

## Heightening Awareness of Humane Treatment of Laboratory Animals



Photo Credit: Irina Gelbukh

Transparency is critical to remain connected to our community. Many times, using animals in lab settings is mischaracterized as a cold, heartless endeavor. Proving to be untrue, many care-takers will describe a fondness toward the animals and a great amount of respect for the animals because of their role advancing life-saving treatments for both people and pets.

Our goal at UT Health San Antonio is to help students and the public understand the critical role of animals in biomedical research, the exceptional care that investigators and staff adhere to, and the unique “partnership” between our animals, the staff and the investigators. Not only are the scientists the heroes, but so are the animals they work with.

### How is the Care and Welfare of Animals Managed?

Maintaining membership for over three decades, our institution adheres to the strict standards of the international non-profit organization [Association for Assessment and Accreditation of Animal Laboratory Care \(AAALAC\)](#), an organization dedicated to animal welfare in research settings. Considered the gold standard of animal laboratory welfare, it includes requirements of enrichment activities, social housing, and staff operations. We currently have 5 veterinarians, 36 care staff, and 12 administrative staff dedicated to the ethical and humane treatment of animals in biomedical research. Without the membership to AAALAC, potential to receive future funding from the National Institutes of Health or other federal agencies could be jeopardized halting the discovery of new life-saving treatments.

### Humane Science is Good Science.

Lack of care and inhumane treatment can distort the results of a study. Significant distress results in physiological changes that potentially affect the outcome of a disease pathway or treatment. Often, to mimic real-world settings, animals are treated as if they are a patient in care at a hospital to minimize distress and increase the validity of a study. The [Institutional Animal Care and Use Committee \(IACUC\)](#) operates as an internal review board to maintain these ethical standards of care for all animals used in research at UT Health. IACUC requires all researchers to replace animals in a study if an alternative *in vitro* or mathematical model is available. If not, researchers must pay close attention and refine their experimental procedures to prevent distress and use as few animals as possible (See table below). Scientists and staff, in conjunction with IACUC,

take the utmost precautions to manage the welfare of animals in research and adhere to [international](#) and [national standards](#).

**The Three R's of Ethical Research with Animals**

<b>Replace</b>	the use of animals with alternative techniques
<b>Reduce</b>	the number of animals used to a minimum, to obtain information from fewer animals or more information from the same number of animals.
<b>Refine</b>	the way experiments are carried out, to make sure animals suffer as little as possible. This includes better housing and improvements to procedures which minimize pain and suffering and/or improve animal welfare.

Source Credit: American Association for Laboratory Science Foundation

In the push toward transparency, staff and veterinarians at UT Health have provided educational materials and activities designed to engage the public, particularly young adults, about animals in research settings. Using the framework of [Biomedical Research Awareness Day](#) and following on the heels of the [Texas Society for Biomedical Research](#), we offered multiple presentations and booths at two key events held on our campus in November: the 2018 Science Expo and San Antonio Brain Health Symposium.

For most of us, our first experience with animals is a childhood pet. Whether the pet is the dog at your side or the cat on your lap, many of us learn to love animals like family. However, we use animals for a variety of reasons. One of which, and arguably most importantly, is to further the health and well-being of people and pets through research. Without our partnership with animals in labs, we would not have the comforts and treatments we have today.

"Scientists using animal models are fully aware of the tremendous obligation we, as a community of scholars, have in insuring their humane treatment and respecting their critical role in biology and medicine," explained Mark Nijland, Ph.D., assistant vice president for research and associate professor of obstetrics and gynecology. He added, "As investigators, it's incumbent upon us to recognize the privilege and responsibility of conducting research with animals. Without animal models we would not be able to advance [Nobel prize discoveries](#) such as those by James P. Allison, Ph.D. from our sister institution, University of Texas MD Anderson and Tasuku Honjo from Kyoto University, for their discoveries in mice that underpin the use of immune therapy as a form of cancer treatment."



Mark Nijland, Ph.D.