

**Breeding Programs and Rodent Strains Available at LAS**

***Outbred:***

Outbreeding system used at Laboratory Animal Services is the ‘Poiley System’ which is systematic breeder rotation that avoids brother – sister mating’s.

***Inbred:***

Inbred rodents are bred within a closed colony by brother-sister mating to maintain certain characteristics.

***Hybrid:***

Hybrid is the first generation (F1) of parents from two different inbred strains

***Mutant:***

These rodents display a feature of genetic mutation, which can either be spontaneous or induced.

**Outbred Mice**

**Swiss (Arc:Arc(S))**

Strain Description: Outbred

Coat Colour: Albino

Source of Colony: Re-derived into the SPF Barrier Dec 2008 from LAS stock. SPF stock originally obtained from Animal Resource Centre (ARC), Western Australia 1996.

* Robust Mouse
* Large litters (average 10.7 pups per litter)
* Males may become aggressive after 7 weeks old

**Inbred Mice**

**CBA/CaH**

Strain Description: Inbred +:H-2K

Coat Colour: Agouti

Source of Colony: Re-derived into the SPF Barrier Dec 2008 from generation F28 LAS stock. SPF stock originally obtained from Animal Resource Centre (ARC), Western Australia 1996.

* Relatively docile with low activity
* Good breeders (average 5.9 pups per litter)
* Both males and females have relatively high tumour incidence, 29% and 55% respectively.

**BALB/C**

Strain Description: Inbred A,b,c:H-2d

Coat Colour: Albino

Source of Colony: Re-derived into the SPF barrier Dec 2008 from generation F25 LAS stock. SPF stock received from Animal Resource Centre (ARC) in 1996.

* Good breeding performance (average 6.4 pups per litter)
* Relatively robust with moderate life span approx. 20 months

**C57BL/6**

Strain Description: Inbred

Coat Colour: Black

Source of Colony: Received as SPF stock from Harlan SD, Indianapolis USA in Nov 2008.

* Average breeding performance (average 6.4 pups per litter)
* Congenital abnormalities include microphthalmia, corneal opacities, anophthalmia and hydrocephalus.
* Males can be particularly aggressive

**Hybrid Strains**

**CBAF1**

Strain Description: hybrid – F1 (CBA mother, C57 father)

Coat Colour: Agouti

* Good breeding performance (average 6.5 pups per litter)
* Easily agitated
* Jumpy when young

**Mutant Mouse Strains**

**SCID** (Severe Combined Immunodeficient)

Strain Description: Mutant inbred

Coat Colour: Albino

Source of Colony: Received as SPF stock from ARC in 2008.

* Homozygotes have little or no immunoglobulin in serum
* Bone marrow lacks plasma cells and lymphocytes and skin lacks dendritic Thy-1+ epidermal cells. Although B and T cells and pre B and pre T cells are absent early B and T cells are present.
* Useful model for immunity and disease
* House in an isolator or IVC

**Nude**

Strain Description: BALB/c-Foxn1nu/Arc -Balb/c Nude Inbred Athymic

Genetics: A, Tyrc, Tyrp1b, *Foxn1nu*

Coat Colour: Mutant inbred Albino: homozygote – hairless; heterozygous – haired

Source of Colony: Caesarean derived into SPF Barrier Nov 2004 from ARC.

* Good Breeding (refer to BALB/C)
* Prone to dust in their eyes due to no eyelashes
* Litter generally consist of equal nude and haired offspring.
* Immunodeficient