Office of Research

Mentoring and Training of Postdoctoral Researchers

Background

Effective January 5, 2009, NSF will require all proposals that include a postdoctoral researcher on the budget to include a description of mentoring activities that are planned for that postdoc. Below are excerpts explaining that requirement from the <u>New Grant Proposal</u> <u>Guide (http://www.nsf.gov/pubs/policydocs/pappguide/nsf09_1/gpg_sigchanges.jsp)</u>, *Effective January 5, 2009*.

Mentoring Requirement for Postdoctoral Research Fellows

[From GPG Summary of Significant Changes] "Chapter II - Section C.2d(i), Project Description, has had entirely new guidance added regarding mentoring activities. This was done to address the mentoring requirement of the America COMPETES Act. Each proposal that requests funding to support postdoctoral researchers must include, as a separate section within the 15-page project description, a description of the mentoring activities that will be provided for such individuals. Examples of such activities are provided and the mentoring plan will be evaluated during the merit review process, under the Broader Impacts criterion. Proposals that do not include a separate section on mentoring activities within the Project Description will be returned without review. The Proposal Preparation Checklist (Exhibit II-1) and Chapter IV.B. on Return without Review have been updated to reflect that."

[From GPG Chapter II - Section C.2d(i)] "Each proposal that requests funding to support postdoctoral researchers must include, as a separate section within the 15-page Project Description, a description of the mentoring activities that will be provided for such individuals. 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 do not include a separate section on mentoring activities within the Project Description will be returned without review."

At the University of California, postdoctoral experience emphasizes scholarship and continued research training under the oversight of a faculty mentor.

"Faculty mentors are responsible for guiding and monitoring the advanced training of Postdoctoral Scholars. In that role, faculty mentors should make clear the goals, objectives, and expectations of the training program and the responsibilities of Postdoctoral Scholars. They should regularly and frequently communicate with Postdoctoral Scholars, provide regular and timely assessments of the Postdoctoral Scholar's performance, and provide career advice and job placement assistance." (<u>Academic Personnel Manual 390-6 - Responsibility</u> (<u>http://www.ucop.edu/acadadv/acadpers/apm/apm-390.pdf</u>).

What is mentoring?

Scientific mentoring is a personal, one-on-one relationship between a more experienced scientist and a junior scientist through which the trainee receives guidance and encouragement that contributes to professional development.

Why should you be a good mentor?

Good mentoring should be viewed as an essential ingredient for ensuring that the postdoctoral-mentor relationship is professionally productive Mentors also often mention deriving personal satisfaction in helping nurture the next generation of scientists.

Traits of a good mentor

- Accessibility: An open door and an approachable attitude.
- Empathy: Personal insight into what the trainee is experiencing.
- Open mindedness: Respect for each trainee's individuality and for working styles and career goals that may be different from those of the mentor.
- Consistency: Acting on your stated principles on a regular basis.

• *Patience*: Awareness that people make mistakes and that each person matures at his or her own rate.

• *Honesty*: Ability to communicate the hard truths about the trainee's chances of success.

• Savviness: Attention to the pragmatic aspects of career development.

• Trust: As a mentor you are privy to considerable information about your trainee,

including accomplishments, failures, financial situations and possibly even

personal information. Information should be treated as confidential so your

trainees feel they can trust you and share their ideas and problems with you.

Strategies for Effective Mentoring in your Lab

- Make everything a learning opportunity
- Set specific goals and measures of accomplishment
- Encourage strategic thinking and creativity
- Uphold professional standards
- Impart skills
- Provide networking opportunities
- Give moral support

Example Postdoctoral Researcher Mentoring Plan for an NSF Proposal

(http://research.ucmerced.edu/docs/Example Postdoctoral Researcher.doc)

Literature and Resources on Mentoring of Postdocs

• National Academy of Sciences Report, "<u>Enhancing the Postdoctoral Experience for</u> <u>Scientists and Engineers: A Guide for Postdoctoral Scholars, Advisers, Institutions, Funding</u> <u>Organizations, and Disciplinary Societies (http://books.nap.edu/catalog.php?record_id=9831#toc)</u>," 2000. (available to read free online) - see particularly Chapter 8.

• "Learning to Mentor (http://www.nature.com/naturejobs/2005/050721/full/nj7049-436a.html)," by Virginia Gewin, on naturejobs.com

• The Federation of American Societies for Experimental Biology (FASEB) Individual

<u>Development Plan for Postdoctoral Fellows (http://opa.faseb.org/pdf/idp.pdf)</u> and <u>Policy</u> <u>Statement (http://opa.faseb.org/pdf/QReports/July-Sept08/MentoringRGrants.pdf) (pdfs)</u>.

Another presentation of FASEB's Individual Development Plan

(http://www.case.edu/provost/gradstudies/docs/IDP%20Instructions%202008-09.pdf) (IDP) process by the Case Western Reserve University Office of Postdoctoral Affairs in a different format (pdf).
Making the Right Moves: A Practical Guide to Scientific Management for Postdocs and New Faculty (http://research.ucmerced.edu/docs/moves2.pdf) - see particularly Chapter 5

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