



+++ ENVIGO

Research Models
and Services
Outbred Mice

ICR Mouse Hsd:ICR (CD-1®)

The Hsd:ICR (CD-1®) mouse model is of Swiss origin and descended from the original two male and seven female albino non-inbred mice, imported by the Rockefeller Institute in 1926 from Lausanne, Switzerland. Descendants were distributed worldwide and the Ha/ICR was established in 1948 at the Institute of Cancer Research (ICR). A portion of the Ha/ICR colony was given to the Roswell Park Memorial Institute (RPMI). Charles River Laboratories (CRL) received their nucleus from RPMI in 1959, and caesarean rederived. Harlan obtained breeding stock from CRL in 1983. Harlan became Envigo in 2015.

Characteristics

- + Coat: Albino
- + Litter average: 11.5
- + Docile disposition
- + Excellent reproductive and maternal characteristics
- + High incidence of retinal degeneration (*Pde6b^{rd1}*; 64)

Research Uses

Oncology

- + Antisense oligonucleotide pharmacokinetics (31)
- + Catalase repression (39)
- + Mucositis protection (35)
- + Neutropenia treatment (8, 61)
- + PEGylated liposome treatment (36)

Toxicology

- + Cardioprotection
 - Sildenafil (59)
- + Cardiotoxicity
 - Sildenafil and doxorubicin (26)
- + Cyclophosphamide-induced bladder damage (7, 29)
- + Domoic acid (14)

- + Genotoxicity
 - Salacia oblonga* extract (27)
- + Hepatotoxicity (50)
 - Retinoic acid (54)
- + High-density lipoproteins
 - Brevetoxin (PbTx-3; 78, 79)
- + Pulmonary emphysema
 - Titanium dioxide (12)

Vaccines

- + Antiepileptic (28)
- + Antifungal (4)

Teratology

- + 2,3,7,8-tetrachlorodibenzo-p-dioxin (69)
- + Biotin deficiency (46, 63)
- + Fluconazole (71)
- + Gestational diabetes (25)
- + Hydrazine (3)
- + Hypoxia (30)
- + MG-132 (43)
- + Neural tube defects (25)
- + Reduced-folate carrier (42)

Nutrition

- + Digestion (32)
- + Energy metabolism (62)
- + Fescue toxicosis (33)
- + Intestinal cytokines (80)
- + Lipid metabolism (24, 82)
- + Low-sodium diet and furosemide (85)



Behavior

- + Bar-related behavior (51)
- + Foraging (62)
- + Maternal (9)
- + Predatory behavior (84)
- + Voluntary wheel-running (57)

Immunology

- + Bradykinin B₂ receptor (45)
- + CD4⁺ and CD8⁺ T cells (47)
- + IL-1 β effects (70, 81)
- + Immunogenicity (10, 11, 36)
- + Immunoprotection (55)
- + Pregnancy development (48)

Virology

- + La Cross virus (6)
- + Mouse hepatic virus (60)
- + Mouse parvovirus (2)
- + Mouse polyoma virus (19)
- + Reovirus type 3 (73)

Bacteriology

- + Enterococci (49, 53)
- + *Listeria monocytogenes* (15)
- + *Staphylococcus aureus* (8)
- + *Streptococcus pneumoniae* (67)

Reproduction and Embryolog

- + Assisted reproductive technology (2, 60)
- + Embryo development (1, 65)
- + Folate (63)
- + Folliculogenesis (72)
- + Paternal methylation imprints (41)
- + Pregnancy-related hypotension (77)
- + Selective breeding (40)
- + Subfertility due to β B2-crystallin (20)
- + Zona pellucida binding (38, 68)

Drug Abuse

- + Morphine (13, 75)
- + Ethanol consumption (44, 55)
- + Toluene (76)
- + Nicotine (16, 18)
- + Cocaine (17, 50, 57)

Neurology

- + Adult neurogenesis (37)
- + Diet-induced neuropathy (14)
- + Neuropathic and inflammatory pain (17)
- + Pain management (21)

General studies

- + Acupuncture analgesia (74)
- + Assay development (73)
- + Hypoxia preconditioning (85)
- + Muscle atrophy (66)
- + Population genetics (5)
- + Temperature measurement (52)

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