



ASSOCIATION OF AMERICAN UNIVERSITIES

April 22, 2013

**Re: National Institutes of Health Notice Number: NOT-OD-13-045
Response to Request for Information on the Implementation of the
Recommendations of the Advisory Committee to the NIH Director Working
Group on the Biomedical Research Workforce**

To whom it may concern:

We appreciate the opportunity to comment on suggestions for the implementation of recommendations by the National Institutes of Health (NIH) Advisory Committee to the Director Working Group on the Biomedical Research Workforce (NOT-OD-13-045). The Association of American Universities (AAU) is a non-profit association of 60 U.S. and two Canadian preeminent research universities. Our institutions collectively receive nearly 60 percent of all federal research funds provided to colleges and universities, including more than 60 percent of all NIH awards.

AAU responded to the previous Request for Information (RFI) from the Working Group and believes many of our earlier comments (<http://www.aau.edu/WorkArea/DownloadAsset.aspx?id=12706>) are still relevant to the implementation proposals being considered by the agency. We have responded to the specific proposals and issues addressed in the RFI below. Nonetheless, it should be noted that little in the implementation plan addresses two major issues identified by the Working Group in its June 2012 report: the length of postdoctoral training and the creation of a sustainable research pathway. While AAU recognizes and agrees with NIH's approach to making changes to the way it funds trainees and scientists in a cautious and incremental manner, it is important to acknowledge that these very real issues related to sustainability of the biomedical workforce, which will only be exacerbated as fiscal constraints amplify, will still exist even if NIH implements some of these preliminary proposals.

Individual Development Plans

In general, AAU supports mechanisms that promote productive conversations about degree progress and goals between trainees and their mentors, and that encourage trainees to proactively consider their career pathway and professional aspirations. Individual Development Plans (IDP) can be a useful tool to guide these activities. This may be particularly true for graduate students and postdocs supported on research grants, which typically involve less formal career development structures and programming than training awards.

However, we believe it is important to recognize that the IDP alone is not sufficient to ensure active, engaged mentoring of trainees, which is the ideal to which training programs should aspire. In particular, we are concerned by original recommendation of the Working Group to "require" IDPs and to link implementation of this

Brandeis University
Brown University
California Institute of Technology
Carnegie Mellon University
Case Western Reserve University
Columbia University
Cornell University
Duke University
Emory University
Georgia Institute of Technology
Harvard University
Indiana University
Iowa State University
The Johns Hopkins University
Massachusetts Institute of Technology
McGill University
Michigan State University
New York University
Northwestern University
The Ohio State University
The Pennsylvania State University
Princeton University
Purdue University
Rice University
Rutgers, The State University
of New Jersey
Stanford University
Stony Brook University –
State University of New York
Texas A&M University
Tulane University
University at Buffalo –
State University of New York
The University of Arizona
University of California, Berkeley
University of California, Davis
University of California, Irvine
University of California, Los Angeles
University of California, San Diego
University of California, Santa
Barbara
The University of Chicago
University of Colorado, Boulder
University of Florida
University of Illinois, Urbana-
Champaign
The University of Iowa
The University of Kansas
University of Maryland, College Park
University of Michigan
University of Minnesota, Twin Cities
University of Missouri, Columbia
The University of North Carolina at
Chapel Hill
University of Oregon
University of Pennsylvania
University of Pittsburgh
University of Rochester
University of Southern California
The University of Texas at Austin
University of Toronto
University of Virginia
University of Washington
University of Wisconsin - Madison
Vanderbilt University
Washington University in St. Louis
Yale University

requirement to evaluation of training awards. When the IDP becomes a vehicle of accountability and compliance, there is a danger of transforming what is supposed to be an ongoing, interactive process between trainee and mentor into another “checkbox” compliance exercise by the institution, which would defeat the purpose of requiring the IDP. The more the IDP becomes an accountability exercise, the less useful it becomes for fostering genuine mentorship.

Shortening Time to Degree

AAU and our institutions have long been concerned about increasing time to the doctoral degree, and we share NIH’s concern over the lengthening career pathway from receipt of a college degree in the biological sciences to status as an independent investigator. AAU works very closely with our member’s institutional research officers through the AAU Data Exchange (AAUDE) to improve the quality and usability of information about higher education, including data related to time to degree. We believe that institutions must become more efficient in educating graduate students by increasing completion rates and reducing time to degree for doctoral study. Nevertheless, we do not support NIH’s proposal to cap the length of graduate support for doctoral students.

First, we note that the Working Group found that the time to degree in biomedical Ph.D.s has remained stable for the past 15 years, which leads us to question whether this is a solution in search of a problem. While the recommendation to cap the length of support seems to be based on comparisons to the length of degree in other sciences, such as chemistry and physics, AAU questions whether such comparisons are appropriate. The use of whole organisms, longitudinal studies, increasingly complex questions about the molecular basis of disease, and development of unprecedentedly large data sets for analysis are all valid scientific approaches unique to the life sciences which could contribute to time to degree. Given the fiercely competitive marketplace for biomedical faculty, it may be more common in the life sciences for students to follow mentors to new institutions or be forced to find mentors at their existing institution, which may lengthen the period of doctoral training.

Perhaps most importantly, AAU is concerned that putting an arbitrary cap on support of doctoral students might incentivize sloppy scholarship or lapses in research integrity, as graduate students are driven by the need to complete their research in a pre-set timeframe. We believe the approach outlined in the recent American Chemical Society report, “Advancing Graduate Education in the Chemical Sciences,” which included better monitoring of student progress and greater engagement of faculty and departments in graduate student training as ways to address issues related to time to degree.

Providing Benefits to Postdoctoral Scholars

In 2005, AAU surveyed our member institutions on issues related to postdoctoral education and found, at that time, that the majority of institutions offered some minimum benefits to postdoctoral scholars. However, we have found there is tremendous variation in the benefits provided to postdocs related to their classification as employees or trainees within the institution. Institutions use a wide variety of titles and funding mechanisms for postdoc classification and support, which can make collecting institution wide data on postdocs challenging. AAU has long recommended that institutions develop core policies related to compensation and benefits of postdocs. However, we think it is critical to recognize that issues related to benefits may be complicated by a number of external factors, including state laws related to providing insurance

to non-employees (if postdocs are classified as trainees), union negotiations, and the benefits packages provided to other university staff and faculty.

Data Collection Efforts on Trainees and Institutional Reporting

AAU and our institutions have been on the forefront of promoting and engaging in data collection efforts on graduate students, including data on enrollment by program, time to degree, completion rates, stipends, and career outcomes, as well as encouraging the use of core questions on doctoral exit surveys to improve data comparisons. Much of this work is done through collaboration with AAUDE. Further, we've found that about one-quarter of our institutions report at least some of this data publicly, either at the program or graduate school level.

As supportive as AAU is of these data collection efforts, we find some significant practical challenges to such data collection. Graduate education is often decentralized, with departments and faculty as the primary foci of admission, support, and contact with doctoral students. Coordinating participation of these disparate entities can be extremely difficult, particularly if data collection efforts fall under the purview of the graduate school, which may not have the authority to incentivize or mandate participation. Moreover, such data collection efforts are not without costs, particularly when tracking student outcomes after completion of degree, and institutions may not have sufficient resources to support such efforts. Regarding NIH's proposal to create an electronic data collection system, AAU notes that some institutions have invested significant resources into developing their own electronic systems. As such, it would be critical that any system developed by NIH would be able to interact with existing data infrastructure, to avoid inefficient and costly duplication of effort.

Finally, although AAU believes it is critically important to understand the career outcome of our trainees in order to adjust our training programs, develop institutional comparisons, or to better understand and model the marketplace for our graduates and postdocs, we do not necessarily agree with NIH that the primary goal of publishing such data is "so that individuals contemplating biomedical research training and selecting a training institution would have access to current information about the career outcomes of students and postdoctorates from those institutions." While publishing such data may fulfill the NIH goal, shared by AAU, to provide trainees with more information about the diversity of career outcomes for doctoral degree holders, it is a poor source of information for students making decisions about programs in which to enroll. The marketplace for life scientists can shift dramatically over the course of a multi-year doctoral program or postdoctoral fellowship, depending on many variables, including the federal funding environment, overall economy, and paradigm shifts in the science itself. Furthermore, the entering doctoral student, who has perhaps never been exposed to a full-time, somewhat autonomous research experience, may develop very different career aspirations over the course of his/her studies. Those contemplating training in the biomedical sciences would be far better off making decisions based on other criteria, such as the area of science they are interested in pursuing, the faculty members in those areas they wish to work with, funding support available, and institutional training and career development programs.

Career Outcomes

AAU applauds NIH's proposal to expand the definition of career success in its graduate programs to encompass a wider array of career outcomes. Our graduate deans and institutions have been actively trying to provide more exposure to and opportunities to learn about career

pathways that lay outside of the traditional academic research route. However, the NIH proposal to delineate “types of careers [which] should be considered a successful outcome” gives us pause. There are many career outcomes which ultimately contribute in some way to NIH’s mission to seek basic life science knowledge and apply that knowledge to improve human health and reduce the burdens of disease. These range from research positions in a multiplicity of settings to administrative roles to educators and policymakers. To try to develop a static list of “successful” career outcomes and therefore, almost by definition, categorize those outside of that list as “unsuccessful” or “failures” seems to lack an appreciation for the complex and diverse workforce of the innovation economy.

Information Related to Faculty Salaries

AAU has strongly urged Congress to restore the NIH salary cap to Executive Level I, pointing out that our institutions have been forced to divert funds to compensate for the reduction in the salary limit, taking away from critical activities such as providing bridge funding to investigators who may be between grants, and to provide seed grants and start-up packages for young investigators. We have been particularly worried that the reduction is mostly likely to impact physician scientists and highly productive investigators. AAU is also concerned about NIH’s proposal to further reduce salary report, phased in over a period of time, because we feel it is based on a false perception that NIH-supported faculty are receiving the majority of their salaries from research grants. Current data suggest that NIH and other federal research agencies do provide critical support for salaries, but the majority of salary is still paid by the institutions. A recent survey of its members by the Association of American Medical Colleges showed that the percentage of full-time faculty salaries derived from sponsored-program funds was, on average, only 15.4%. When full-time faculty holding MD degrees are excluded, the figure rises to 32%. This is consistent with NIH’s own data and similar to the results of an annual salary survey conducted by the Association of Chairs of Departments of Physiology, which found that percentage of faculty salary support from federal research grants has declined in recent years (from 38.3% in 2003 to 37.3% in 2009).

Thank you for your consideration of our views.

Sincerely,

A handwritten signature in dark ink, reading "Hunter R. Rawlings III". The signature is fluid and cursive, with a stylized flourish at the end.

Hunter R. Rawlings III
President