Resource Summary Report

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Mouse Phenome Database (MPD)

RRID:SCR_003212
Type: Tool

Proper Citation

Mouse Phenome Database (MPD) (RRID:SCR_003212)

Resource Information

URL: http://phenome.jax.org/

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Description: Database enables integration of genomic and phenomic data by providing access to primary experimental data, data collection protocols and analysis tools. Data represent behavioral, morphological and physiological disease-related characteristics in naive mice and those exposed to drugs, environmental agents or other treatments. Collaborative standardized collection of measured data on laboratory mouse strains to characterize them in order to facilitate translational discoveries and to assist in selection of strains for experimental studies. Includes baseline phenotype data sets as well as studies of drug, diet, disease and aging effect., protocols, projects and publications, and SNP, variation and gene expression studies. Provides tools for online analysis. Data sets are voluntarily contributed by researchers from variety of institutions and settings, or retrieved by MPD staff from open public sources. MPD has three major types of strain-centric data sets: phenotype strain surveys, SNP and variation data, and gene expression strain surveys. MPD collects data on classical inbred strains as well as any fixed-genotype strains and derivatives that are openly acquirable by the research community. New panels include Collaborative Cross (CC) lines and Diversity Outbred (DO) populations. Phenotype data include measurements of behavior, hematology, bone mineral density, cholesterol levels, endocrine function, aging processes, addiction, neurosensory functions, and other biomedically relevant areas. Genotype data are primarily in the form of single-nucleotide polymorphisms (SNPs). MPD curates data into a common framework by standardizing mouse strain nomenclature, standardizing units (SI where feasible), evaluating data (completeness, statistical power, quality), categorizing phenotype data and linking to ontologies, conforming to internal style guides for titles, tags, and descriptions, and creating comprehensive protocol documentation including environmental parameters of the test animals. These elements are critical for experimental reproducibility.

Abbreviations: MPD

Synonyms: Mouse Phenome Database

Resource Type: data or information resource, data repository, database, narrative resource, experimental protocol, service resource, storage service resource

Defining Citation: PMID:24243846, PMID:22102583, PMID:18987003, PMID:17151079

Keywords: female, genomic location, genotype, inbred strain, male, mouse strain, phenome, phenotype, qtl, reference data, single-nucleotide polymorphism, strain allele, strain characteristic, strain, trait, gene expression, variation, hypothesis testing, data set, bio.tools, FASEB list

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NHLBI HL66611;
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NIDA DA028420

Availability: Free, Freely available

Resource Name: Mouse Phenome Database (MPD)

Resource ID: SCR_003212

Alternate IDs: biotools:mpd, nif-0000-03160, r3d100010101

Alternate URLs: https://bio.tools/mpd, https://doi.org/10.17616/R3PC7F

Old URLs: http://www.jax.org/phenome

Record Creation Time: 20220129T080217+0000

Record Last Update: 20260811T043158+0000

Ratings and Alerts

No rating or validation information has been found for Mouse Phenome Database (MPD).

No alerts have been found for Mouse Phenome Database (MPD).

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 230 mentions in open access literature.

Listed below are recent publications. The full list is available at nidm-terms .

Han H, et al. (2026) Intestinal Epithelial Cell-derived Osteopontin Protects Against Metabolic Dysfunction-associated Steatohepatitis by Modulating Bile Acid Composition and the Gut Microbiome. Cellular and molecular gastroenterology and hepatology, 20(3), 101678.

Ostadi M, et al. (2026) Swallowing characteristics in Down syndrome at an advanced age: a preclinical study in the Ts65Dn mouse model. Frontiers in neurology, 17, 1703041.

Potter CS, et al. (2026) Role of Aire and Notch4 allelic mutations in alopecia areata in C3H/HeJ mice. JID innovations : skin science from molecules to population health, 6(3), 100466.

Dickson PE, et al. (2026) Behavioral variation across multiple phases of intravenous cocaine self-administration among genetically diverse mouse populations. Psychopharmacology, 243(6), 1513.

Tatom Z, et al. (2026) Fifteen years of the Diversity Outbred mouse model: a review. Mammalian genome : official journal of the International Mammalian Genome Society, 37(1), 28.

Ninoyu Y, et al. (2026) Novel candidate genes for vestibular function identified through GWAS in the hybrid mouse diversity panel. BMC genomics, 27(1).

Miller AK, et al. (2025) Concordance between male- and female-specific GWAS results helps define underlying genetic architecture of complex traits. Nature communications, 16(1), 8695.

Haque R, et al. (2025) Essential resources and best practices for laboratory mouse research. Molecules and cells, 48(2), 100178.

Fang Z, et al. (2025) Twenty-first century mouse genetics is again at an inflection point. Lab animal, 54(1), 9.

Jiang N, et al. (2025) Deciphering the timing and impact of life-extending interventions: temporal efficacy profiler distinguishes early, midlife, and senescence phase efficacies. Nature communications, 16(1), 10164.

Aigner B, et al. (2025) Variability of test parameters from mice of different age groups in published data sets. PloS one, 20(8), e0329357.

Lucey CM, et al. (2025) Isotopic Fractionation of Natural Uranium in Mice as a Potential Biomarker of Renal Accumulation. Environmental science & technology, 59(28), 14279.

Bar??n-Mendoza I, et al. (2025) Single-nucleotide polymorphism analysis accurately predicts multiple impairments in hippocampal activity and memory performance in a murine model of idiopathic autism. Scientific reports, 15(1), 749.

Steele-Perkins P, et al. (2025) Comparison between dietary, parenteral, and genetic iron overload on bone health reveals secondary iron overload as a driver of cortical bone loss and fracture risk in mice. JBMR plus, 9(10), ziaf118.

Pilling D, et al. (2024) Inhibition of CCl4-induced liver inflammation and fibrosis by a NEU3 inhibitor. PloS one, 19(11), e0308060.

Masson SWC, et al. (2024) Unlocking metabolic insights with mouse genetic diversity. The EMBO journal, 43(21), 4814.

Ball RL, et al. (2024) GenomeMUSter mouse genetic variation service enables multitrait, multipopulation data integration and analysis. Genome research, 34(1), 145.

Asadi F, et al. (2024) An orally available compound suppresses glucagon hypersecretion and normalizes hyperglycemia in type 1 diabetes. JCI insight, 9(2).

Chen PB, et al. (2024) Complementation testing identifies genes mediating effects at quantitative trait loci underlying fear-related behavior. Cell genomics, 4(5), 100545.

Bar??n-Mendoza I, et al. (2024) Altered hippocampal neurogenesis in a mouse model of autism revealed by genetic polymorphisms and by atypical development of newborn neurons. Scientific reports, 14(1), 4608.