

## **FASEB Statement on Including Postdoctoral Mentoring Plans in Research Grant Applications**

The National Institutes of Health (NIH) and the National Science Foundation (NSF) define postdoctoral scholars as individuals engaged in temporary periods of mentored advanced training to enhance the professional skills and research independence needed to pursue their chosen career paths.<sup>1</sup> Consistent with this definition, these agencies typically require postdoctoral training grant and fellowship applicants or their sponsors to describe the training, mentoring, or career support that postdocs funded on those grants would receive. Until recently, neither agency required research grant applicants to include a plan for training and mentoring postdocs supported on their grants. The 2007 *America COMPETES Act*,<sup>2</sup> however, requires NSF-funded investigators to describe in their research grant applications how they would mentor postdocs funded on their grants, and it mandates that this information be evaluated under NSF's broader impacts merit review criteria. Investigators are also required to describe their mentoring activities in their annual and final grant reports. The National Institute of General Medical Sciences may adopt a similar policy: according to its 2008 strategic plan,<sup>3</sup> the institute will consider "implementing a 'broader aims' component of research project grant applications that explicitly evaluates an investigator's training, mentoring, and diversity activities."

FASEB supports efforts to improve postdoctoral training and believes that training and mentoring postdocs is a joint responsibility of institutions and investigators. Investigators should have a plan for training and mentoring postdocs supported on their research grants, and training institutions should have oversight for the development of these plans. In particular, training institutions should have guidelines as to what constitutes an appropriate plan, review investigators' plans, and, if requested, communicate to funding agencies that investigators have submitted a plan consistent with their guidelines. Funding agency staff and peer reviewers should not be charged with reviewing and evaluating these plans. The development and review of postdoctoral training plans should be instituted in ways that minimize the administrative burden placed upon individual investigators and postdocs. What follows is a more detailed discussion of FASEB's perspective on this issue, including practical guidelines for successfully implementing such a policy.

***Postdoctoral appointments are training positions.*** FASEB affirms that postdoctoral appointments are preparatory positions for which research training under the supervision of a mentor is the primary purpose.<sup>4</sup> FASEB's view that all postdocs are trainees is reinforced in its policy statements, development and promotion of the *Individual Development Plan for Postdoctoral Fellows*,<sup>5</sup> and endorsement of the Association of American Medical Colleges' (AAMC) *Compact Between Postdoctoral Appointees and Their Mentors*.<sup>6</sup>

***Mentoring is a critical component of postdoctoral training.*** Although postdocs have primary responsibility for their careers, mentoring is an important component of their training. Postdocs should receive scientific and professional guidance, access to career development resources, and opportunities to develop and receive feedback on training and career plans. One study suggests that providing postdocs with structured oversight, including the opportunity to develop training plans, benefits both postdocs and their research advisors: such postdocs published more papers, expressed greater satisfaction, reported fewer disputes with their advisors, and rated their advisors more highly than those who did not.<sup>7</sup>

***Investigators are responsible for mentoring postdocs trained on their research grants.*** As stewards of grant funds, principal investigators (PI) are responsible for overseeing grant activities and ensuring that all funds, including those provided for postdoctoral training, are used as intended. It is both appropriate and possible for PIs to train and mentor postdocs effectively while carrying out the research aims of the grant on which their trainees are funded. Institutions and funding agencies should facilitate these goals by enabling postdocs and their mentors to dedicate time to these activities while supported on research grants.

***Investigators should have a training and mentoring plan for postdoctoral scholars supported by their research grants.*** Research grant applicants who request funding for postdoctoral scholars should develop a plan for training and mentoring those postdocs. Because postdocs supported by the same grant experience similar training environments, a single training plan for all postdocs supported on research grants should suffice. The process of constructing a training and mentoring plan encourages investigators to consider the professional development needs of their postdocs and helps them to determine the best way to provide the necessary support.

***Institutions should provide guidance to investigators on the development of mentoring plans.*** Institutions should develop guidelines for postdoctoral training and they should help their

investigators develop meaningful plans suited to their postdocs' career goals, while minimizing the burden imposed on investigators. Plans should address, as applicable, how postdocs will acquire training in the following areas: scientific and technical skills; grants management; laboratory management (including responsible conduct of research); communication skills; and career planning and professional development. Mentoring plans should also address how investigators will assess progress toward these goals (e.g., by conducting regular performance evaluations). To be sure, many postdocs already receive such preparation as part of their research training, and institutions may offer a variety of resources and services to assist in this regard. Institutions should make investigators aware of these opportunities, as well as those available through other organizations. Documents such as *The NPA Postdoctoral Core Competencies*,<sup>8</sup> AAMC's *Compact Between Postdoctoral Appointees and their Mentors*, and FASEB's *Individual Development Plan for Postdoctoral Fellows*, can provide a useful framework to help institutions and investigators develop effective plans.

***Investigators should have flexibility in the development of their mentoring plan.*** There are many ways to effectively mentor trainees; a single approach may not be successful in every trainee-mentor relationship. The purpose of having investigators develop a general mentoring plan that acknowledges institutional guidelines is not to formally evaluate their training and mentoring capabilities. Rather, it is to encourage them to refine their own mentoring strategies, identify the needs of their trainees and explore the training and career resources available to them. Although institutions should provide investigators with guidelines for developing a plan, they should also ensure that they have the flexibility to develop plans tailored to their circumstances.

***Institutions and funding agencies should work together to promote mentoring.*** Funding agencies should encourage their grantees to have a general plan for training and mentoring postdocs supported on research grants. However, these plans should be filed with and evaluated by the investigator's institution, not the agency through which the grant is funded. Under such a policy, investigators would submit their plan to their institution, which would, through its office of sponsored research or other appropriate entity, review and evaluate the plan based on established *institutional* guidelines. To the extent that any funding agency so requests, institutions would be responsible for reporting that an appropriate plan had been submitted. (Reporting should be as simple as completing a check box for each research grant

application.) This policy would ensure that investigators develop a plan that is consistent with their institution's guidelines and the resources and opportunities available to them, while minimizing the addition of administrative requirements. Oversight of mentoring activities should be in the hands of people able to observe it firsthand, and should not require assessments to be made by agency staff or peer reviewers.

*Approved by the FASEB Board of Directors on September 2, 2008*

## References

- 
- <sup>1</sup> National Institutes of Health and National Science Foundation (2007). *NIH-NSF Definition of Postdoctoral Scholar*. [http://grants1.nih.gov/training/Reed\\_Letter.pdf](http://grants1.nih.gov/training/Reed_Letter.pdf) (accessed May 20, 2008).
- <sup>2</sup> GovTrack.us. H.R. 2272--110th Congress (2007). *America COMPETES Act*. <http://www.govtrack.us/congress/bill.xpd?bill=h110-2272> (accessed May 20, 2008).
- <sup>3</sup> National Institutes of General Medical Sciences (2008). *Investing in Discovery: National Institute of General Medical Sciences Strategic Plan 2008–2012*. <http://www.nigms.nih.gov/About/StrategicPlan/> (accessed May 20, 2008).
- <sup>4</sup> Federation of American Societies for Experimental Biology (2002). *FASEB Postdoctoral Fellow Definition*. <http://opa.faseb.org/pdf/pstdocdef.pdf> (accessed May 20, 2008).
- <sup>5</sup> Federation of American Societies for Experimental Biology (2002). *Individual Development Plan for Postdoctoral Scholars*. <http://opa.faseb.org/pdf/pstdocdef.pdf> (accessed May 20, 2008).
- <sup>6</sup> Association of American Medical Colleges (2006). *Compact Between Postdoctoral Appointees and Their Mentors*. <http://www.aamc.org/research/postdoccompact/start.htm> (accessed May 21, 2008).
- <sup>7</sup> Davis, G (2005). Doctors Without Orders. *American Scientist*, 93(3, supplement). <http://postdoc.sigmaxi.org/results/> (accessed August 14, 2008).
- <sup>6</sup> National Postdoctoral Association (2008). *The NPA Postdoctoral Core Competencies*. <http://www.nationalpostdoc.org/site/c.eoJMIWOBIRH/b.4027621/> (accessed May 20, 2008).