

# IACUC Guideline 01-01: Animal Acclimation & Quarantine

**Purpose:** The purpose of this guideline is to describe the period suggested for acclimation and stabilization of newly-received animals at the University of Wyoming, including quarantine strategies when necessary.

## Roles & Applicability.

According to the University of Wyoming (UW) IACUC Policies and Procedures Manual; “All those involved with the use of laboratory animals are responsible for ensuring the health and well-being of the animals used in research and education at the University”. Due to the unique challenges of decentralized vivarium facilities at UW, daily responsibilities of animal care and well-being fall upon the project Principal Investigator (PI). The UW IACUC and Attending Veterinarian (AV) are available to provide advice upon request.

## Background.

The *Guide for the Care and Use of Laboratory Animals* (8<sup>th</sup> edition), aka *The Guide*, discusses the importance of quarantine and acclimation for animal biosecurity as well as to prevent any unintended consequences to animal welfare and/or study results.

**Quarantine** is the separation of newly received animals from those already in the facility, in a way that prevents potential spread of contaminants to both the research animals and human investigators.

**Acclimation** (or acclimatization) occurs in a short period of time (days to weeks), and as well as within the organism’s lifetime. It is a reversible or morphological change that an organism experiences in response to changing environmental conditions. Such physiological changes enable the organism to tolerate (or acclimatize to) the new environmental conditions. Proper acclimation time may minimize unintended consequences. *The Guide* expands upon this:

“Regardless of whether the animals are quarantined, newly received animals should be given a period for physiological, behavioral, and nutritional acclimation before their use. The length of time for acclimation will depend on the type and duration of animal transportation, the species, and the intended use of the animals. For animals not typically housed in research settings, consideration should be given to providing means to assist with their acclimation (e.g., shearing sheep before they are brought indoors). The need for an acclimation period has been demonstrated in mice, rats, guinea pigs, nonhuman primates, and goats, and time for acclimation is likely important for other species as well...”

## Procedures.

This guideline provides *suggested* quarantine & acclimation periods, as information from suppliers about animal quality should be a main determinant for the PI (with assistance from the AV/IACUC if requested) to establish the length of quarantine, define the potential risks to personnel and animals in the colony, and determine whether therapy is required before animals are released from quarantine. *The Guide* suggests that “Rodents may not require quarantine if data from the vendor or provider are sufficiently current, complete, and reliable to define the health status of the incoming animals and if the potential for exposure to pathogens during transit is considered.” Otherwise, generally speaking, a 7-day quarantine in which new animals are introduced to a sequestered vivarium space upon arrival is recommended for the animal biosecurity. Beyond that, introduction into the general animal population is up to the PI’s decision. This may run concurrently with an initial acclimation period.

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An acclimation period may be necessary if a quarantine period is not observed and/or after any major alteration to the animal's environment (e.g. major alterations to the animal's day-night cycle). The included Table offers suggested general acclimation periods per species, but consult with the IACUC and AV when necessary.

| Species   | Recommended Minimum Acclimation Period   |
|---|--|
| Non-mammalian Vertebrates (i.e. – birds, fish, reptiles, amphibians)  | 48 hours   |
| Rodents   | 72 hours   |
| USDA-covered Species (i.e. – wild caught mammals, guinea pigs, rabbits, ferrets, dogs, cats, livestock used in biomedical research) | 5 – 7 days (not including date of acquisition and animals must be physically examined by the veterinary staff before research can begin) |

### References.

National Research Council. 2011. **Guide for the Care and Use of Laboratory Animals**: Eighth Edition. Washington, DC: The National Academies Press.

### History of Revisions.

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