



Dayanand Education Society's

## **DAYANAND COLLEGE OF PHARMACY**

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Accredited NAAC "A+" Grade CGPA 3.35, I Cycle

**Swiss albino mice** are a widely used mouse strain, which is used for many research investigations due to its small size, short life span. An Outbreed albino for Multipurpose use.

Best Study Model for

- Toxicity models
- Efficacy Studies
- Safety Studies
- Multipurpose model

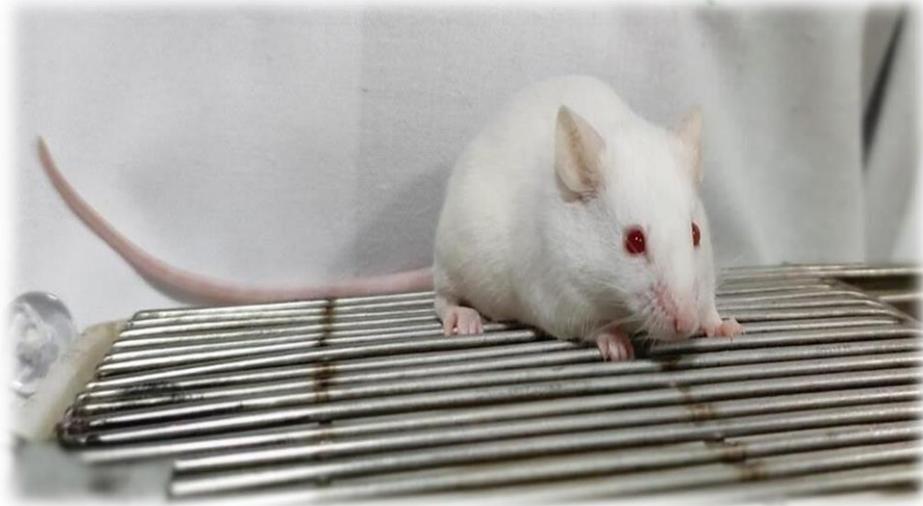


### **BALB/c mice**

Body weight of male and female is almost equivalent and is sensitive to carcinogens. They develop lung tumours, reticular neoplasms, renal tumours and other tumor variants, making it a good candidate for cancer recovery studies and Immunological studies.

Best Study Model for

- Cancer therapy studies
- Immunological studies
- Antibody production (Monoclonal)
- Viral defense studies
- DNA vaccine studies
- Anti plasmodial studies
- Antifungal immune response studies

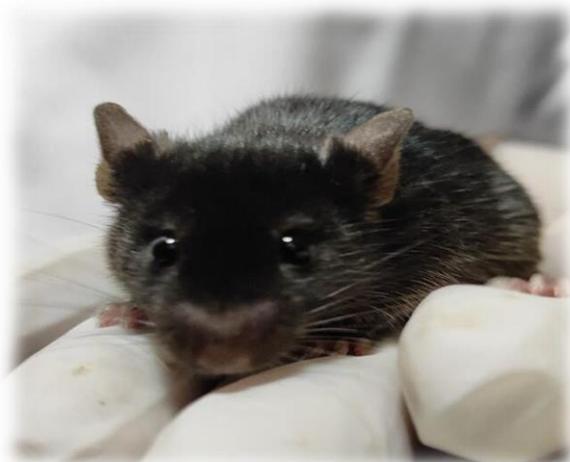


### **C57BL/6 or C57 Black 6 or Black 6**

This strain has disrupted mitochondrial antioxidant enzyme, Nicotinamide Nucleotide Transhydrogenase (NNT) due to a natural deletion in the exons which completely disrupts protein expression. This mutation is responsible for the impaired glucose clearance and resting glucose levels.

### **Best Study Model for**

- Diet induced obesity studies
- Safety/Efficacy studies
- Immunological studies (T cell development studies, B lymphocyte development studies)
- Inflammation responses
- Fibrosis and cardiomyopathy
- Heart failure models
- Diabetic studies (Obesity, type-2 diabetes and associated complications), Infectious disease screening
- Acute gastrointestinal infection studies



### **C57BL 6 mouse lifespan**

The median lifespan of C57BL/6 mice range from 27 – 29 months, with the maximum being around 36 months.

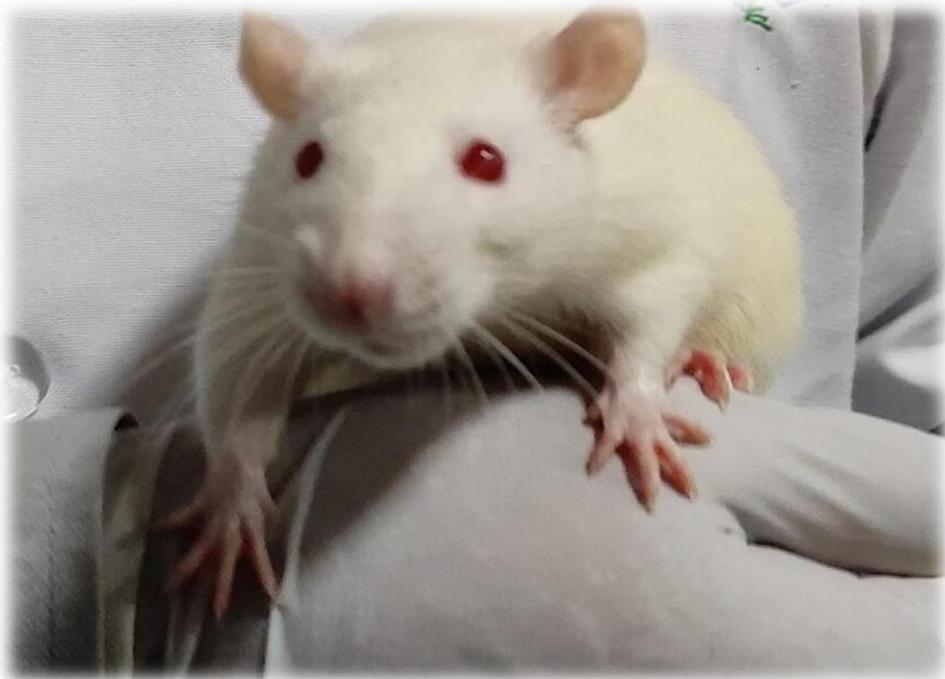
## **Rat Strains**

### **Wistar Rat**

The Wistar rat is an outbred albino rat. The Wistar rat is currently one of the most popular rats used for laboratory research. It is characterized by its wide head, long ears and tail length that is always less than its body length.

#### **Best Study Model for**

- Cardiotoxicity studies
- Nephrotoxicity research
- Neurotoxic studies
- Aging model
- Safety / efficacy pharmacological studies



### **Sprague-Dawley Rat**

The Sprague Dawley rat is an outbred multipurpose breed of albino rat used extensively in medical research. Its main advantage is its calmness and ease of handling. These rats typically have increased tail to body length ratio compared with Wistar rats.

## **Best Study Model for**

- Toxicology studies
- Safety and Efficacy studies
- Contemporary toxicology research
- Neurobiology research



## **Rabbit**

A white albino extensively used in general multipurpose research.



## **Best Study Model for**

- 1. Cardiotoxicity studies
- 2. Dermatology studies
- 3. Ophthalmology
- 4. Antibody production
- 5. Renal studies

## GUINEA PIG

### **Dunkin Hartley**

Similar to dietary requirements of humans, Guinea pigs also require external source of vitamin C. They serve as a good source of serum complement. A well-suited model for auditory and immunological research.



### **Best Study Model for**

- Otological Research (Human complement)
- Immunological studies
- Allergic studies
- Multipurpose and surgical models
- Antibody Production

## **HAMSTERS**

### **GOLDEN SYRIAN HAMSTERS**

Golden brown and white patched hamsters are the best model for research related to hormonal effects and reproduction. They are also well suited for dental caries, nutritional studies, cardiovascular and pharmacological research in infectious diseases and pathological investigations.



#### **Best Study Model for:**

- Carcinogenic studies
- Toxicology studies
- Behavioral studies