

THE UNIVERSITY OF ALABAMA
Office for Research
NSF Postdoctoral Mentoring Activities

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I. NSF Requirement

From the National Science Foundation (NSF) Grant Proposal Guide (GPG):

- 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...
- 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.)

In addition, the FastLane project reporting format has been modified to inform PIs of the requirement to report on the mentoring activities provided to postdoctoral researchers during the performance period, including any postdoctoral researcher not identified in the original proposal submission.

II. Example Postdoctoral Researcher Mentoring Plan

The GPG provides examples of mentoring activities, “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.” NSF has recommended against the use of “boilerplate” language and expects each PI to describe a mentoring plan that is appropriate to the individual(s), the research program and the University.

The Office for Research provides the following language as an example but expects that each proposed mentoring plan will vary depending on the nature of the research program and the potential benefits to the postdoctoral researcher(s). *Please note that as part of a separate NSF policy implementation, **RCR training will become mandatory for all students and postdoctoral researchers supported by awards resulting from proposals submitted on or after January 4, 2010.** The plan for ensuring RCR training is not required to be included in the proposal but the University will expect all postdoctoral researchers, and students, funded by awards resulting from these NSF proposals to complete RCR training within 90 days of the award or assignment to the project.*

Example Introduction:

#x postdoctoral researcher(s) will be funded on this project. As described below, a structured mentoring program tailored to meet the needs of each postdoctoral researcher's development will be implemented. Each mentoring program is designed to enhance the postdoctoral researcher's knowledge and experience and the career skills he/she will need to succeed. The following components will be included in the mentoring plan:

Plan Component Examples:

- Research
 - Human Resources Development course on how to write competitive proposals
 - Office for Sponsored Programs training:
 - Community of Science – identification of research funding opportunities
 - Grants.gov – Preparation of electronic grant application packages
 - NIH, <http://grants.nih.gov/grants/outreach.htm>
 - Regional Seminars on Program Funding and Grants Administration
 - Each NIH Institute, Center and Office regularly holds workshops that are open to the public, including grant writing workshops
 - NSF Regional Grants Conference, <http://www.nsf.gov/bfa/dias/policy/outreach.jsp>
 - Travel to conferences with the goal that the postdoctoral researcher present a poster or paper
- Teaching
 - Mandatory workshop for all new graduate teaching assistants hosted by the Graduate School
 - International Teaching Assistant Program (ITAP) conducted by the University's English Language Institute
- Oral English for nonnative speakers. Free class offered by the University's English Language Institute.
- Responsible Conduct of Research (RCR)
 - Comprehensive RCR course. This course is available via Collaborative Institutional Training Initiative (CITI) and includes four discipline specific courses; Biomedical, Social and Behavioral, Physical Science and Humanities. The following content areas are covered in this course:
 - Introduction to the Responsible Conduct of Research
 - Research Misconduct
 - Use of Human Subjects in Research
 - Use of Animals in Research
 - Data Acquisition and Management
 - Responsible Authorship
 - Peer Review
 - Mentoring
 - Conflicts of Interest
 - Collaborative Research
 - Human Subjects Research:
 - Institutional Review Board Training (medical and non-medical), made available via the CITI program
 - UA AAHRPP GUIDANCE Document: Responsible Conduct of Human Subject Research

- Humane care and use of laboratory animals:
 - Working with the IACUC (Institutional Animal Care & Use Committee), made available via the CITI program
 - Laboratory Animal Training Association (LATA) modules for Lab Animals
 - Laboratory Animal Training Association (LATA) module for Occupational Health and Safety
- Office of Research Integrity (ORI) RCR Program for Postdocs - http://www.nationalpostdoc.org/site/c.eoJMIWOBIRH/b.2625523/k.5BD7/Bring_RC_R_Home_Project.htm
- Lab Safety
 - UA Environmental Health and Safety provided training in general lab safety/chemical hygiene.
 - UA Environmental Health and Safety provided additional lab specific training as Biological Safety, Laser Safety and Radiation Safety as needed.
- Lab Management
 - On-line laboratory management training can be found on the ORI website - http://ori.dhhs.gov/education/products/rcr_general.shtml
- Export Control
 - **EAR** (Export Administration Regulations) - Dual Use/Commercial Technologies
 - Training through the BIS Online Training Room <http://www.bis.doc.gov/seminarsandtraining/seminar-training.htm>
 - **ITAR** (International Traffic in Arms Regulations) - Military/Space Technologies
- Other Professional Development
 - Individual mentoring of the postdoctoral researcher including formal evaluations, at least annually, of the performance of the postdoctoral researcher*
 - Resources provided by the UA Office for Technology Transfer, including individual consultation, for identification and development of Intellectual Property
 - Career advancement
 - University Career Center resource for Resume and Curriculum vitae writing and Salary Negotiation
 - Individual Negotiation counseling

III. Other Resources

* An annual review and an [Individual Development Plan for Postdoctoral Fellows](#), developed by Federation of American Societies for Experimental Biology (FASEB), provide a planning process that identifies both professional development needs and career objectives.

The American Association of Medical Colleges (AAMC) has created a [Compact between Postdoctoral Appointees and Their Mentors](#), which is "intended to initiate discussions ...about the postdoctoral appointee-mentor relationship and the commitments necessary for a high quality postdoctoral training experience." The AAMC suggests various ways it can be used in order to create mutual expectations for training between postdocs and their mentors.

National Academy of Sciences, National Academy of Engineering, Institute of Medicine, "Enhancing the Postdoctoral Experience for Scientists and Engineers: A Guide for Postdoctoral Scholars, Advisers, Institutions, Funding Organizations, and Disciplinary Societies," - <http://www.nap.edu/openbook.php?isbn=0309069963>

National Academy of Sciences, National Academy of Engineering, Institute of Medicine, "On Being a Scientist: A Guide to Responsible Conduct in Research." Updated March 27,2009, "The volume offers researchers — particularly early-career scientists and their mentors — guidance on how to conduct research responsibly, avoid misconduct such as fabrication and plagiarism, and think about how to respond in complex ethical situations."

<http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=12192>.