

## **Report on the Office of Laboratory Animal Welfare Site Visits to the National Primate Research Centers – October 2016**

### **INTRODUCTION**

During the time between May 2009 and June 2016, the NIH Office of Laboratory Animal Welfare (OLAW) visited all seven of the National Primate Research Centers (NPRC) operating in the US. Specifically, OLAW conducted site visits to California National Primate Research Center; Oregon National Primate Research Center; Southwest National Primate Research Center; Tulane National Primate Research Center; Washington National Primate Research Center; Wisconsin National Primate Research Center; and Yerkes National Primate Research Center.

At each site visit OLAW assessed institutional compliance with the standards of the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals (Policy) and the *Guide for the Care and Use of Laboratory Animals (Guide), 8<sup>th</sup> Edition*. Accordingly, OLAW evaluated the current state of social housing, husbandry, enrichment, veterinary care, and training practices. This report summarizes the results of the site visits.

### **BACKGROUND**

OLAW oversees PHS-funded animal activities by the authority of the Health Research Extension Act of 1985 (Section 495 of the PHS Act) and the PHS Policy. As a condition of receipt of PHS support for research involving laboratory animals, institutions must provide a written Assurance to OLAW describing their program of animal care and use. Through the Assurance mechanism, the institution commits to the operation of their animal care and use program in compliance with the PHS Policy, the *Guide*, and the Animal Welfare Act regulations (9 CFR, Subchapter A).

The NPRC provide facilities, animals, and professional expertise to investigators using nonhuman primates for biomedical research. In FY 2016, the NPRC facilitated more than 1000 individual research projects involving approximately 1500 researchers. To facilitate these studies, the NPRC housed approximately 22,000 monkeys (nonhuman primates) of 12 different species.<sup>1</sup> The majority of these animals, approximately 20,000, are macaque monkeys. The NPRC support research in all areas of biomedicine, including infectious disease, neurobiology, metabolic disease, reproductive biology, and aging. The majority of researchers that use the NPRC's physical and intellectual infrastructure are funded by the PHS, including most of the NIH Institutes and Centers. The NPRC also support researchers funded by other federal sources, research foundations and the private sector.<sup>2</sup>

## **FINDINGS**

The NPRC were found to be compliant with all requirements of the PHS Policy and *Guide*.

### **Social Housing and Enrichment**

The *Guide* espouses the importance of social interactions among members of the same species as essential to normal development and well-being. The *Guide* also requires single housing of social species to be justified based on experimental requirements or veterinary-related concerns. In the absence of other animals, the *Guide* recommends the use of enrichment for animals through positive interaction with the animal caregivers, additional enrichment items, or contact with a companion animal in the housing area. Environmental enrichment is indicated for all animals to enhance sensory and motor stimulation and facilitate expression of species-typical behaviors.<sup>3</sup>

The majority of nonhuman primates at the NPRC were socially housed in accordance with the *Guide* unless specifically exempted, as permitted by the *Guide* for scientific or clinical reasons. In corral housing, animals had climbing structures, swings, hammocks, and wading pools. Animals inside indoor cages had environmental enrichment including metal mirrors, puzzle feeders, variable diets and food treats, manipulanda, and positive interactions with staff. The facilities' were staffed with dedicated, trained behaviorists to monitor animals' behavior and provide appropriate intervention as needed.

### **Husbandry**

To meet *Guide* standards, an institution's animal husbandry practices must be species-specific, appropriate for the animals, and in compliance with Animal Welfare Act regulations. This includes provision of diets that meet nutritional and behavioral needs and access to potable drinking water.<sup>4</sup>

The husbandry provided at the NPRC was of uniformly high quality and supported by dedicated and knowledgeable animal care teams with integrated animal behavior and enrichment professionals.

### **Veterinary Care**

The *Guide* considers veterinary care an essential part of an institution's animal care and use program. Veterinary care requires assessment of animal well-being and effective management of clinical care for research and non-research related health conditions. It must include a mechanism for direct and frequent communication with the veterinarian to ensure animals receive appropriate treatment, relief from pain or discomfort, or euthanasia, if indicated.<sup>5</sup>

The veterinary care provided at the NPRC was of the highest order and delivered by caring and professional individuals using state of the art resources.

### **Training of Animals**

To reduce possible stress during routine husbandry or experimental procedures, the *Guide* recommends that animals are habituated to activities using positive reinforcement training. Such behavioral shaping allows voluntary cooperation by the animals.<sup>3</sup>

Many animals observed at the NPRC had been successfully trained using positive reinforcement to enter transport boxes and pens, and to readily participate in clinical procedures. A majority of animals were also socialized to the staff as evidenced by the animals' calm demeanor.

## **CONCLUSIONS**

The NPRC were found to be in compliance with the PHS Policy and *Guide*. Animals were in good health and lived in social groups whenever possible. The Institutional Animal Care and Use Committees were knowledgeable, attentive, and made complete documentation of animal care oversight available for inspection by the site visit teams. Husbandry, veterinary, and behavior staff members were noted to be dedicated to the animals, professional, and competent. Occupational health programs were effective and ensured personnel safety. Facilities and support areas were clean, organized, and well maintained. Senior management provided strong leadership and support to the programs. OLAW determined the NPRC to be effectively supporting the biomedical research mission by maintaining excellent humane programs of animal care and use.

## **References**

1. National Primate Research Centers. (<https://nprcresearch.org/primate/>).
2. National Institutes of Health. Office of Research Infrastructure Programs. Primate Resources for Researchers. National Primate Research Centers. ([https://dpcpsi.nih.gov/orip/cm/primate\\_resources\\_researchers](https://dpcpsi.nih.gov/orip/cm/primate_resources_researchers)).
3. Institute for Laboratory Animal Research. Guide for the Care and Use of Laboratory Animals 8th edn. (National Academies Press, Washington, DC, 2011). p. 64.
4. Institute for Laboratory Animal Research. Guide for the Care and Use of Laboratory Animals 8th edn. (National Academies Press, Washington, DC, 2011). p. 65.
5. Institute for Laboratory Animal Research. Guide for the Care and Use of Laboratory Animals 8th edn. (National Academies Press, Washington, DC, 2011). pp. 105-106.