

Knock out mice

Transgenic mice that carry a knock out gene that is a gene of interest replaced by a non functional is called knockout mice. Different types of model mouse can be developed to understand the function of various genes. E.g. Disease development. Knockout mice have helped the immunologists to understand the effect of knock out gene in immune system in animals. Production of knock out mice includes the following steps.

1. Embryonic stem cells are isolated from inner cell mass of a mouse embryo
2. A mutant gene is induced in to the ES cells and homologous recombinant cells are selected.
3. These cells are injected in to the recipient mouse embryo
4. Mating of chimeric offspring heterologous for disrupted gene to produce homozygous knock out mice.