

In 2005, the National Academies of Science issued a report, entitled “Advancing the Nation's Health Needs: NIH Research Training Programs,” which evaluates the current state of biomedical research in the United States and makes recommendations to improve it. Within the document, data were presented and discussed and a series of recommendations were suggested as possible scenarios for reform within the National Institutes of Health (NIH). As the primary advocate for postdoctoral scholars in the United States of America, the National Postdoctoral Association (NPA) issues this response to the suggestions put forth in the document.

Although the report contained a number of recommendations, the following are those that the NPA believes show the greatest promise for change and benefit to postdoctoral scholars, as they contribute to the research enterprise.

### **Data Collection for Career Outcomes**

In Recommendation 10-2, the Committee suggests the NIH develop a method by which career outcome data be developed. The NPA believes that the collection of data concerning current researchers and their ultimate career outcomes should be the highest priority. While the report contains comments from the Committee which consider the current system to be in ‘reasonable balance,’ the paucity of reliable quantitative data makes such an assessment suspect. The NPA believes that only through the collection and dissemination of data concerning career outcomes can a truly quantitative analysis be performed.

### **Extension of Employee Benefits**

In Recommendation 9-3, the Committee suggests that the NIH attempt to develop a system by which National Research Service Award (NRSA) fellows receive the same benefits as employees at their home institutions. The NPA believes this is a laudable goal, and recommends that the NIH adopt and promulgate a policy that all NIH-supported postdoctoral scholars should receive benefits similar to other institutional employees in similar positions. The NPA believes that postdoctoral researchers are so vital to the health of the scientific enterprise that all should be afforded benefits commensurate with their education, experience and contribution to the research enterprise of the United States.

### **Interdisciplinary Research**

In Recommendations 8-2 and 8-3, the Committee suggests targeting NRSA awards for emerging fields and interdisciplinary research as well as requiring the teaching of quantitative sciences to those in the biomedical fields. In an increasingly competitive employment market, the NPA believes that such initiatives are necessary and beneficial to the postdoctoral community. The Association believes that by fostering research into new areas and training young scientists in quantitative fields, some of the difficulties in obtaining long term employment and job satisfaction may be alleviated.

### **Point of Contention**

The NPA recognizes the need for a strong and diverse biomedical workforce for the future. Such a workforce is necessary not only for the economic health of the United States, but also the advancement of science at large. And while the NPA agrees with many of the recommendations put forth by the committee, one statement within the Committee's report is troubling:

"Taking into account workforce models and all other known factors, this committee finds the following: (1) the system is currently in reasonable balance, and (2) despite the emergence of new and unanticipated factors over the next six years, the system will adapt toward a balanced state unless major policy changes are made in the patterns of federal research support. This means that unemployment among trained researchers should remain low and that most of the trained personnel will remain in science."

While the NPA recognizes the large amount of time and effort invested to analyze data and use workforce models, we respectfully suggest this position is overly sanguine and has overlooked issues addressed by other National Academy of Science panels.<sup>1</sup> Most notably, this report focuses on one side of the supply-demand equation. As reported by the committee (Figures 2-3 and 2-4) the number of doctorates awarded and number of postdoctoral researchers has been increasing. However, there is a paucity of data included in the report illustrating the decrease in tenure track positions to which many young scientist aspire. Similarly, there is scant discussion of the low pay and poor benefits that are endured by many postdoctoral researchers. Such oversights, in light of the statement above, raise great concern within the NPA.

In addition, from the statement it appears the committee may implicitly believe that employment as a postdoctoral scholar for an extended period of time is part of "a reasonably balanced system." The NPA's position on the postdoctoral appointment is that it is a time of training that is fixed in duration. However, for many postdocs, this position is not one of training and advancement, but the only alternative for recent PhDs who want to stay in a research environment.

As data have shown, a career as a scientist is becoming less attractive to the best U.S. students.<sup>1,2</sup> The NPA believes that the Committee ignores at its own peril the increasing dissatisfaction many young scientists experience as they struggle to procure the jobs they are trained to perform. As noted by Dr. Straus,<sup>3</sup> failure to retain the current cadre of scholars will result in a loss to the U.S. public as investments in manpower go unrealized. Only by recognizing that the system is in a non-equilibrium state can positive change occur and the current dissatisfaction be overcome.

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<sup>1</sup> National Academy of Sciences, *Bridges to Independence: Fostering the Independence of New Investigators in Biomedical Research* (National Academy Press Washington, DC 2005)

<sup>2</sup> American Society for Cell Biology, *Careers and Rewards in Bio Sciences: the disconnect between scientific progress and career progression*, 2001

<sup>3</sup> J. Straus III, *Science* 309, 851 (2005)