Vertebrate Animal Section (VAS)

1. **Description of procedures:**

Provide a concise description of the proposed procedures to be used that involve vertebrate animals. Identify the species, strains, ages, sex and total number of animals by species to be used. If dogs or cats are proposed, provide the source of the animals.

Add further description about individual experimental groups. Add multiple segments if different species or different experimental protocols are proposed.

2. **Justifications:**

Provide justification that the species are appropriate for the proposed research. Explain why the research goals cannot be accomplished using an alternative model (e.g., computational, human, invertebrate, in vitro).

3. **Minimization of Pain and Distress:**

Describe the interventions including analgesia, anesthesia, sedation, palliative care and humane endpoints to minimize discomfort, distress, pain and injury. Pain/distress concerns are specific for individual projects. Describe any concerns relative to THIS proposal.

_Unless prohibited by the animal use protocol AND approved by the IACUC (for example your animal protocol is an approved category E protocol), please include the following statement in your response: “All animals are observed at least twice daily for signs of illness and/or injury. If animals exhibit any indication of infection or distress, the veterinary staff confers with laboratory personnel to recommend appropriate antibiotics, analgesics, other pharmaceuticals, or euthanasia. Animals are treated by the facility supervisor(s), licensed veterinary technician, or laboratory animal technicians as ordered by the Attending Veterinarian. Environmental enrichment is provided to all species as detailed in the USA Environmental Enrichment Plan.”_

Discuss end-points here. Include BOTH scientific and humane end-points and detail end-point criteria for using a humane end-point.

4. **Euthanasia:**

If animals will be euthanized using an AVMA-approved method, state: “The method of euthanasia is consistent with the recommendations of the American Veterinary Medical Association (AVMA) Guidelines for the Euthanasia of Animals”.

If the method is not AVMA-approved, describe the method and provide scientific justification.