University of Southern California
Institutional Animal Care and Use Committee
Environmental Enrichment Policy

A. Background

The purpose of the policy is to describe the enrichment items and opportunities provided to the research animals as part of the institution's environmental enrichment program and to describe the dog exercise plan.

B. Definitions

Environmental Enrichment: husbandry practices that facilitate the expression of species-typical behavior through exercise, manipulanda, and/or cognitive engagement for the promotion of well-being.

C. Applicability

Per the Institute for Laboratory Animal Research Guide for the Care and Use of Laboratory Animals (The Guide): "Enrichment programs should be reviewed by the IACUC, researchers, and veterinarian on a regular basis to ensure that they are beneficial to animal well-being and consistent with the goals of animals use." Per the USDA Animal Welfare Act § 3.8 "Dealers, exhibitors, and research facilities must develop, document, and follow an appropriate plan to provide dogs with the opportunity for exercise."

D. Policy

Environmental Enrichment

All animals require at least one form of enrichment. Additional enrichment may be provided to animals housed alone. Enrichment may take the form of social housing, manipulanda, visual enrichment, auditory enrichment, exercise, positive interactions with personnel, and foraging opportunities that are aimed at species-specific behaviors. Examples of species-specific enrichment utilized are listed below:

Mice	Nestlets, Diamond Twists, crinkle paper, mouse huts (paper shacks, plastic house or igloos)

Rats	PVC pipes, shredded bedding materials (Diamond Twists or other)
Guinea pigs	Plastic igloo hideaways, Timothy hay, and cyclone chews
Rabbits	Metal chains, plastic balls, cyclone chew toys, Timothy Hay (loose or cubes), fruit blocks, fresh produce, soft instrumental timed music on a player, play pen time
Swine	Large hard plastic balls, , manipulable King wobbler treat dispenser toys, hanging foraging balls, scratching pads, positive interaction with staff, soft instrumental timed music on a player, and various rotating food treats
Dogs	Commercial dog toys such as plastic balls, Nylabones and Kong toys, puzzle treat toys and lick mats, positive interaction with staff, soft-instrumental timed music on a player, and exercise*
Frogs	PVC pipes, Lily pads
Chickens, Guinea Fowl	Meal worms, rubber mats, perches, foraging balls with fresh fruit and vegetables
Quail	Dust baths, plastic huts, meal worms
Spiny mice	PVC pipes, plastic igloos, nesting items, and Nylabones
Kangaroo rats	Nylabones, PVC pipes, dust baths, and deep bedding for burrowing
Chinchillas	Dust baths, PVC pipes, plastic huts, platform perches
Gerbils	Dust baths, yogurt drops, plastic tubes, diamond twists, seeds for foraging, and Nylabones
Tree shrew	Branches for climbing, fresh produce, dried meal worms, additional hides, dig boxes, radio, cloth hammocks, and rotated commercial manipulable Kong treat dispensers, crinkle toys, and ladders.
Ferrets	PVC pipes, plastic balls

Zebra finches	Nest boxes, supplementary diets, water baths
Alligators	UVB basking lamps, PVC pipes, large plastic square pipes
Fish	Group housing, visual contact with conspecifics, artificial plants
Geckos and Lizards	Live feed, artificial plants, and hiding places

Any exceptions to the provision of enrichment must be justified in the protocol and approved by the IACUC. This would also include any novel enrichment items requested by the Principal Investigator.

Dog Exercise

All dogs over 12 weeks of age will have the opportunity for exercise every 24 hours, every day of the week for the duration of dogs' duration of housing.

Status	**Exercise options**
Dogs housed individually >12 weeks of age	Daily opportunity for exercise and/or double the required floor space
Dogs without sensory contact with another dog	Daily opportunity of exercise and daily positive physical contact with humans
Group housed dogs	If both dogs are provided 100% of space requirement, then the exercise requirement is met If the space requirement is <100% for each dog, then daily opportunity for exercise must be provided
Exemptions	The Attending Veterinarian or designee exempts exercise because of the dog's health, condition, or well-being. This will be reviewed every 30 days if exemption is still needed. The Principal Investigator may exempt exercise for scientific reasons approved in the protocol. The IACUC will review this exemption annually.

E. References

1. ILAR, Guide for the Care and Use of Laboratory Animals
http://nap.edu/12910

2. Animal Welfare Act and Regulations
https://www.nal.usda.gov/awic/animal-welfare-act