April 3, 2022

BY ELECTRONIC SUBMISSION

Response to NIH Request for Information [NOT-OD-22-061]: Inviting Comments and Suggestions on a Framework for the NIH-Wide Strategic Plan for Diversity, Equity, Inclusion, and Accessibility

The American Society for Pharmacology and Experimental Therapeutics (ASPET) appreciates the opportunity to provide comments to the National Institutes of Health (NIH) in response to its Request for Information on its framework for an agency-wide strategic plan to address diversity, equity, inclusion, and accessibility (DEIA). ASPET is committed to identifying and dismantling barriers to the full participation of its membership in the biomedical sciences workforce.

ASPET is a 4,000-member scientific society located in Rockville, MD. ASPET's members conduct essential basic and clinical pharmacological research and work for academia, government, large pharmaceutical companies, small biotech companies, and non-profit organizations. Their efforts help to develop new medicines and therapeutic agents to fight existing and emerging diseases.

ASPET supports NIH's effort to develop a strategic plan for DEIA and believes our input will help NIH to develop a framework that contributes to fostering DEIA within the biomedical and health research enterprise.

I. Objective 1: Implement Organizational Practices to Center and Prioritize DEIA in the Workforce

NIH Workforce: ASPET recognizes the need to bring more underrepresented populations into the biomedical and health sciences. Accomplishing this within the NIH workforce will require scholarship and trainee funding. Trainees from underrepresented populations will need additional resources for programming, networking, leadership training, and mentoring. The overall goal would be to create more opportunities for marginalized populations to train at NIH and then to provide an inclusive environment for them to thrive and develop as leaders and scientists. This would include increasing the diversity of advisory panels, webinars, symposia, and training sessions. A systemic benefit of this is that all trainees at NIH would see a greater representation of diversity throughout their training experience. The UNITE program targets creating a strategically planned and inclusive environment.

ASPET also supports efforts to be inclusive of persons with disabilities so that they have equal opportunity to pursue careers in the biomedical sciences. Persons with disabilities are significantly under-represented in STEM fields relative to the general population, and those who are already researchers may be reluctant to identify as such due to stigmatization, stereotyping, and perceived negative impacts to career prospects. NIH can encourage persons with disabilities to feel comfortable pursuing STEM careers by recruiting current researchers with disabilities to advisory boards,

emphasizing and funding mentorship programs that connect persons with disabilities to established researchers who have overcome similar challenges, and conducting outreach to the disability community by highlighting the career paths and achievements of researchers with disabilities. In addition to increased representation, more education on the challenges faced by persons with disabilities is needed. Many patient advocacy organizations provide resources for employers on how to support persons with disabilities in the workplace. These guides offer legal and compliance information, as well as practical information on how to accommodate and communicate respectfully with an employee with a disability. Labs are unique workplaces that present many challenges, so working with these organizations to create lab-specific guides or recommendations for a more inclusive and accessible working environment may be helpful.

Workforce at Institutions Supported by NIH funding: NIH leads by example. Once increased diversity initiatives for under-represented populations and for persons with disabilities are implemented, these can be shared as best practices with institutions that receive NIH funding so that they may create a more inclusive environment. Professional societies like ASPET can assist by highlighting and distributing these resources to membership.

II. Objective 2: Grow and Sustain DEIA Through Structural and Cultural Change

Stewardship: As part of its DEIA strategic plan, ASPET encourages NIH to more fully explore the interrelation between culture and medicine. The use of natural products to cure ailments and diseases is well-documented, and modern methods of drug discovery that isolate active compounds owes a great debt to this cultural knowledge. But the use of natural products in drug discovery poses many challenges (e.g., diversification of possible therapeutic lead compounds by the derivatization of a promising isolated natural product compound), and their use by large pharmaceutical companies has been in decline for decades. This decline is occurring despite the screening of only a fraction of the planet's biodiversity for biological activity. There are very likely many natural products that can contribute to our understanding of human health and development of therapeutics, and we can draw on the experiences of other cultures to guide us in our search for new ways to fight disease. NIH can be a leader on this front by prioritizing outreach to historically marginalized communities like the Native Americans and Indigenous people of Hawaii, Alaska, and the Pacific Islands. Inviting representatives from these cultures to share their knowledge of natural products in workshops and seminars may lead to unexpected collaborations that help further advance our knowledge of diseases and therapeutics.

Partnerships and Engagements: NIH actively partners with the researchers it supports and their institutions. Most educational institutions are actively trying to identify ways to improve their own DEIA climates. A national consortium headed by NIH could be created. The Clinical and Translational Science Award (CTSA) program required that the grants be prepared and submitted by two universities, with awardees participating in a national consortium. A similar model could engage universities and minority serving institutions in a program to transform the biomedical workforce.

III. Objective 3: Advance DEIA Through Research

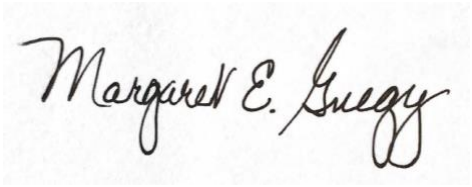
Workforce Research: Annual data released by the National Science Foundation in its Survey of Earned Doctorates continues to show an enormous disparity in graduate debt between white doctoral degree recipients and black doctoral degree recipients. Black doctoral recipients reported a mean graduate debt of $63,087 vs. $20,451 for white doctoral recipients. When adding in undergraduate debt, the gap

widens, with black doctoral recipients reporting a total debt load of $88,206 vs. $31,878 for white doctoral recipients. And from 2015-2020, black student debt rose faster than white student debt by a 2-to-1 margin. The impact of student debt on the biomedical research workforce is largely unexplored, however the prospect of a significant debt burden may be discouraging. NIH should prioritize workforce research that explores the impact of debt on diversity in the biomedical workforce, as well as the impact of potential debt on the choice of undergraduates from underrepresented groups who may elect not to pursue graduate education in the life sciences at all.

Health Research: As a professional society with members who conduct translational and clinical research, ASPET is always thinking about the application of basic science research to real world issues. One area where DEIA principles are needed is in the enrollment of patients for clinical trials. Consideration and inclusion of diverse genetic, ethnic, metabolomic, and proteomic backgrounds is important to best understand what constitutes a healthy state for an individual and for investigating the safety and effectiveness of interventions in a population. Using DEIA principles in experimental design could ensure clinical trials are sufficiently diverse and representative and include considerations of how genetic polymorphisms influence drug metabolism and/or efficacy (genetic diversity in metabolizing enzymes or receptor targets). But these considerations can be challenging in practice. Recruiting a diverse clinical study cohort is often very difficult, and there may be a limited understanding of the influence of ethnic backgrounds on drug metabolism or receptor polymorphisms. There may also be linguistic, religious, cultural, and educational barriers to outreach. ASPET is aware of the NIH's study on Oversight Processes to Ensure Diversity Among Human Subjects Enrolled in Clinical Trials to be released in 2023, but encourages the NIH to address diversity in clinical trial representation in its upcoming strategic plan by researching these barriers and how best to overcome them.

Thank you for the opportunity to comment. ASPET stands ready to partner with NIH to address these issues to ensure a diverse biomedical research workforce.

Respectfully,



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