

Resource Summary Report

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Eye mutant resource - The Jackson Laboratory

RRID:SCR_004519

Type: Tool

Proper Citation

Eye mutant resource - The Jackson Laboratory (RRID:SCR_004519)

Resource Information

URL: <http://eyemutant.jax.org/index.html>

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Description: The Eye mutant resource lists and describes mouse models for ocular research available from The Jackson Laboratory and provides continuing results from a Jackson Laboratory screening program to identify genes and new mutations that affect vision. It also provides a list of known mouse mutations that affect vision and presents updated information on the cloning of vision-related genes. The primary focus is on the mouse as a model of human inherited vision disorders. The number of known serious or disabling eye diseases in humans is large and affects millions of people each year. Yet research on these diseases frequently is limited by the obvious restrictions on studying pathophysiologic processes in the human eye. Likewise, many human ocular diseases are genetic in origin, but appropriate or available families often are not easy for genetic studies. Mouse models of inherited ocular disease provide powerful tools for quick genetic analysis and characterization. The mouse eye is remarkably similar in structure to the human eye, and many developmental or invasive experiments can be done in mice that are impossible in human beings. Comparative mapping and sequencing between human and mouse genomes shows that knowing the gene location in either man or mouse allows for the same gene to be found more quickly in the other. Finally, the use of inbred strains, where all mice in the strain are alike genetically except for the mutation being studied, is a powerful tool for linkage analysis, and assures phenotypic reproducibility of any model found in a strain. The virtual identity of mice in an inbred strain also allows for fewer numbers of mice to be studied clinically. Mouse models of retinal degeneration have been investigated for many years in the hope of understanding the causes of photoreceptor cell death. 16 naturally occurring mouse mutants that manifest degeneration of photoreceptors in the retina with preservation of all other retinal cell types have been found: retinal degeneration (formerly rd , identical with rodless retina, r, now Pde6b rd1); Purkinje cell degeneration (pcd); nervous (nr); retinal degeneration slow (rds, now Prph Rd2); retinal degeneration 3 (rd3); motor neuron degeneration (mnd); retinal degeneration 4 (Rd4); retinal degeneration 5 (rd5); vitiligo (vit , now Mitf mi-vit); retinal degeneration 6 (rd6); retinal degeneration 7 (rd7); neuronal ceroid lipofuscinosis (nclf); retinal degeneration 8

(rd8); retinal degeneration 9 (Rd9); retinal degeneration 10 (rd10); and cone photoreceptor function loss (cpfl1).

Abbreviations: Eye mutant resource

Resource Type: biomaterial supply resource, material resource, organism supplier

Resource Name: Eye mutant resource - The Jackson Laboratory

Resource ID: SCR_004519

Alternate IDs: nif-0000-00228

Record Creation Time: 20220129T080225+0000

Record Last Update: 20260829T182207+0000

Ratings and Alerts

No rating or validation information has been found for Eye mutant resource - The Jackson Laboratory.

No alerts have been found for Eye mutant resource - The Jackson Laboratory.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We have not found any literature mentions for this resource.