

Sample Template Language for Grant Proposals

The following information and sample text is provided as a guide for principal investigators/mentors developing and submitting mentoring and training plans in research proposals. Because the requirements deal with postdoctoral fellows, graduate students, residents, and undergraduates, the term trainee will be used in this section to refer to individuals in those classes. Investigators/Mentors are encouraged to personalize the section to the specifics of their own labs / project groups and disciplines, as well as the role and career stage of the trainee(s) involved.

Mentoring Plans for Postdoctoral Fellows

The act of mentoring should assist the postdoctoral fellow in attaining the skills, knowledge, and experience to become independent researchers. This 'real world' training and guidance varies depending upon the discipline, the individuals involved in the mentoring relationship and the career goals of the postdoctoral fellow. Through a combination of personal exchanges and structured activities, the mentor and mentee can mutually benefit.

Key elements of the mentoring plan are the Individual Development Plan, which would include:

- career counseling;
- training in preparation of grant proposals, publications and presentations;
- guidance on ways to improve teaching and mentoring skills and provision of opportunities to practice teaching and mentoring skills;
- guidance on collection and interpretation of research results;
- guidance on how to effectively collaborate with researchers from diverse backgrounds and disciplinary areas;
- training in responsible professional practices, including those options described in the previous section;
- how frequently mentors will meet individually with mentees;
- how frequently mentors will meet collectively with mentees;
- support provided for travel to national and international meetings in order to further career networking and ability to present research results; and
- annual performance review and any interim reviews conducted throughout the year.

The American Association for the Advancement of Science (AAAS) hosts an interactive, online career planning tool to guide users through the process of self-assessment, career exploration, and setting short- and long-term goals. There is no charge to use the site (<http://myidp.sciencecareers.org/>).

The National Postdoctoral Association provides career planning resources (<http://www.nationalpostdoc.org/careers/career-planning-resources>) and mentoring plans (<http://www.nationalpostdoc.org/publications/mentoring-plans>).

The Federation of American Societies for Experimental Biology (FASEB) has also created sample mentoring plans to assist mentors in this process. The examples included below can provide a framework for investigators to develop language for their mentoring plans.

Sample 1

Source text from FASEB website modified for Mississippi State University, portions that are specific to a research group and would require additional modification are emphasized.

Postdoctoral scholars working in my laboratory will conduct research on the [insert research area]. Under my mentorship, they will learn to formulate and test hypotheses related to the acquisition, consolidation, and retrieval of [insert research area]; develop expertise in [provide categorical description of methods/techniques] techniques, including [list relevant techniques]; and acquire expert knowledge of the scientific literature in our research area.

At the start of their training, postdocs will be required to [Pick one: complete the Mississippi State University RCR training requirement which consists of an online course covering: research misconduct, data acquisition, management, sharing and ownership, publication practices, responsible authorship, peer review, mentor/trainee responsibilities, conflict of interest and collaborative research and quarterly seminars in RCR related topics; OR insert description of approved alternative]. The Office of Research Compliance also hosts monthly seminars on topics such as grant writing, lab management, research ethics, networking and interviewing, and teaching. In addition, our institution has demonstrated a strong commitment to creating a high quality research training environment.

To foster open and clear communication with my postdocs, I will provide them with the [Pick One: Association of American Medical Colleges' Compact Between Postdoctoral Appointees and Their Mentors (found at <https://www.aamc.org/initiatives/research/postdoccompact/>); insert unit/department specific agreement between post docs and mentors], which describes the commitments both they and I are expected to make in order to ensure an effective postdoctoral training experience. We will discuss these expectations and the steps we will take to achieve the goals of the agreement at the start of the postdoctoral appointment. I will also help my postdocs complete an individual development plan in order to identify and work toward their short-and long-term career goals.

Because effective communication of research findings is an essential component of scientific success, I will help my postdocs hone their communication skills by writing research articles and developing oral and poster presentations for lab meetings, department seminars, and scientific meetings. I will also help them to prepare their own research grants and involve them in the development of mine. Finally, I believe that all trainees benefit from the perspectives and guidance of multiple mentors; therefore, while I will serve as my postdocs' primary advisor, I will encourage them to seek additional mentors within and outside our institution.

Sample 2

Source text from FASEB website modified for Mississippi State University, portions that are specific to a research group and would require additional modification are emphasized.

Scientific and technical skills

- Post Docs will contribute to research on [insert research area].
- They will work under my guidance and with assistance from senior lab members and faculty collaborators to develop the scientific and technical skills necessary to carry out this research program.
- In the course of this research, they will develop expertise in [provide categorical description of techniques] techniques, including [insert listing of techniques]. These skills will have broad applicability to other areas of research and will be an immense benefit to Post Docs as they establish their own laboratories.
- Post Docs will add to their scientific knowledge by reading and discussing scientific literature with me and other members of the lab and participating in journal clubs and seminars related to this research.

Career planning and professional development

- I will work with Post Docs to design an individual development plan describing their research, training, and career goals as well as the approaches they will take to achieve those goals. We will review and revisit this plan on a regular basis.
- I will meet weekly with Post Docs to discuss their progress on research projects and to identify and resolve any difficulties carrying out their work.
- Post Docs will be encouraged to attend workshops on responsible conduct of research, career opportunities, resume writing, and interview skills.
- Travel to at least two conferences each year [name conferences here] (travel funds are included in the budget), with the goal that the postdoctoral fellow present a poster or paper at the conference.

Communication skills

- Post Docs will improve their ability to communicate research findings by presenting and obtaining feedback on their research at regularly scheduled lab meetings.
- Post Docs will also have an opportunity to present their research at our departmental series at which faculty, graduate students, Post Docs, and invited speakers present on a rotating basis.
- Post Docs will be encouraged to give poster and oral presentations during the [insert appropriate venue].
- I will help Post Docs enhance their writing skills by working with them to develop research reports and review articles.
- Post Docs will be invited to join me in teaching a seminar on our research topic. This will give them experience presenting complex scientific information to an audience of non-experts, and it will provide valuable teaching experience.

Grants management

- I will involve Post Docs in the preparation of new grant applications and competing renewals.
- I will encourage Post Docs to apply for independent research support, such as a [insert appropriate grant examples] award. I will provide guidance as they develop these grant applications.

Laboratory management

- Post Docs will be required to receive training in [insert appropriate training: RCR (mandatory inclusion), environmental health and safety, animal welfare, human subjects].
- Post Docs will be involved in day-to-day management of lab operations (e.g., ordering laboratory supplies, overseeing the lab budget, maintaining research equipment and facilities, ensuring compliance with safety standards).
- Post Docs will be involved in training and mentoring undergraduate and graduate students.
- Post Docs will have a role in recruiting and interviewing new students and employees to the lab.