



GUINEA PIG

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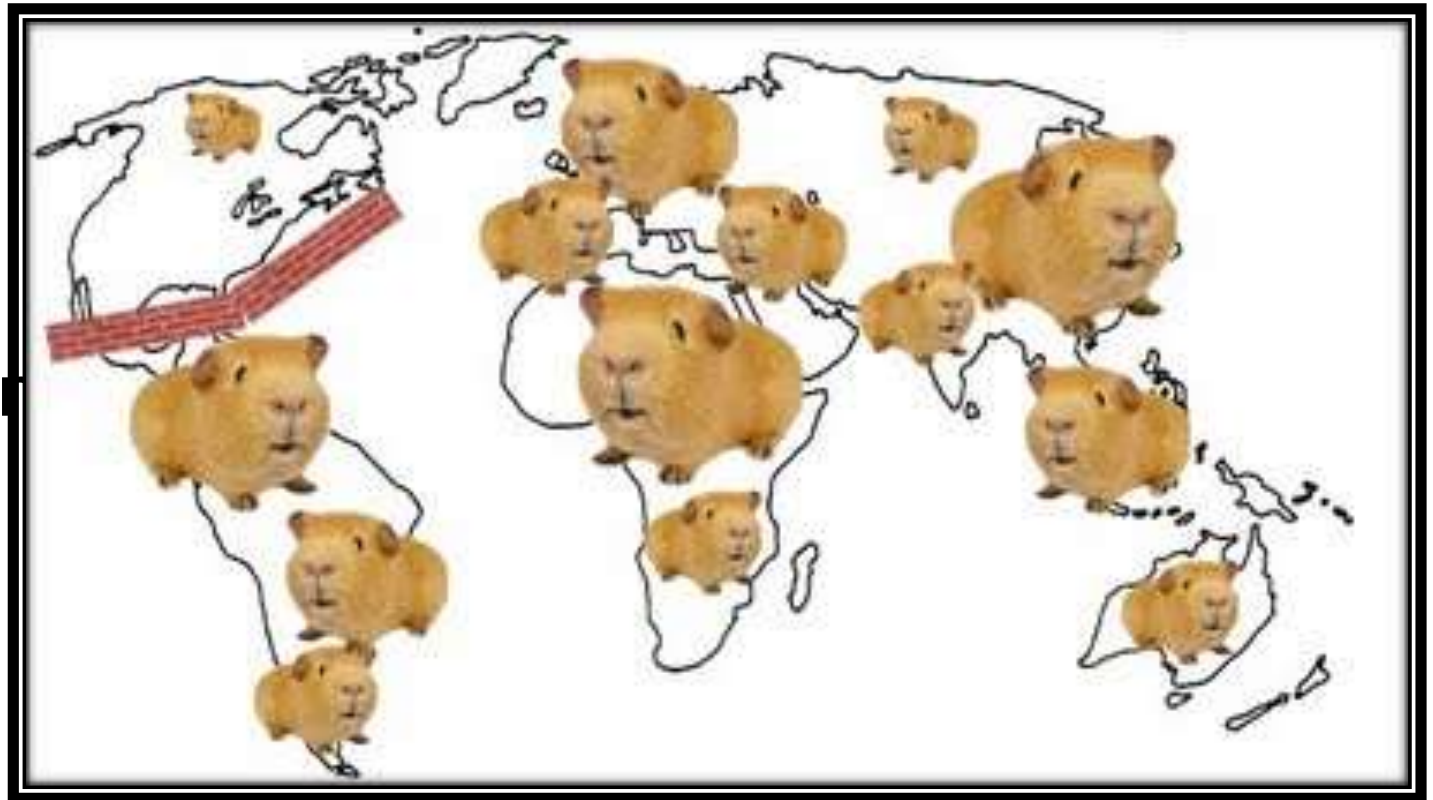


Intruduction:

- ▶ *Cavia porcellus*
- ▶ English, Abyssinian, Peruvian

Uses:

- ▶ Pet
- ▶ Research



Behavior:



- ▶ Live together
- ▶ Male dominant
- ▶ Diurnal
- ▶ Sensitive and easily excited
- ▶ Dislike changes



Anatomic and Physiology features:

Table 5.1. Biologic and reproductive data for guinea pigs

Adult body weight	
Male	900–1200 g
Female	700–900 g
Life span	4–5 y
Body temperature	37.2°–39.5°C (99°–103.1°F)
Heart rate	230–380 beats per minute
Respiratory rate	42–104 breaths per minute
Food consumption	6 g/100 g/d
Water consumption	10 mL/100 g/d
Breeding onset	
Male	3–4 mo (600–700g)
Female	2–3 mo (350–450g)
Estrous cycle length	15–17 d
Gestation period	59–72 d
Postpartum estrus	Fertile
Litter size	2–5
Weaning age	14–21 d
Breeding duration	18–48 mo
Chromosome number (diploid)	64

Source: Adapted from Harkness and Wagner (1995).

labionasal sulcus

upper incisor

hard palate

soft palate

palatal ostium

molar teeth

lower incisor

Anatomic and Physiology features :

► Sexing

Male



Female



Anatomic and Physiology features :

- ▶ Low level of erythrocyte and hemoglobin
- ▶ Lymphocyte is dominant leucocytes
- ▶ Neutrophils with distinct eosinophilic cytoplasmic granules
- ▶ Sex chromatin
- ▶ Opaque, creamy yellow urine, contain crystal
- ▶ Urine PH: 8–9



Breeding and Reproduction :



- ▶ Female: 2–3 months, weight: 350–450gr
- ▶ Male: 3–4 months, weight: 600–700gr
- ▶ Non seasonal, polyestrous
- ▶ Estrus cycle: 15–17 days
- ▶ Estrus signs: lordosis, extension of all four legs, elevation of pubic area
- ▶ Pregnancy can be confirmed by palpation: 14–21 days of pregnancy
- ▶ Gestation period: 59–72 days
- ▶ Babies: fully haired, teeth, open eyes and ear



Husbandry:

▶Housing:

- ▶ Individually or in a colony
- ▶ Bedding are preferred
- ▶ Not climb and jump
- ▶ Estrus cycle: 15–17 days
- ▶ At least 652cm²
- ▶ Temperature: 18–26



Husbandry:

► Feeding and Watering:

► Food: 6gr/100gr per day

► VitC

► Water: 10ml/100gr per day





Techniques:

- ▶ Handling and Restraint:

- ▶ Identification:

- ▶ Cage color or cards, ear
microchip placement





Blood collection:

- ▶ Small amount: toenail bed, marginal ear vein, saphenous vein and cephalic vein
- ▶ Larger quantities: cranial vena cava, femoral vein, directly from heart

Urine collection:



Drug administration:

- ▶ IM: 0.5ml
- ▶ SC: 5–10 ml per site
- ▶ IP

Anesthesia, surgery
postoperative care





Antibiotic toxicity:

- ▶ Penicillins, Ampicillin, Amoxicillin
- ▶ Lincomycin
- ▶ Clindamycine
- ▶ Erythromycin
- ▶ bacitracin
- ▶ Dihydrostreptomycin

Drug	Dosage	Route	Reference
Amikacin	2-5 mg/kg q8-12h	SC, IM	Harkness and Wagner (1995)
Ceftiofur sodium	1 mg/kg q24h	IM	Harkness (1993)
Cephalexin	50 mg/kg q24h	IM	Richardson (1992)
Cephaloridine	10-25 mg/kg q8-24h	IM	Anderson (1994)
Chloramphenicol	50 mg/kg q12h	PO	Burgmann and Percy (1993)
	30-50 mg/kg q12h	SC, IM	Burgmann and Percy (1993)
Ciprofloxacin	7-20 mg/kg q12h	PO	Harkness and Wagner (1995)
Doxycycline	2.5mg/kg q12h	PO	Allen (1993)
Enrofloxacin	0.03-0.2 mg/mL drinking water for 14 d		Harkness and Wagner (1995)
	5-10 mg/kg q12h	PO, IM	Harkness and Wagner (1995)
Gentamicin	2-4 mg/kg q8-24h	SC, IM	Harkness and Wagner (1995)
Griseofulvin	25-50 mg/kg q12h for 14-60 d	PO	Harkness and Wagner (1995)
	1.5% in DMSO for 5-7 d	Topical	Harkness and Wagner (1995)
Neomycin	12-16 mg/kg q12h	PO	Anderson (1994)
Sulfadimethoxine	10-15 mg/kg q12h	PO	Harkness and Wagner (1995)
Sulfamerazine	1 mg/mL drinking water		Anderson (1994)
Sulfamethazine	1 mg/mL drinking water		Anderson (1994)
Sulfaquinoxaline	1 mg/mL drinking water		Collins (1995)
Tetracycline	10-20 mg/kg q8-12h	PO	Burgmann and Percy (1993)
Trimethoprim-sulfa	30 mg/kg q12h	PO, IM	Harkness and Wagner (1995)

DMSO = dimethyl sulfoxide; IM = intramuscular; PO = per os; SC = subcutaneous.

Drug	Dosage	Route	Reference
Carbaryl powder (5%)	Dust q7d for 3 wk	Topical	Anderson (1994)
Fenbendazole	20 mg/kg q24h for 5 d	PO	Allen (1993)
Ivermectin	0.2 mg/kg q7d for 3 wk	PO, SC	Anderson (1994)
	500 µg/kg, repeat in 7 d	SC	McKellar et al. (1992)
Lime sulfur dip	Dilute 1:40 with water, dip q7d for 6 wk	Topical	Anderson (1994)
Metronidazole	10-40 mg/kg q24h	PO	Collins (1995)
Piperazine citrate	2-5 mg/mL drinking water for 7 d, off 7 d, repeat		Anderson (1994)
Praziquantel	6-10 mg/kg	PO	Harkness and Wagner (1995)
Pyrethrin powder	Dust q7d for 3 wk	Topical	Anderson (1994)
Thiabendazole	100 mg/kg q24h for 5 d	PO	Allen (1993)

PO = per os; SC = subcutaneous.

