American Physiological Society

Response to Request for Information (RFI): Inviting Comments and Suggestions on the Implementation of the Recommendations of the Advisory Committee to the NIH Director Working Group on the Biomedical Research Workforce (NOT-OD-13-045)

The American Physiological Society (APS) appreciates the opportunity to comment on the Request for Information (RFI): Inviting Comments and Suggestions on the Implementation of the Recommendations of the Advisory Committee to the NIH Director Working Group on the Biomedical Research Workforce (NOT-OD-13-045). In addition to our own comments, the APS endorses the comments of the Federation of American Societies for Experimental Biology (FASEB), which were submitted separately.

The APS has a strong commitment to training the next generation of physiologists because we believe that the continued success of the American biomedical research enterprise depends on a well-trained and diverse workforce that is prepared to meet the country’s need for individuals with scientific training.

As the NIH works to develop a sustainable model for training and education, the APS urges consideration of how any policy changes will impact researchers at all stages of their careers, from trainees to early-career, mid-career and senior investigators. In these challenging financial times, the work of all scientists who rely on federal funding to support their research programs are at risk. The NIH should strive for a balanced approach that takes into account the effect upon investigators at all career stages and the downstream impact on the long-term productivity of the biomedical research enterprise.

Below we offer our comments on the specific areas outlined in the RFI.

Individual Development Plans (IDPs)
- The APS endorses the use of IDPs as a useful tool for career planning and development for all trainees, regardless of source of support and of ultimate career goals. The online resources available at http://myidp.sciencecareers.org/ provide an easily accessible starting point.
- Mentors should commit to actively engage in the process with their trainees.
- IDPs should be developed early on in the training experience, and be revised yearly to reflect progress and changing priorities.
- Institutions should be responsible for ensuring that trainees use IDPs, and the NIH should avoid imposing burdensome documentation requirements.

Length of NIH support for graduate student training
- The APS endorses the idea of encouraging timely completion of degree and agrees that in general an upper limit of 6 years of support is a reasonable standard.
- Since some trainees may require a longer training period due to unique aspects of their research project or extenuating circumstances, there should be a process by which trainees can seek additional supported time. Extenuating circumstances include, for example, personal illness, family responsibilities, and other disruptions including a change of research mentor.
- Similarly we support encouraging a timely transition for post-doctoral fellows to permanent positions. Many institutions already have in place policies that require regular review of
postdoctoral fellowships. The APS endorses the idea of regular review to assess progress and future plans. At a minimum, after a period determined by the institution (e.g. three to five years) the trainee’s progress should be assessed and a decision made as to whether the trainee is ready to end the fellowship and move into a more permanent position. If not, there should be a clear rationale if the fellowship is to be continued, with clear objectives to determine its end point.

**Post-doctoral benefits**

- The APS supports providing benefits to post-doctoral fellows and believes that benefits packages should be similar to what is offered to permanent employees at each institution. Benefits should at a minimum include health, dental, retirement, sick leave and parental leave.
- All post-doctoral fellows at a given institution should have access to the same or comparable benefits regardless of source of support. For trainees with outside sources of funding, institutions should seek ways to provide benefit packages.
- Information on benefits packages should be made available to fellowship applicants during the application process.

**Gathering information on NIH-supported graduate students and postdoctorates**

- The APS is concerned that it would be costly and inefficient to develop a new system for gathering information from former trainees. Rather, NIH should consider establishing a broader collaboration with NSF’s Survey of Earned Doctorates (SED). While after the initial survey the SED looks at only a percentage of doctoral degree holders over the long term, if the NIH were to provide supplemental funding, NSF might be willing to collect additional follow-up data from NIH-supported trainees. By partnering with the SED, the NIH could take advantage of existing capabilities and avoid startup costs associated with developing a new system.
- Development of a new information gathering system would require careful planning, and any effort should be representative and have a specific purpose. It should include a plan for data analysis and quality monitoring.
- Long term tracking of former trainees is a significant challenge because those who leave the NIH system have no incentive to provide the information. There are additional downsides should individual institutions be required to collect this information. First, this would be an unfunded mandate with a considerable administrative burden. Smaller institutions would be less likely to be able to implement it systematically. Additionally, tracking programs administered by hundreds of institutions will produce a database that is less representative and less consistent than would one, consistently-administered, national program.

**Institutions reporting career outcomes**

- The APS supports the concept of reporting career outcomes for training programs, but as referenced in the response about gathering information, long term tracking of former trainees is exceptionally difficult and almost certainly costly, both at the outset and in the long term due to added administrative burden.
- Another strategy would be to ask that former trainees who later seek NIH grant support to provide career outcome information as part of their application information. However, efforts to adapt the eRA Commons to collect this kind of information should be undertaken with caution to avoid disrupting a system that already has technical limitations. This strategy is not
ideal in that former trainees who pursue careers outside of NIH-funded academic research would not be captured by this method.

- Efforts to report career outcomes for individuals who pursue careers in which they do not receive NIH or other federal funding will be dependent upon the quality of data gathering referred to above.

Training grant review considerations

- The APS strongly believes that the health of the biomedical research enterprise depends on a diverse and well-trained group of individuals who can apply their skills and training to a broad range of careers. To the greatest extent possible, training programs should provide students with exposure to a variety of career paths, including those outside of the traditional laboratory setting.

- It is increasingly clear that a system that trains individuals for a narrow career path (i.e. NIH-funded biomedical research in an academic setting) offers limited employment opportunities and is not sustainable in the long term. While the primary goal of these programs remains to train the best minds so we can advance American science and maintain our place as a world leader in scientific innovation, training should be broadened to enable students to contribute to the rapidly evolving biomedical research enterprise.

- Doctoral degree holders have the skills, knowledge and critical thinking to drive and enhance the scientific enterprise in creative and innovative ways. An individual who is using his or her training and credentials to gain access to and advance in a productive professional career should be considered to have achieved a successful outcome.

NIH support of salaries

- Many researchers are now expected to bring in the majority of their salary on research grants, with little to no salary support from their institution. The APS supports efforts to increase institutional support of faculty salaries, but urges that any changes be carefully considered and phased in over time to allow both institutions and investigators to adjust to a new system. Any sudden changes in NIH support for faculty salaries could lead to a down-sizing of the biomedical research workforce.

- The reduction in salary support from Executive Level I to Executive Level II primarily affects senior investigators, physician scientists and their institutions. While the APS cannot comment directly on the financial impact of the policy change, we are cautious about the possible negative consequences particularly for physician scientists, who have an important role to play in translational research. In addition, sudden changes in support do not give the institutions and investigators the chance to consider ways to adjust.

The APS is a professional society dedicated to fostering research and education as well as the dissemination of scientific knowledge concerning how the organs and systems of the body work. The Society was founded in 1887 and now has nearly 11,000 member physiologists who conduct research at colleges, universities, medical schools, and other public and private research institutions across the U.S.