

# Nonprofit calls for less talk, more action to make the scientific enterprise sustainable

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In an article published today in the *Proceedings of the National Academy of Sciences*, members of the American Society for Biochemistry and Molecular Biology describe eight steps that should improve the sustainability of the scientific enterprise. The authors of the article analyzed nine high-profile reports on the topic and identified eight "consensus recommendations" with the hope of spurring the scientific community to move beyond discussing problems plaguing the enterprise and to begin making necessary changes.

"This paper is about action," said Chris Pickett, policy analyst for the ASBMB and lead author on the paper. "This is a departure from previous reports. Many scientific and government leaders have discussed the scientific enterprise's problems over the years. This paper aims to move the discussion forward and lay out a path to begin making real changes."

In addition to identifying areas of consensus in past reports, the authors provide plans for implementing changes at institutions and within the government that will affect research funding levels, regulatory burden and training. "One important aspect of this paper," Pickett said, "is we show that, instead of taking on each recommendation individually, it may be easier and more beneficial to scientists and society if several recommendations are tackled at once."

The paper also emphasizes issues that haven't gotten much attention in previous reports. "The reports we analyzed said very little about

increasing workforce diversity, for example, despite the fact doing so will touch every corner of the enterprise," said Pickett. "And improving the dialogue among those in academia, industry and the government helps solve workforce and discovery issues - not just funding."

Wes Sundquist, chairman of the ASBMB Public Affairs Advisory Committee and a professor of biochemistry at the University of Utah, was one of the authors of the paper. He said the authors wanted to "offer a platform for change."

He continued: "Researchers - from graduate students to established investigators - have been distressed by stagnant funding and outdated policies that damage the enterprise, reducing productivity and disenfranchising young and minority scientists. We need to move beyond this."

## **The eight consensus recommendations**

The authors of the paper analyzed nine reports about sustainability published since 2012, including reports from the National Academy of Sciences, the President's Council of Advisors on Science and Technology and the Future of Research. The authors then pared down more than 260 recommendations to just eight that were found in a majority of the reports. The eight consensus recommendations were:

1. The federal government should make research funding predictable and sustainable.
2. The [federal government](#) should increase overall research and development funding with 3 percent of [gross domestic product](#) as an initial target.
3. Federal agencies should streamline, harmonize or eliminate burdensome regulations.
4. Institutions and federal agencies should increase compensation

- for postdoctoral scholars with \$50,000 a year as an initial target.
5. Institutions and federal agencies should cap the amount of federal funding trainees can receive in order to reduce graduate student and postdoc training periods.
  6. Institutions and federal agencies should train students and postdocs for the breadth of careers available to them.
  7. Institutions and federal agencies should support more trainees on fellowships and training grants rather than research grants.
  8. Institutions should create new job classifications for staff scientists, and [federal agencies](#) should incentivize use of staff scientists.

**More information:** *PNAS*

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