

MENTORING PLANS IN RESEARCH, CAREER DEVELOPMENT AND TRAINING PROPOSALS

Guidelines for Principal Investigators

Agency Policy

NIH: The NIH Grants Policy Statement (http://grants.nih.gov/grants/policy/nihgps/part_iii_3.htm) regarding institutional training grants (T32, T35) states:

Although the NIH does not establish specific curricula or formal requirements, all programs are encouraged strongly to consider instruction in the following areas: conflict of interest, responsible authorship, policies for handling misconduct, policies regarding the use of human and animal subjects, and data management. Within the context of training in scientific integrity it is also beneficial to discuss the mutual responsibilities of the institution and the trainees participating in the program. Plans must address the subject matter of the instruction, the format of the instruction, the degree of faculty participation, trainee attendance requirements, and the frequency of instruction. The rationale for the proposed plan of instruction must be provided.

Similar requirements are outlined for mentored career development awards (F and K series). NIH has not yet developed specific guidelines for research-series awards (R series) related to the America COMPETES Act, though these are likely forthcoming.

NSF: The NSF Proposal & Award Policies & Procedures Guide was revised to update NSF's implementation of the mentoring requirement contained in the America COMPETES Act. As of April 6, 2009, each proposal requesting funds to support postdoctoral researchers must include a description of the mentoring activities that will be provided for such individuals. Specifically, the policy (Chapter II, Section C.2j) states:

*Each proposal that requests funding to support **postdoctoral researchers** must include, as a supplementary document, a description of the mentoring activities that will be provided for such individuals. In no more than one page, the mentoring plan must describe the mentoring that will be provided to all postdoctoral researchers supported by the project, irrespective of whether they reside at the submitting organization, any subawardee organization, or at any organization participating in a simultaneously submitted collaborative project. Proposers are advised that the mentoring plan may not be used to circumvent the 15-page project description limitation. See [GPG Chapter II.D.4](#) for additional information on collaborative proposals*

Examples of mentoring activities include, but are not limited to: career counseling; training in preparation of grant proposals, publications and presentations; guidance on ways to improve teaching and mentoring skills; guidance on how to effectively collaborate with researchers from diverse backgrounds and disciplinary areas; and training in responsible professional practices. The proposed mentoring activities will be evaluated as part of the merit review process under the Foundation's broader impacts merit review criterion. Proposals that include funding to support postdoctoral researchers, and, do not include the requisite mentoring plan will be returned without review (see [GPG Chapter IV.B.](#))

Guidelines for Mentoring Plans

Guidelines outlined here are provided to assist you in developing a mentoring plan for proposals targeted to NIH, NSF, or other non-government agencies. While the NSF Guide specifically relates to postdoctoral fellows, mentoring plans may be a required element of any training and/or career development proposal. A general framework for a mentoring plan is given below – the term “fellow” is used generically. The Principal Investigator should tailor this material to his/her own laboratory and research program and to the needs of the fellow given their career stage. Individual funding mechanisms may have other specific requirements.

- * A discussion of how you will work with the fellow to establish and implement an **Individual Development Plan**. FASEB has developed a template, available at: <http://opa.faseb.org/pdf/idp.pdf>
- * Plans to develop the fellow’s research skills in the context of the proposed work.

- * An indication of how frequently you meet with the fellow 1) individually to discuss research results and specific career goals and 2) in the context of lab meetings at which fellows have the opportunity to present and discuss their research with the research team. Participation in the Principal Investigator's research lab meetings where feedback and coaching are provided to help fellow develop their communication and presentation skills.
- * Information related to travel support for fellows to attend regional, national, or international scientific meetings to facilitate their training, present a poster/paper and/or to provide networking opportunities.
- * Opportunities to network with visiting scholars who are leaders in your field by having lunch or dinner with departmental visiting speakers.
- * Opportunities/participation in seminars and journal clubs. Frequency with which fellows are required to present in these venues should be stated.
- * Describe mechanisms for ensuring regular feedback to fellows. (i.e., formal committee, evaluation and individual development plan review/discussion, etc.)
- * Requirements for relevant training and workshops on the Responsible Conduct of Research (RCR). Opportunities available on the USA campus:
 - The Office of the Vice President for Research offers periodic training workshops.
 - The Office of Research Compliance and Assurance offers an RCR tutorial via the Collaborative Institutional Training Initiative (CITI): <http://www.southalabama.edu/researchcompliance/responsible.html>
 - Departmental initiatives/teaching specific to ethical conduct and responsible research practices.
 - The Offices of Faculty Affairs and Research Compliance and Assurance offer a program of RCR instruction for fellows designed to foster ethical and professional standards for research conduct. This program provides an overview of relevant RCR topics and case discussions between fellows and faculty participants, facilitated by a workshop moderator. Participants completing five out of six modules will be granted a certification of completion.
- * If relevant, you should also indicate required training programs that address ethical and safety issues related to human subjects research, use of laboratory animals and/or biological hazards.

Inclusion of statements regarding development of career "survival skills" may be relevant:

- * Skills in writing
 - The Qualifying Examination in the PhD program requires that the graduate student develop and successfully defend a research proposal using the NIH R01 guidelines.
 - Preparation of individual fellowship proposals for extramural funding.
 - "Effective Scientific Writing" (IDL 641) – this course is also open to postdoctoral fellows and faculty.
 - Mentors work with fellows to bring their research to publication.
 - Grantsmanship workshops for fellows offered by the Office of Faculty Affairs
- * Presentation skills
 - Special topics course on presentation skills, abstracts (IDL 590)
 - Requiring oral presentations in journal clubs, seminars, scientific conferences

The College of Medicine Postdoctoral website (<http://www.southalabama.edu/com/facultyaffairs/postdoc.shtml>) provides access to a number of resources on RCR and mentoring.