

Extracted pages from the AAG

records of recombinant DNA research conducted at their organization in a form that is available to NSF upon request.

**c. Research Requiring Prior Approval of the Director, NIH**

In certain instances research should not be initiated or registered with IBCs prior to approval and determination of containment level by the Director, NIH. Normally such experiments are reviewed by the Recombinant DNA Advisory Committee before a decision is made by the Director, NIH. Such instances are:

- (i) research for which containment levels are not explicitly specified by the Guidelines;
- (ii) research involving experiments prohibited by the Guidelines, i.e., requests for exceptions to the Guidelines; and
- (iii) requests to perform experiments without regard to the containment specified in the Guidelines, i.e., exemptions from the Guidelines.

**d. Recombinant DNA Research Outside the U.S.**

Recombinant DNA research within the scope of the Guidelines that is performed outside of the U.S. using funds provided by NSF for transportation, salaries or direct research expenses must comply with the U.S. or host country standards. If the research is to be carried out in a country that has adopted guidelines comparable to those of the U.S., a document with information and endorsements assuring compliance to the host organization standards must be submitted to NSF. NSF funds may not be used to carry out research using recombinant DNA in a country that has not adopted national guidelines unless the research is in full compliance with the Guidelines and the procedures required for NSF-supported research within the U.S.

**3. Vertebrate Animals**

**a. Background**

The grantee is responsible for the humane care and treatment of any vertebrate animal used or intended for use in such activities as field or laboratory research, development, training, experiments, biological testing or for related purposes supported by NSF grants.

**b. Federal Regulations**

- (i) Any grantee performing research on vertebrate animals<sup>9</sup> shall comply with the Animal Welfare Act [7 U.S.C. 2131 et seq.] and the regulations promulgated thereunder by the Secretary of Agriculture [9 CFR 1.1-4.11] pertaining to the humane care, handling, and treatment of vertebrate animals held or used for research, teaching or other activities supported by Federal awards. The awardee is expected to ensure that the guidelines described in the National Academy of Science (NAS) Publication, "*Guide for the Care and Use of Laboratory Animals*" are followed and to comply with the *Public Health Service Policy and Government Principles Regarding the Care and Use of Animals* (included as Appendix D to the NAS Guide).

In the case of research involving the study of wildlife in the field or in the lab, for the provision in the PHS Assurance for Institutional Commitment (Section II) that requires the organization to establish and maintain a program for activities involving animals in accordance with the Guide for the Care and Use of Laboratory Animals (Guide), the organization has established and will maintain a program for activities involving animals according to the Guide. The organization will follow recommendations specified in the Guide for details involving laboratory animals, and taxon-specific guidelines approved by the American Society of Ichthyologists

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<sup>9</sup> In addition to vertebrate animals covered by the Animal Welfare Act, the requirements specified in this coverage also are extended to rats, birds and mice.

and Herpetologists, the American Society of Mammalogists, and the Ornithological Council, as is appropriate for the taxon to be studied<sup>10</sup>.

(ii) During the life of the award, additional IACUC approval must be obtained if the protocols for use of vertebrate animals have been changed substantively from those originally proposed and approved, or if the previous approval is more than three years old. In the event the grantee's multi-project Assurance is cancelled or lapses, the grantee must immediately notify the NSF Grants and Agreements Officer identified in the award.

(iii) Research facilities subject to the Animal Welfare Act using or intending to use live animals in research and who receive Federal funding are required to register the facility with the Animal and Plant Health Inspection Service (APHIS), U.S. Department of Agriculture. A current listing of licensed animal dealers may also be obtained from APHIS. The location of the nearest APHIS Regional Office, as well as information concerning this and other APHIS activities may be obtained at <http://www.aphis.usda.gov/>.

(iv) Awards to U.S. grantees for projects involving the care or use of vertebrate animals at a foreign institution or foreign field site also require approval of research protocols by the U.S. grantee's IACUC. If the project is to be funded through an award to a foreign institution or through an individual fellowship award that will support activities at a foreign institution, NSF will require a statement of compliance that the activities will be conducted in accordance with all applicable laws in the foreign country and that the *International Guiding Principles for Biomedical Research Involving Animals* (see <http://www.cioms.ch/>) will be followed.

### **c. Grant Conditions**

Each NSF grant contains, as part of the standard grant conditions, an article implementing NSF regulations on projects involving research with vertebrate animals.

## **4. Government Permits and Activities Abroad**

a. For awards that include activities requiring permits from appropriate Federal, state, or local government authorities, the awardee should obtain any required permits prior to undertaking the proposed activities.

b. The awardee should assure that activities carried on outside the U.S. are coordinated as necessary with appropriate U.S. and foreign government authorities and that necessary licenses, permits or approvals are obtained prior to undertaking proposed activities. NSF does not assume responsibility for awardee compliance with the laws and regulations of the country in which the work is to be conducted.

## **C. Construction, Rearrangements and Alterations**

### **1. Davis-Bacon Act**

The Davis-Bacon Act (40 USC §276a et seq.) establishes minimum wages to be paid to laborers and mechanics on construction contracts to which the U.S. is a party involving public buildings or public works within the U.S. A number of other statutes have extended this provision to specific Federal grant programs involving construction. However, unless specifically stated in the grant, the Davis-Bacon Act does not normally apply to NSF grants since grantees normally retain title to property acquired under the grant and the construction, if any, is normally on non-Government land.

### **2. Bonding and Insurance**

The NSF Act (42 USC §1870c) provides NSF with authority to enter into grants, contracts or other agreements without performance or other bonds. Therefore, unless the grant specifically provides otherwise, NSF does not require performance or other bonds or insurance.

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<sup>10</sup> Guidelines to the Use of Wild Birds in Research; Guidelines of the American Society of Mammalogists for the Use of Wild Mammals in Research; Guidelines for the Use of Fishes in Research; Guidelines for the Use of Live Amphibians and Reptiles in Field and Laboratory Research

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- brief description of other support services available and the annual budget for their operation, maintenance and administration.

Equipment proposals must include the information described above within the 15-page project description.

These proposals normally compete with proposals for research or education projects.<sup>37</sup>

## 6. Proposals Involving Vertebrate Animals

a. Any project proposing use of vertebrate animals for research or education shall comply with the Animal Welfare Act [7 U.S.C. 2131 et seq.] and the regulations promulgated thereunder by the Secretary of Agriculture [9 CFR 1.1-4.11] pertaining to the humane care, handling, and treatment of vertebrate animals held or used for research, teaching or other activities supported by Federal awards. In accordance with these requirements, proposed projects involving use of any vertebrate animal for research or education must be approved by the submitting organization's Institutional Animal Care and Use Committee (IACUC) before an award can be made. For this approval to be accepted by NSF, the organization must have a current Public Health Service (PHS) Approved Assurance.

In the case of research involving the study of wildlife in the field or in the lab, for the provision in the PHS Assurance for Institutional Commitment (Section II) that requires the organization to establish and maintain a program for activities involving animals in accordance with the *Guide for the Care and Use of Laboratory Animals* (Guide), the organization has established and will maintain a program for activities involving animals according to the Guide. The organization will follow recommendations specified in the Guide for details involving laboratory animals, and taxon-specific guidelines approved by the American Society of Ichthyologists and Herpetologists, the American Society of Mammalogists, and the Ornithological Council, as is appropriate for the taxon to be studied<sup>38</sup>.

b. Sufficient information must be provided within the 15-page project description to enable reviewers to evaluate the choice of species, number of animals to be used, and any necessary exposure of animals to discomfort, pain, or injury.

c. Research facilities subject to the Animal Welfare Act using or intending to use live animals in research and who receive Federal funding are required to register the facility with the Animal and Plant Health Inspection Service (APHIS), U.S. Department of Agriculture. A current listing of licensed animal dealers may also be obtained from APHIS. The location of the nearest APHIS Regional Office, as well as information concerning this and other APHIS activities may be obtained at <http://www.aphis.usda.gov/>.

d. Projects involving the care or use of vertebrate animals at a foreign organization or foreign field site also require approval of research protocols by the U.S. grantee's IACUC. If the project is to be funded through an award to a foreign organization or through an individual fellowship award that will support activities at a foreign organization, NSF will require a statement of compliance that the activities will be conducted in accordance with all applicable laws in the foreign country and that the *International Guiding Principles for Biomedical Research Involving Animals* (see <http://www.cioms.ch/>) will be followed.

e. The following information regarding the organization's intention to utilize vertebrate animals as part of the project should be provided on the NSF Cover Sheet:

(1) The box for "Vertebrate Animals" must be checked on the Cover Sheet if use of vertebrate animals is envisioned.

<sup>37</sup>See AAG Chapter IV.D for additional information on the administration of equipment awards.

<sup>38</sup> Guidelines to the Use of Wild Birds in Research: <http://www.nmnh.si.edu/BIRDNET/guide/index.html>

Guidelines of the American Society of Mammalogists for the Use of Wild Mammals in Research:

<http://www.mammalsociety.org/articles/guidelines-american-society-mammalogists-use-wild-mammals-research-0>

Guidelines for the Use of Fishes in Research: [http://fisheries.org/docs/policy\\_16.pdf](http://fisheries.org/docs/policy_16.pdf)

Guidelines for the Use of Live Amphibians and Reptiles in Field and Laboratory Research:

<http://www.asih.org/files/hacc-final.pdf>

- (2) The IACUC approval date (if obtained) must be identified in the space provided.

If IACUC approval has not been obtained prior to submission, the proposer should indicate "Pending" in the space provided for the approval date. If a decision is made to fund the proposal, the organization must provide a signed copy of the IACUC approval letter to the cognizant program. The letter should indicate approval of the proposed activities and must be submitted prior to an award being issued.

- (3) The PHS Approved Animal Welfare Assurance Number must be entered in the space provided.

f. For fellowship proposals submitted by individuals that involve use of vertebrate animals, a copy of the approval letter from the IACUC (including Assurance Number and organizational signature) should be included in the Supplementary Documentation section of the proposal or sent directly to the cognizant program. The letter should indicate approval of the proposed activities.

If IACUC approval has not been obtained prior to submission, the proposer should indicate "Pending" in the space provided for the approval date. If a decision is made to fund the proposal, the organization must provide a signed copy of the IACUC approval letter to the cognizant program. The letter should indicate approval of the proposed activities and must be submitted prior to an award being issued.

See also AAG Chapter VI.B.3 for additional information on the administration of awards that utilize vertebrate animals.

## **7. Proposals Involving Human Subjects**

a. Projects involving research with human subjects must ensure that subjects are protected from research risks in conformance with the relevant federal policy known as the Common Rule (*Federal Policy for the Protection of Human Subjects, 45 CFR 690*). All projects involving human subjects must either (1) have approval from the organization's Institutional Review Board (IRB) before issuance of an NSF award or, (2) must affirm that the IRB has declared the research exempt from IRB review, in accordance with the applicable subsection, as established in section 101(b) of the Common Rule. If certification of exemption is provided after submission of the proposal and before the award is issued, the exemption number corresponding to one or more of the exemption categories must also be included in the documentation provided to NSF.

If the project involves human subjects and is to be performed outside of the U.S., evidence of IRB approval also is required. If there is no IRB approval provided, and the foreign country is not included in the 2008 HHS OHRP International Compilation of Human Research Protections (<http://www.hhs.gov/ohrp/international/HSPCompilation.pdf>), nor is an Assurance on file with OHRP (<http://ohrp.cit.nih.gov/search/asearch.asp#ASUR>), NSF may decline to support the project.

b. The following information regarding the organization's intention to utilize human subjects as part of the project should be provided on the NSF Cover Sheet:

(1) The box for "Human Subjects" must be checked on the Cover Sheet if use of human subjects is envisioned.

(2) If human subject activities are exempt from IRB review, provide the exemption number(s) corresponding to one or more of the exemption categories. The six categories of research that qualify for exemption from coverage by the regulations are defined in the Common Rule for Protection of Human Subjects.

(3) If the research is not designated as exempt, the IRB approval date should be identified in the space provided. This date, at minimum, should cover the period at which the project is initiated. If IRB approval has not been obtained prior to submission, the proposer should indicate "Pending" in the space provided for the approval date. If a decision is made to fund the proposal, the organization must provide a signed copy of the IRB approval letter to the cognizant program. The letter should indicate approval of the proposed activities and must be submitted prior to an award being issued.

(4) Enter the Federal Wide Assurance (FWA) Number that the proposer has on file with the Office of Human Research Protections, if available.

See also AAG Chapter VI.B.1 for additional information on the administration of awards that utilize human subjects.

## **8. Proposals for Conferences, Symposia and Workshops**

NSF supports conferences, symposia and workshops in special areas of science and engineering that bring experts together to discuss recent research or education findings or to expose other researchers or students to new research and education techniques. NSF encourages the convening in the U.S. of major international conferences, symposia and workshops. Conferences will be supported only if equivalent results cannot be obtained at regular meetings of professional societies. Although requests for support of conferences, symposia and workshops ordinarily originate with educational institutions or scientific and engineering societies, they also may come from other groups. Shared support by several Federal agencies, States or private organizations is encouraged. Because proceedings of such conferences normally should be published in professional journals, requests for support may include publication costs. Proposals for conferences, symposia and workshops should generally be made at least a year in advance of the scheduled date. Conferences or meetings, including the facilities in which they are held, funded in whole or in part with NSF funds, must be accessible to participants with disabilities.

A conference, symposium or workshop proposal<sup>39</sup> (that complies with the page and font size instructions in GPG Chapter II.B) must contain the elements identified below. Note the proposal preparation instructions for these types of proposals deviate from the standard proposal preparation instructions contained in this Guide.

- Cover Sheet
- Project Summary (GPG Chapter II.C.2.b should be consulted to prepare this portion of the proposal).
- Project Description (not to exceed 15 pages) that includes:
  - (1) A statement of the need for such a gathering and a list of topics;
  - (2) A listing of recent meetings on the same subject, including dates and locations;
  - (3) The names of the chairperson and members of organizing committees and their organizational affiliations;
  - (4) Information on the location and probable date(s) of the meeting and the method of announcement or invitation;
  - (5) A statement of how the meeting will be organized and conducted, how the results of the meeting will be disseminated and how the meeting will contribute to the enhancement and improvement of scientific, engineering and/or educational activities; and
  - (6) A plan for recruitment of and support for speakers and other attendees, that includes participation of groups underrepresented in science and engineering (e.g., underrepresented minorities, women, and persons with disabilities).
- Proposal Budget: An estimated total budget for the conference, together with an itemized statement of the amount of support requested from NSF (the NSF budget may include participant support for transportation (when appropriate), *per diem* costs, stipends, publication and other conference-related

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<sup>39</sup> Costs associated with conferences, symposia, workshops or other meetings supported by an NSF grant must be specifically and clearly identified in the proposed scope of work and budget, and approved by NSF. Additional information on the charging of conference, symposia and workshops is contained in the AAG Chapter V.C.5.