The term “murine model” refers to an experimental model using mice (genus Mus) or rats (genus Rattus) to study biological processes, human diseases, or treatment effects. It is a cornerstone of biomedical research.

Key Features of Murine Models: High genetic similarity to humans (around 85% for mice).

Ease of genetic manipulation, including transgenic, knock-out, and knock-in models.

Short reproductive cycles and low maintenance costs.

Widely used to study:

Cancer

Neurodegenerative diseases (e.g., Alzheimer’s, Parkinson’s)

Infections

Metabolic disorders

Autoimmune diseases

Common Types: Induced models: disease is triggered through chemicals, infections, trauma, etc.

Genetic models: carry human-relevant mutations.

Xenograft models: involve transplanting human cells or tissues (e.g., tumors) into immunodeficient mice.

Let me know if you’re referring to a murine model in a specific context (e.g., cerebral hemorrhage, glioma, epilepsy), and I can tailor the explanation further.