# Checklist for Review of Vertebrate Animal Section (VAS)

*This Checklist is provided to assist applicants in preparing the VAS for submission to the NIH for peer review, and as guidance to reviewers in evaluating the VAS of applications and proposals. Detailed instructions are provided on pages 3-4.*

**Performance site(s):** All five points must be addressed for all performance sites.

— If applicant's institution is not where animal work will be performed, all collaborative performance site(s) are identified
— If more than one performance site is planned, descriptions of animal care and use for each site is provided

**1. Description of animals and their use:** Address for all species proposed.

— Species
— Strain
— Ages
— Sex
— Number of animals to be used
— Concise, but complete description of procedures; sufficient information for evaluation

**2. Justification for:**

— The use of animals
— Choice of species
— For non-human primates (NHP), dogs or cats, additional justification is provided
— Number of animals to be used (power calculations cited if appropriate)

**3. Veterinary care (for each performance site):**

— Availability of veterinary care
— How often animals are monitored for health by veterinary or animal care staff
— How monitoring occurs during anesthesia and recovery (if applicable)
— When and how veterinary staff communicate with the investigator
— Indicators for veterinary intervention
— Description of intervention procedures by veterinary staff (if indicated)

**4. Provisions to minimize discomfort, distress, pain and injury:**

— Procedures and circumstances are identified when discomfort, distress, pain or injury may occur
— Tranquilizers, analgesics, anesthetics, and other treatments are identified by name and their use described
— Care, monitoring, or special housing (if indicated) following surgery or procedures
— If survival surgery is proposed, anesthesia, post-surgical analgesia and other treatments (if indicated) are described
— Indicators of humane endpoints
— Brief description of restraint devices, if relevant

**5. Euthanasia:**

— Method(s) for euthanasia and reasons for selection(s)
— Stated that method is consistent with AVMA Guidelines on Euthanasia
— Scientific justification for choice of method if not AVMA recommended

## Review of Vertebrate Animal Section in NIH Applications and Proposals

# I. Guidelines for Applicants, Reviewers and NIH Staff

### Requirements for review

If live vertebrate animals are to be used, federal policy requires that the following points are addressed in applications and proposals. Typically, these can be addressed within 1-2 pages.

- A detailed description of the use of the animals, including species, strains, ages, sex, and numbers
- Justification of the use of animals, choice of species, and numbers to be used
- Information on the veterinary care of the animals
- Procedures for ensuring humane treatment of animals
- Methods of euthanasia

Reviewers must evaluate all five points. Any concerns will be cited in the summary statement. Applicants are given the opportunity to resolve concerns prior to award. Applicants should be aware that NIH generally will release information contained in funded applications pursuant to a Freedom of Information Act request.

### Applicant responsibilities

Each of the five points must be addressed in the VAS of NIH applications or proposals. All of the items must be complete and evaluated by reviewers as appropriate for an application to be ACCEPTABLE.

### Reviewer responsibilities

Although applicant institutions and investigators are primarily responsible for the proper care and use of animals, responsibility for oversight is shared by scientific review groups, Advisory Councils and Boards. All procedures (e.g., housing, anesthesia, surgery, euthanasia) must comply with federal animal welfare regulations and the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals (Policy). It is the responsibility of reviewers to verify that the information is provided and that plans for the use of vertebrate animals are appropriate.

### NIH Staff responsibilities

- ***Review staff*:** a) performs an administrative review of each VAS, checking that all five points are addressed; if not addressed, Scientific Review Officers may contact applicants to submit the missing information as supplemental material prior to review; b) provides reviewers with instructions for reviewing the VAS (e.g., Checklist), noting that all points must be evaluated as appropriate for the VAS to be ACCEPTABLE; c) codes the application and includes reviewers' comments in the Resume at the end of the summary statement.
- ***Program staff*:** a) obtains additional information or clarification, to resolve concerns for any application found to be UNACCEPTABLE if it is to be recommended for funding; b) works with the applicant to provide information to the Office of Laboratory Animal Welfare (OLAW) allowing resolution of the animal welfare concerns.
- ***Grants Management staff*:** a) verifies that the Institutional Animal Welfare Assurance number is provided; b) obtains the IACUC approval date for the Investigator's protocol, if not previously provided.

### References

The PHS Policy incorporates the standards in the Guide for the Care and Use of Laboratory Animals and requires that euthanasia be conducted according to the American Veterinary Medical Association guidelines. The following documents are available on the OLAW website (http://olaw.nih.gov) and may be accessed to answer any questions that arise during review:

- PHS Policy
  http://grants.nih.gov/grants/olaw/references/phspol.htm
- The Guide for the Care and Use of Laboratory Animals
  http://www.nap.edu/openbook.php?record_id=5140
- The AVMA Guidelines on Euthanasia
  http://www.avma.org/issues/animal_welfare/euthanasia.pdf

## II. Instructions for Review and Coding of VAS

Subsequent to evaluation of the VAS by an Initial Review Group (i.e., study section), all applications or proposals are coded as NO CONCERNS (30), CONCERNS (44) or NO VERTEBRATE ANIMALS (10). An example of a concise, but complete VAS section is included on the last page of this document.

**Coding as "NO VERTEBRATE ANIMALS"**
If animal tissue used in the study is obtained from other sources (e.g., tissue repository, animals euthanized for an unrelated purpose), the application may be coded as "no vertebrate animals used." A statement indicating the source of the tissues is required in the VAS to validate the coding as "no vertebrate animals."

If animals are manipulated prior to euthanasia or obtained specifically for tissue harvest, this constitutes using animals and must be classified as "use of live vertebrate animals." The generation of custom antibodies must be coded as "use of live vertebrate animals."

**VAS Coding as "NO CONCERNS/ACCEPTABLE" or "CONCERNS/UNACCEPTABLE" is based on evaluation of:**

**Performance site(s)**
If the applicant institution is not the site where animal work will be performed, the performance site must be identified. If there is more than one performance site, description of animal care and use for each site must address the required five points listed.

**1. Description of animals and how they will be used**
A concise, complete description of the proposed procedures must be included in the VAS. While additional details may be included in the Methods section of the Research Plan, a coherent, albeit brief description of the protocols must be provided in the VAS. The description must include sufficient detail to allow evaluation of the procedures. Some examples of procedures to be described include blood collection, surgical procedures, administration of substances, tumor induction, and post-irradiation procedures.
In describing the animals, investigators must provide the following for each species or strain:
- Species
- Strain
- Ages
- Sex
- Number of animals to be used

**2. Justification**
Investigators must justify the use of animals in their research. The justification must indicate why alternatives to animals (e.g., computer models, cell culture) cannot be used, and should indicate the potential benefits and knowledge to be gained.

Rationale for the choice of species must be provided. The rationale should indicate the advantages of the species chosen and why alternative species are not appropriate. If less highly evolved or simpler animal models are available, justification must be provided for using more advanced species. The use of non-human primates (NHP), dogs or cats should be noted during review and thorough justification for their use is required. If NHP species are to be used, a comparison to other NHP species may be appropriate.

Estimates for the number of animals to be used should be as accurate as possible. Justification for the number of animals to be used should include considerations of animal availability, experimental success rate, inclusion of control groups and requirements to reach statistical significance. Cite power calculations where appropriate.

**3. Veterinary care**

For each performance site, descriptions of veterinary care should indicate the availability of veterinarians or veterinary technicians. For example, the VAS might state the number of veterinarians and veterinary technicians associated with the applicant institution, indicate their proximity to the performance site(s), or include a brief description of the services provided by veterinarians, veterinary technicians, or other staff. The frequency with which veterinary staff observe or monitor animals should be described.

If survival surgeries are proposed, veterinary involvement or post-surgical monitoring should be described. If animal use involves invasive approaches that might result in discomfort, distress or pain, descriptions of veterinary care should indicate the mechanism and regularity of communication with staff. The circumstances and indicators for veterinary intervention, and humane endpoints should be described, if appropriate. The mechanisms by which veterinary staff can intervene should be described, including actions taken. Particular attention to these issues is required for research involving NHP, cats and dogs.

**4. Provisions to minimize discomfort, distress, pain and injury**

Procedures or circumstances that may result in more than momentary discomfort, distress, pain or injury should be identified. Methods to alleviate discomfort, distress, or pain should be described. If pharmacological agents are used, the agent(s) should be specified by name. Any additional means to avoid discomfort, distress, pain or injury should be described briefly. The manner, circumstances and duration of all post-surgical provisions and care should be described. If special housing is necessary following surgery or manipulations, the VAS should describe these provisions, the duration, and type of monitoring provided. If procedures (e.g., pharmacological, surgical) might lead to severe discomfort, distress, pain or injury, indicators for humane endpoints and euthanasia (e.g., severe infection, respiratory distress, failure to eat, tumor size) should be described. All of these issues are particularly important for "survival surgeries." If multiple surgeries are proposed, these must be well justified and provisions to avoid any potential complications must be described. Describe restraining devices if used.

**5. Euthanasia**

The method(s) of euthanasia must be described and the reasons for the selection(s). The indicators for euthanasia (i.e., time point, termination of experiment, indicators for humane endpoint) should be stated. It is <u>not</u> sufficient to state simply that humane methods will be used, consistent with the recommendations of the AVMA Guidelines on Euthanasia or the Institutional Animal Care and Use Committee (IACUC). A scientific justification for the method must be provided if not an AVMA recommended method.

## Additional Information Concerning the VAS

**Points to consider while reviewing the VAS (Replace, Reduce, Refine)**

- Can the proposed research be conducted without animal experimentation?
- Does the proposed approach minimize the number of animals to be used, and do the methods minimize animal distress, discomfort and pain?
- Does the proposed research involve animal pain or distress? Is it justified by the anticipated advances in knowledge or health care? Are procedures to alleviate pain and distress adequate?
- Is particular care taken to justify and describe research involving NHPs, cats or dogs?

**Institutional Assurance number, IACUC approval and institutional accreditation:**

- The Institutional Animal Welfare Assurance (Assurance) number should be provided on the face page (PHS398) or "other project information" page (SF424) if available. The Assurance number indicates that the applicant organization has an animal care program approved by OLAW, and that all procedures will be administered under the guidelines of that animal care program.

- If the applicant organization lacks an Assurance, one will be negotiated with OLAW. The process of negotiating an Assurance is initiated by the NIH grants management staff. If the applicant institution does not have an Animal Welfare Assurance and the animal work will be conducted at an institution with an Assurance, the grantee must obtain an Inter-Institutional Assurance from OLAW prior to award. When the grantee is a domestic institution and there is a foreign performance site using animals, the grantee must ensure that the performance site has an appropriate Foreign Assurance and must provide verification of approval of the animal care and use protocol by the domestic grantee's IACUC, certifying that the activity as conducted at the foreign performance site is acceptable to the grantee.

- Although not required in the VAS, the date of IACUC approval of the animal care and use protocol must be provided by the investigator prior to award (i.e., "Just In Time"). Therefore, if indicated in the application, it may be useful when reviewing to note the status of the protocol approval (e.g., protocol has/has not been submitted for approval, is pending, or is approved).

- Although not required, some applicants may indicate that their institution is accredited by the Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC). Each institution's animal care program/facilities must be assured as a category I or II program; AAALAC accreditation is classified as category I. If AAALAC accreditation is cited, it may be useful when reviewing to note this.

## III. Example VAS (under development)