FASEB
Federation of American Societies for Experimental Biology

Representing Over 130,000 Researchers

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Kelvin K. Droegemeier, PhD
Director, Office of Science and Technology Policy
Executive Office of the President
Eisenhower Executive Office Building
1650 Pennsylvania Avenue
Washington, DC 20504

RE: RFI Response: Bioeconomy [FR Doc. 2019-19470]

Transmitted electronically via email: MBX.OSTP.WHBioeconomy@ostp.eop.gov

Dear Dr. Droegemeier,

The Federation of American Societies for Experimental Biology (FASEB) appreciates the opportunity to share its feedback on the recently released Request for Information (RFI) seeking input on the U.S. bioeconomy. As a coalition of 29 biological and biomedical scientific societies collectively representing over 130,000 individual scientists and engineers, FASEB recognizes the critical role of biology in promoting human health and welfare and driving economic growth, both in the U.S. and internationally.

Our comments in response to the four questions posed by OSTP in this RFI reiterate FASEB positions on core issues of interest to our members: reducing duplicative or unnecessary regulatory oversight of research initiatives; ensuring a diverse research workforce prepared to utilize new technologies to address key scientific questions; and implementing strategies to establish a strong research infrastructure that maximizes the exchange of resources and data across the research community.

1. What specific actions could the U.S. Government take to reinforce a values-based ecosystem that will guide the transformation and expansion of the U.S. Bioeconomy, in both the short- and long-term?

To ensure the conduct of research is efficient and effective, federal funding agencies must continue to evaluate existing policies and regulations affecting the conduct of research and make

real progress towards eliminating redundancies. Similarly, a cost-benefit analysis should be conducted for existing and proposed policies and regulations to ensure that implementation enhances research utility without resulting in undue administrative or cost burdens for investigators. FASEB has demonstrated a long-standing commitment to streamlining the policy and regulatory environment for biological research, including its extensive engagement with the scientific community as part of its response to a 2013 RFI issued by the National Science Board seeking input on ways to reduce investigators' administrative workload for federally-funded research[1]. More recently, FASEB collaborated with the Association of American Medical Colleges, the Council on Governmental Relations, and the National Association for Biomedical Research on a report[2] outlining ways in which the U.S. National Institutes of Health (NIH) and U.S. Department of Agriculture (USDA) could streamline federal regulations, policies, and guidelines governing the use of animals in research while maintaining humane treatment and care of animal subjects as a top priority.

In addition to continuing efforts to streamline the regulatory and policy environment within which federally funded research is conducted, FASEB strongly encourages OSTP to work with those agencies supporting research activities to establish long-term funding plans for their respective priority areas. While this will not eliminate the instability of the annual federal appropriations process, it would allow for more transparent communication of agency research priorities and estimated funding needs to Congressional leaders. Similarly, this transparency will trickle down to the research community, who in turn can better align research activities and plans with the goals and timelines of the federal agencies.

2. In what ways can the U.S. Government partner with the private sector, industry, professional organizations, and academia to ensure the training and continued development of a skilled workforce to support the growth of the Bioeconomy?

Recruitment and retention of a well-trained workforce representative of the U.S. population is a core policy issue for FASEB and its member societies. From providing stable funding sources to aid the establishment of early-career investigators to ensuring an adequate supply of physician scientists that translate basic research discoveries to clinical applications, the success of the U.S. scientific enterprise is critically dependent upon the research workforce.

FASEB applauds the efforts of the National Science Foundation's National Center for Science and Engineering Statistics for collecting and disseminating critical data about the science and

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[1] National Science Board, *Reducing Investigators' Administrative Workload for Federally Funded Research* (National Science Foundation: 2014). https://www.nsf.gov/pubs/2014/nsb1418/nsb1418.pdf (Last accessed: October 14, 2019).

[2] FASEB, AAMC, COGR, and NABR, *Reforming Animal Research Regulations: Workshop Recommendations to Reduce Regulatory Burden* (2017). https://www.faseb.org/Portals/2/PDFs/opa/2017/FASEB-Animal-Regulatory-Report-October2017.pdf (Last accessed: October 14, 2019).

technology workforce. Similarly, NIH has conducted extensive analyses of the biomedical workforce to enact policies to shorten doctoral and postdoctoral training periods, foster diversity, and establish new funding mechanisms to spur independent research careers. OSTP could help further these existing efforts through trans-agency initiatives highlighting the need for a data-driven understanding of the research workforce and using this information to update training paradigms for modern, high-throughput scientific initiatives.

3. In what ways can the U.S. Government partner with the private sector, industry, professional organizations, and academia to establish a more robust and efficient Bioeconomy infrastructure?

In 2017, FASEB issued a survey[3] to the research community to collect information to better understand the national landscape for shared instrumentation and research resources. Data collection sought to learn more about funding and business operations of facilities as well as community awareness and utilization of shared resource facilities. Similarly, the survey explored shared resource facility staff, including professional development and recognition. Survey responses were then used to inform a series of recommendations[4] intended to make efficient use of research funds and broaden access to advanced technologies through shared research resource facilities.

As OSTP explores strategies for establishing a more robust and efficient infrastructure to support the Nation's bioeconomy, FASEB would like to highlight the importance of developing models to promote more efficient use of shared research resource facilities. A first step is the development of guidelines for regional core facilities to broaden access, and thus use, of new technologies, while also addressing the development, operation, and sunsetting of regional facilities to maximize research investments.

4. Across the spectrum, from basic discovery to practical application, what data policies, information-sharing mechanisms, and safeguards will be necessary for a prosperous U.S. Bioeconomy?

The diversity of data types, research areas, and resources available make it challenging to identify data management and accessibility strategies that are practical and relevant for all life

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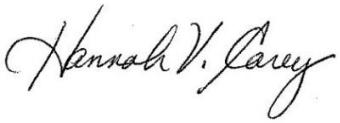
[3] FASEB, *Maximizing Shared Research Resources, Part II: Survey Findings and Analysis* (2017). https://www.faseb.org/Portals/2/PDFs/opa/2017/Maximizing%20Shared%20Research%20Resources%20-%20Part%20II.pdf (Last accessed: October 14, 2019)

[4] FASEB, *Maximizing Shared Research Resources, Part I: Recommendations from the Federation of American Societies for Experimental Biology* (2017). https://www.faseb.org/Portals/2/PDFs/opa/2017/Maximizing%20Shared%20Research%20Resources%20-%20Part%20I.pdf (Last accessed: October 14, 2019).

science fields. In 2016, FASEB issued its "Statement on Data Management and Access[5]" that highlighted the need to improve data management and increase data access to facilitate new scientific opportunities. A key step towards achieving these overarching goals is establishment of an incentive structure to encourage appropriate data deposition and citation. In addition to fostering a culture that promotes appropriate data exchange, there needs to be a broader discussion of the costs associated with a data ecosystem that fosters data that are findable, accessible, interoperable, and reusable while ensuring data security and protection of personally identifiable information for projects involving human subjects[6].

FASEB appreciates the opportunity to provide feedback on this RFI and looks forward to future engagement with OSTP regarding ways to maximize federal investments in biological and biomedical research.

Sincerely,



Hannah V. Carey, PhD
FASEB President

[5]FASEB Statement on Data Management and Access (2016) https://www.faseb.org/Portals/2/PDFs/opa/2016/FASEB%20Statement%20on%20Data%20Management%20and%20Accesss.pdf (Last accessed: October 14, 2019).

[6] FASEB comments in response to Draft NIH Strategic Plan for Data Science (2018) http://www.faseb.org/Portals/2/PDFs/opa/2018/FASEB%20comments-on-NIH-Strategic-Plan-for-Data-Science.pdf (Last accessed: October 14, 2019)