating radiobiology & dosimetry)	Pathbase	Resources Links	http://www.eulep.org/Necroscopy_of_the_Mouse/			
Gene Expression Database	stores primary data from different types of expression assays, describes expression		Jax	MGD, MGS	Integrated projects within Jax for combined data analysis	http://www.informatics.jax.org/mgihome/GXD/aboutGXD.shtml			
Edinburgh Mouse atlas	EMAP & EMAGE - 3D digital atlas of mouse embryo		Uni Edinburgh / MRC			http://genex.hgu.mrc.ac.uk/			
Vancouver Mouse Atlas						http://www.mouseatlas.org/			
Mouse Brain Library	images and databases of brains from many genetically characterized strains of mice		Neurogenetics online http://www.nervenet.org/	Neurogenetics online http://www.nervenet.org/	Host	http://www.mbl.org/			
Embryo Images online	Mouse & human interactive SEMs of embryo development					http://www.med.unc.edu/embryo_images/unit-welcome/welcome.htm#akgs.htm			
Skypainter (part of Reactome)	?	?	Cold Spring Harbor Laboratory (CSHL) and the European Bioinformatics Institute (EBI).	Cold Spring Harbor Laboratory (CSHL) and the European Bioinformatics Institute (EBI).					
The Visible Mouse Project	Educational resource - anatomy, physiology, histology, and pathology of GEM					http://tvmouse.compmed.ucda.vis.edu/			
Toronto Center for Phenogenomics Mouse Imaging	Mouse Atlas (Image Gallery)	mouse atlas showing the normal deviation of organ sizes		CMHD Canada		http://www.mouseimaging.ca/research/var_mouse_brain_atlas.html			
Toronto Center for Phenogenomics Variable Brain Atlas	Mouse Brain image library	left window is the slice viewer and the right window is the 3D viewer. The 'l' key toggles between the normal MRI greyscale image and the		Mouse Imaging Atlas					

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Classification of databases	MTB supports the use of the mouse as a model system of hereditary cancer by providing electronic access to: Descriptions of tumors (data are organized by strain and organ of tumor origin) Tumor frequency and latency data Information on genetic factors associated with tumors and tumor development Tumor pathology reports and images References, both published and unpublished		NIH	Links to related online resources, including: The Mouse Genome Database (MGD) The JAX@ Mice Database The Mouse Models of Human Cancer Consortium (MMHCC)		http://tumor.informatics.jax.org/mtbwi/index.do	http://tumor.informatics.jax.org/mtbwi/userHelp.jsp	MTB is supported by grant CA89713, entitled "Electronic Access to Mouse Tumor Data", awarded to Janan T. Eppig from the National Cancer Institute (NCI) of the National Institutes of Health (NIH).	
MMHCC (Mouse models of Human Cancer Consortium)			NCI			http://mouse.ncifcrf.gov/			
NCI Cancer Models Database			NCI			http://cancermodels.nci.nih.gov/mmhcc/index.jsp			
AMDCC (Animal Models of Diabetic Complications Consortium)						http://www.amdcc.org/			
CGAP	Cancer Genome Anatomy Project. To determine the gene expression profiles of normal, precancer, and cancer cells, leading eventually to improved detection, diagnosis, and treatment for	Gene, Tissue, Pathway, RNAi, Chromosome & SAGE databases	NCI			http://cgap.nci.nih.gov/			
Type 1 Diabetes Resource	Collect and cryopreserve ~150 mouse stocks important to research in type 1 diabetes		Jax	NIH		http://www.jax.org/t1dr/			
BayGenomics Consortium of research groups in San Francisco Bay Area funded as part of NHLBI to identify genes relevant to cardiovascular and pulmonary disease	ES cell lines for producing knockout mice. In situ hybridization images for analyzing gene-expression patterns. New program GenMAPP, for analyzing DNA microarray data. Also generate limited number of knockout mice	Sequence Tags database, In situ images, genetrapp vector sequences	University of California			http://baygenomics.ucsf.edu/overview/resources.html	http://baygenomics.ucsf.edu/index.html		
Jax PGA: Mouse Heart, Lung, Blood and Sleep Disorders Center Program for Genomic Applications	public access to all phenotypic & genotypic data, unrestricted distribution of mice, educational and training opps		Jax / NHLBI			http://pga.jax.org/resources/index.html	http://pga.jax.org/		
PHL Murine Immunohistochemistry Database	450 different immunohistochemical techniques optimized in mouse tissues	searched by Antibody, Manufacturer, and Fixative	NCI Friedrick	NCI, NIH		http://web.ncifcrf.gov/rtp/jasp/phl/immuno/			
References for Gene Knockouts in Mice that Affect Nervous System Phenotypes and	list of references for gene knockouts that affect nervous system phenotype or function	Only publication references				http://165.112.78.65/KOS/KOSearch.taf?function=form			

Classification of databases

Level	Content
Phenotyping	Phenotyping services & databases
Mouse Archives	Mouse archives, strains & lines, Tg & ES cells & mutagenesis programmes
Ontologies	Ontologies & systems biology
Expression	Expression, gene & protein sequences & arrays
Pathology	Pathology, including anatomy
Disease Models	Disease models, including cancer, diabetes, etc