



Outbred Rats

While genetic drift is a natural, unavoidable occurrence in any population, the challenge in breeding outbred animals is to maintain the diversity at the level of the individual, yet somehow standardize multiple production colonies of these animals that are geographically separated so that each colony has the same range of genetic variation. Charles River's global breeding plan allows us to implement a global management program that genetically links all of our colonies and ensures that none diverge too far from the others. The end result is that all of the colonies are genetically merged into one large colony that resides in multiple locations around the world.

CD® IGS Rat

Nomenclature: Crl:CD(SD) **Strain Code:** 001 **Origin:** Originated in 1925 by Robert W. Dawley from a hybrid hooded male and a female Wistar rat.

To Charles River in 1950 from Sprague Dawley, Inc. In 1991, eight colonies were selected to form the IGS foundation colony. Rederived into an isolator foundation colony in 1997. IGS refers to animals bred using the Charles River International Genetic Standardization system. **Coat Color:** White (Albino).

Research Application: General multipurpose model, safety and efficacy testing, aging, nutrition, diet-induced obesity and oncology

CD® Hairless Rat

Nomenclature: Crl:CD-Prss8^{hr} **Strain Code:** 184 **Origin:** This spontaneous mutation model was isolated from a Crl:CD(SD) colony in Charles River, Wilmington, MA, in the late 1980s. Rederived in 1993 and subsequently transferred to Charles River, Raleigh, NC, for barrier room production. The model does not exhibit the typical characteristics of hair growth and loss found in other hairless models. Specific genetic analysis to identify the mutation has not been undertaken. Histopathology has determined the model is euthymic.

Coat Color: Hairless, albino background. **Research Application:** Wound healing model, dermatology, and safety and efficacy testing

Rat Models

With more than 20 breeding facilities around the world, Charles River is the leading global supplier of standard rat models for biomedical research. Charles River stocks and strains are managed under the International Genetic Standardization (IGS) program, a unique program designed to manage the health and genetics of outbred and inbred strains on a global basis, ensuring that researchers worldwide have access to standardized models, regardless of the production location.

Benefits

- Worldwide availability
- Veterinary and professional support
- VAF/Plus® health status
- Genetics managed under the IGS program



Long-Evans Rat

Nomenclature: CrI:LE **Strain Code:** 006 **Origin:** Originated by Drs. Long and Evans in 1915 by crossing several Wistar Institute white females with a wild gray male. To Charles River from Canadian Breeding Farm and Laboratories in 1978.

Coat Color: White with black hood; occasionally white with brown hood. **Research Application:** General multipurpose model, behavioral research and diet-induced obesity

Sentinel Rat (Isolator-Maintained)

Nomenclature: CrI:NIH-Foxn1^{nu} **Strain Code:** 118 **Origin:** This immunocompetent rat is the heterozygous offspring of a heterozygous (*nu/+*) female mated to a homozygous (*nu/nu*) male. The NIH nude rat was developed in 1979-1980 through a series of matings involving eight inbred rat strains. To Charles River from the National Institute of Health in 2001. **Coat Color:** White, black, black & white. **Research Application:** Multipurpose

Sprague Dawley® Rat

Nomenclature: CrI:SD **Strain Code:** 400 **Origin:** To SASCO from ARS/Sprague Dawley in 1979. To Charles River in 1996.

Coat Color: White (Albino). **Research Application:** General multipurpose model, safety and efficacy testing, aging, nutrition, diet-induced obesity and oncology

Wistar Rat

Nomenclature: CrI:WI **Strain Code:** 003 **Origin:** To Scientific Products Farm, Ltd. [predecessor of Charles River United Kingdom] in 1947 from Wistar Institute. To Charles River North America in 1975 from Charles River UK. This particular colony was selected because of a low incidence of hydronephrosis.

Coat Color: White (Albino). **Research Application:** General multipurpose model, infectious disease research, safety and efficacy testing and aging

Wistar Han IGS Rat

Nomenclature: CrI:WI(Han) **Strain Code:** 273 **Origin:** Rederived by GlaxoWellcome from Han Wistar stock supplied by BRL. Transferred to Charles River UK in 1996. Transferred to Charles River North America in 1997 and rederived into isolator-maintained foundation colony. IGS refers to animals bred using the Charles River International Genetic Standardization system. **Coat Color:** White (Albino). **Research Application:** General multipurpose model, safety and efficacy testing, aging and oncology