

Object:STUDY OF COMMON LABORATORY ANIMALS

1. Guinea pig Guinea pigs (400-600g) are the commonly used experimental animals. they are very docile and easy to raise and maintain they are highly sensitive to histamine. They are used in experimental asthma to study bronchodilators . they are also used to local anaesthetics and as a model in amoebiasis and cholera as they are sensitive to this micro organism.

2. Albino rat White rat (200-250g) is the commonest laboratory animal used in experimental pharmacology. Rats are easy to breed and maintain. Resemble man in several organ function and nutrition and sensitive to most of the drugs; make them very useful experimental animals. However they do not have vomiting centre. The various rat tissue used are colon, stomach, uterus, caecum and vas deference. Besides these organs rat brain tissue is extensively employed in radio receptor ligand studies. The other strains of rats are Sprague- Dawley and porton.

3. Albino mouse White mice are the smallest laboratory animals used. Mice are also easy to breed and maintain. They are small in size (25-30g) and therefore, easy to breed and maintain. They are sensitive to most of the drugs used in experimental pharmacology. Mice are used extensively in toxicity study, bio assay of insulin, testing of analgesics, CNS active drugs and chemotherapeutic agents. More recently mouse brain as well as primary cell culture of mouse spinal cord neurons are used in neuro pharmacology for studying neurotransmitters receptor functions . the other strains of mice used are laca and balb/C.

4. Rabbit Domestic rabbits (2-3 kg) are generally used for pyrogen testing. Some of the tissues or organs from rabbits used are heart, aorta, duodenum and ileum. One peculiar thing about rabbits is that they are resistant to the actions of atropine as they contain atropine-esterase enzyme, the presence of which is genetically determined.

5. Frog Frogs (150-200g) were one time extensively used in experimental pharmacology. However, recently the use of wild frogs for experimental purposes has been banned. Earlier, frogs were used for isolated heart, rectus abdominis muscle preparation, study of muscle nerve and ciliary movements, respectively. Frogs were also used for the study of nerve block type of local anaesthetics . frogs are inexpensive and easily available, and the ban on the use of frogs has been debated.

Other animals Cats, dogs and monkeys are used for pharmacological investigations of drugs. Cats and dogs were one time commonly used to study blood pressure experiments. But their use has been now restricted. However beagle dogs are the only strain approved by regulatory authorities (USFDA) for preclinical testing of new drugs.

Alternatives to animal experimentation Because of the growing concern on the use of animals in biomedical research in several countries have passed legislation to prevent or usage of animal experimentation . these include experiment with tissue and body fluids of normal animals and human use of micro organisms, primary cell culture and cell lines, use of models and computer

simulation and software are being used now a days As per the common laboratory alternate animals