Developing a Postdoctoral Mentoring Plan

Postdoctoral mentoring typically includes support for maximizing research skills and productivity as part of professional development as well as assistance in preparing for career success. Today postdocs need to consider all of their career options (academia, industry, nonprofit, governmental), and so effective mentoring becomes even more essential to their success.

Postdoctoral mentoring plans can provide a blueprint for the critical professional guidance that has been shown to be a key indicator for a successful postdoctoral outcome (Sigma Xi Postdoc Survey, 2004-05). Effective mentoring can lead to more independent, productive and satisfied postdocs. Mentoring plans also can be used to satisfy recent requirements by the National Science Foundation (NSF) on proposals that include support for postdocs.

This toolkit is a document-in-progress and will be continually improved and expanded. Your feedback and input is desired and needed. Just e-mail the Executive Director. Thank you.

Please note: The recommendations and suggestions for a mentoring plan made herein have not been endorsed by the NIH, the NSF, or any other government organization. The National Postdoctoral Association (NPA) is providing this toolkit of best practices as a service to its members.

Mentoring Plan "How To"

Developing a mentoring plan does not have to be complicated or time-consuming. The four essential elements of an effective mentoring plan are:

1. Provide a national voice and seeking positive change for postdoctoral scholars.
2. Structure for Every Mentoring Plan
   - The two primary features of any mentoring plan should be (1) professional development, including research development, and (2) career development. The former involves helping the postdoc become a productive and independent researcher, and the latter involves providing guidance and resources for identifying and achieving the next career milestone. Within professional development, core competencies should be considered.

   1. PROFESSIONAL DEVELOPMENT
      - Don’t try to do it all; use the Competency Checklist to identify strengths and challenges and focus on the challenges.
      - Describe how you will provide initial orientation to the lab or research group, including topics such as group meeting schedule, working hours, notebooks, standard operating procedures for techniques, ordering supplies. Consider including general expectations as part of this orientation as well. Ideally there will be a written document that covers these topics, but a face to face meeting would be satisfactory. Will new postdocs receive a copy of grant proposals (funded or not funded) to familiarize them with the scientific approach of the PI?
      - Meet regularly with your postdocs to discuss progress on their research including: review of original data; data collection issues; additional experiments to be performed or data to be collected; data analysis and interpretation; and dissemination of results. Describe the frequency and format, whether these meetings are individual; some postdocs may need more frequent meetings than others. Take care not to let the research work take over the conversation; stay focused on the development of the person.
      - Conduct a final evaluation.

   2. CAREER DEVELOPMENT
      - Discuss career goals with your postdocs and describe how you can help them to reach these goals. The postdoc self-assessment will help to identify potential career options.
      - Become knowledgeable about the current job market for your postdocs so that you can provide meaningful input. For career avenues outside your experience, identify other sources of information on career paths and outcomes; a career center or counselor; colleagues; or your professional society. Articulate your intention to provide this input as well as any other sources you think might be helpful.

   Evaluating Postdocs
   - Consider using the NPA’s Postdoc Office Toolkit article on "Evaluating Postdocs" for additional guidance at http://www.nationalpostdoc.org/jdo-toolkit (NPA membership required).
   - Facilitate conference and meeting attendance where postdocs can present their work and expand their networks. Where possible, describe these opportunities by name. Consider including travel funds within the grant to support such activities.

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Mentoring Activities
In addition to the core mentoring activities above, the following are suggestions for other types of activities that could also be included in a mentoring plan.

Opportunities within the Research Group

PROFESSIONAL DEVELOPMENT

- Encourage your postdocs to attend professional and career development programming at their institution or professional society meetings. Describe these activities within the plan. Providing explicit encouragement and approval of such activities can significantly influence whether or not a postdoc will feel that it is appropriate to participate. Potential sources for such programs are included in the next section.

Opportunities at the Institution

PROFESSIONAL DEVELOPMENT

- Help your postdocs with core skill development. A useful guide to the core competencies postdocs should master at this stage of their career is the NPA's Postdoctoral Core Competencies.
- Offer training and hands-on experience in grant writing by collaborating with your postdocs on future proposals.
- Provide opportunities for your postdocs to mentor students in the research group, which can provide them with useful supervisory and teaching experience. Couple this with guidance on effective mentoring and management skills.
- Provide guidance and training in successful presentation skills through presentations at group meetings, journal clubs, and/or department colloquia.
- Review with your postdocs the Compact between Postdoctoral Appointees and Their Mentors, a mentoring tool developed by the Association of American Medical Colleges (AAMC). Jointly agree to honor the commitments described therein.

CAREER DEVELOPMENT

- As possible, provide input and feedback on your postdocs' job search preparation, such as curriculum vitae (CV) development, drafting a research statement and teaching philosophy, practicing presentations, or rehearsing interviews.

Opportunities Outside the Institution

PROFESSIONAL DEVELOPMENT

- Find ways to expose your postdocs to your professional networks, such as introducing them to your collaborators and involving them in community planning or working groups.
- Provide opportunities for your postdocs to expand their technical skill sets and broaden their networks by sending them to other facilities or labs to learn new techniques.
- Encourage your postdocs to participate in professional development programs sponsored by your professional societies, such as grant-writing workshops at disciplinary society meetings.

http://www.nationalpostdoc.org/publications/mentoring-plans/mentoring-plan
- Recommend your postdocs as speakers or session chairs at regional, national and international conferences. Such opportunities can both broaden their networks as well as improve their presentation skills.
- Recommend your postdocs as manuscript reviewers to the journal editors with which you work.
- Encourage postdocs to attend the National Postdoctoral Association’s Annual Meetings, which offer professional development workshops for the individual postdoc as well as opportunities to network within the broader postdoctoral community.
- Help your postdocs identify other resources for professional growth, such as personal coaching.

CAREER DEVELOPMENT

- Encourage your postdocs to participate in career development programs sponsored by your professional societies, such as resume workshops at disciplinary society meetings.

Appendices

NSF Mentoring Requirements
Mentoring Resources
Mentoring Resources: International Postdocs