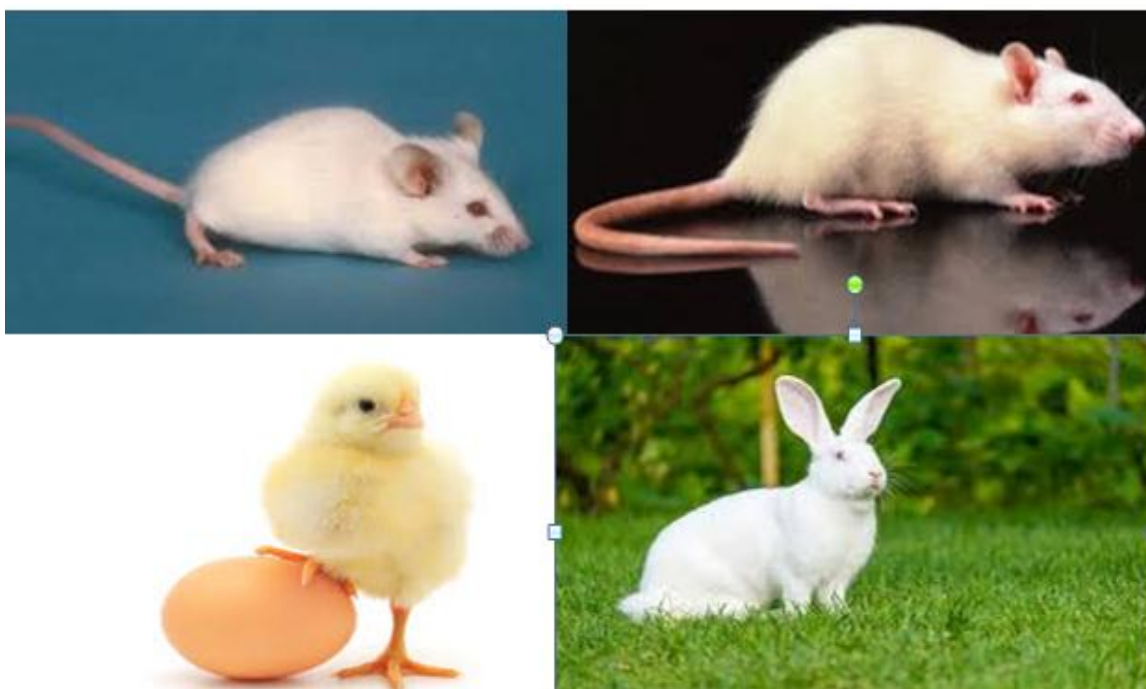




## Common lab. Animals

- ✚ **Laboratory Animal Science:** The science and technology dealing with the procurement, breeding, care, health, and selection of animals used in biomedical research and testing .
- ✚ **laboratory animals** the group of animals constantly used in laboratories for general research in all subjects. Includes rats, mice, rabbits and guinea pigs. In special use laboratories additional animal species can be added, e.g. hamsters, Non human primates, amphibians, fowl, sheep and pigs.
- ✚ **Sexual maturity** is brought about by a maturing of the reproductive organs and the production of gametes (sperms & ova) .
- ✚ **Puberty** is the process of physical changes through which animal body matures into an adult body capable of sexual reproduction (fertilization) .



## **I. Mouse( Mus musculus )**

**1) Body temperature : 37.4 °c**

**2) Age at sexual maturity : 35 day**

**3) Mating age :45 – 60 days**

**4) Estrous cycle : 4 – 5 days**

**5) Gestation period : 19 – 21 days**

**6) Litter size : 6- 11**

**7) Weaning age :21 days**

**8) Housing environment :**

**Temperature : 21 °c**

**Relative humidity : 50%**

**Light – dark cycle : 12 – 12 h**

**9) Daily food intake : 4 – 5 g**

**10)Daily water intake : 7 ml**

**11)Surface area : 20g = 4.6 cm<sup>2</sup>**

**12)Routes of drug administration : oral**

**Subcutaneous**

**Intramuscular**

**Intraperitoneally**

**13)Volume of drug administration : 5 – 10 ml / kg body weight**



## II. Rat ( Rattus norvegicus )

- 1) **Body temperature** : 37.5 °c
- 2) **Age at sexual maturity** : 40 - 45 days
- 3) **Mating age** :70 – 150 days
- 4) **Estrous cycle** : 4 – 5 days
- 5) **Gestation period** : 21 – 23 days
- 6) **Litter size** : 8- 10
- 7) **Weaning age** :21 days
- 8) **Housing environment** :

**Temperature** : 22 °c

**Relative humidity** : 55%

**Light – dark cycle** : 12 – 12 h

- 9) **Daily food intake** : 10 – 20 g
- 10) **Daily water intake** : 20 ml
- 11) **Surface area** : 200g = 32.5 cm<sup>2</sup>
- 12) **Routes of drug administration** : oral
  - Subcutaneous
  - Intramuscular
  - Intraperitoneally
- 13) **Volume of drug administration** : 1 – 2 ml / kg body weight



### III. Rabbit (Oryctlagus cuniculus)

- 1) **Body temperature** : 38.3 – 39.5 °c
- 2) **Age at sexual maturity** : 4 - 6 months
- 3) **Mating age** :6 months
- 4) **Estrous cycle** : continuous
- 5) **Gestation period** : 30 – 32 days
- 6) **Litter size** : 6- 8
- 7) **Weaning age** :45 days
- 8) **Housing environment** :
  - Temperature** : 10 - 18 °c
  - Relative humidity** : 40 – 45%
  - Light – dark cycle** : 12 – 12 h
- 9) **Daily food intake** : 150 – 300 g
- 10) **Daily water intake** : 150 - 200 ml
- 11) **Surface area** : 1.5 kg = 127.0 cm<sup>2</sup>
- 12) **Routes of drug administration** : oral
  - Subcutaneous
  - Intramuscular
  - Intravenous
- 13) **Volume of drug administration** : 0.25 – 2 ml / kg body weight



#### IV. Chicken (Gallus domesticus)

1) **Body temperature** : 40.5 °c

2) **Age at sexual maturity** : 5 - 6 months

3) **Incubation period** :21 days

4) **Hatching condition** :

**Temperature** : 38.4 °c

**Relative humidity** : 60 %

5) **Housing environment** :

**Temperature** :- chicks 32 - 35 °c

**Adults** 18 – 21 °c

**Relative humidity** : 50 %

23 h. **Light** /1 h. **dark**

6) **Daily food intake** :

**One-day chicks** : 5g

**Adults** : 150g

7) **Daily water intake** :

**One-day chicks** : 34ml

**Adults** : 160ml

8) **Routes of drug administration** :

**One – day old**: oral, subcutaneous, intraperitoneally

**Adults** : oral, subcutaneous, intramuscular

9) **Volume of drug administration** :

**One – day old** : 5ml/kg body weight

**Adults** : 0.25 - 1ml / kg body weight



## **References :**

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