

July 26, 2023

The Federal STEM Strategic Planning Team
White House Office of Science and Technology Policy
Executive Office of the President
Eisenhower Executive Office Building
1650 Pennsylvania Avenue
Washington, D.C. 20504

RE: Federal Science, Technology, Engineering and Math Education 2023-2028 Strategic Plan

The American Society for Biochemistry and Molecular Biology is an international nonprofit scientific and educational organization that represents more than 11,000 students, researchers, educators and industry professionals. The ASBMB strongly advocates for strengthening the science, technology, engineering and mathematics (STEM) workforce, supporting sustainable funding for the American research enterprise and ensuring diversity, equity and inclusion in STEM.

The ASBMB recommends the following be included in the federal strategic plan to enhance the STEM ecosystem:

Recommendation 1: Fund programs to train pre-K–12 and postsecondary educators in science pedagogy

The U.S. scientific workforce requires robust investments in the education of the next generation of scientists to fuel graduate students and postdoctoral positions especially in biological and biomedical research. Therefore, we recommend that OSTP incorporate basic science training into pre-K–12 and postsecondary STEM initiatives across science agencies by establishing grants for funding hands-on learning and training for pre-K-12 educators and higher education faculty in basic science pedagogy.

Recommendation 2: Disseminate existing STEM pedagogy materials to low-resourced institutions
Years of education research has resulted in evidence-based pedagogical techniques for enhancing STEM education across educational levels, much of which has been highlighted in the [What Works Clearinghouse](#). However, these strategies have not been disseminated equitably. We recommend that OSTP ensure resources from federal science agencies, such as the [NIH STEM teaching resources](#), are disseminated to Title I schools as well as low-resourced institutions of higher education.

Recommendation 3: Establish collaborations and training programs to feed the biotechnology and biomanufacturing workforce

We recommend that OSTP create more pathways to STEM careers by encouraging collaborations between national labs and science funding agencies with low-resourced institutions. Furthermore, we recommend OSTP fund biomedical [certificate](#), [internship](#) and [apprenticeship](#) programs in [high schools](#) and institutions of postsecondary education. These programs will funnel more students from diverse backgrounds into the biotechnology and biomanufacturing workforce.

Recommendation 4: Provide resources to enhance the quality of life of graduate students

To foster an inclusive learning environment for STEM graduate students, more programs and resources are needed to improve graduate student quality of life. Graduate students face hardships caused by lack of access to affordable [mental health resources](#) and [childcare as well as financial concerns](#). To alleviate these issues, we recommend that OSTP create funding opportunities for [mental health services](#) and resources, grants for tuition and cost-of-living support and [childcare](#) solutions such as [back-up care](#).