

August 16, 2024

Chairwoman Cathy McMorris Rodgers
House Energy and Commerce Committee
2125 Rayburn House Office Building
Washington D.C., 20515

RE: Request for information on NIH framework and reform

The American Society for Biochemistry and Molecular Biology is an international nonprofit scientific and educational organization that represents more than 13,000 students, researchers, educators and industry professionals. The ASBMB strongly advocates for strengthening the science, technology, engineering and mathematics workforce, supporting sustainable funding for the American research enterprise and ensuring diversity, equity and inclusion in STEM. The ASBMB appreciates the chance to provide input on the proposed NIH framework, and we urge policymakers to continue seeking input from the research community and other stakeholders during the NIH reauthorization process.

Recommendation 1: NIH must continue to prioritize investigator-initiated, curiosity-driven basic research

Investigator-initiated, curiosity-driven research fuels innovation, and basic science research is the cornerstone of all medical breakthroughs. [Basic science research seeks](#) to understand the principles, mechanisms and processes of all living things — including humans. The fundamental knowledge gained through basic science research forms the essential foundation for breakthroughs in how to predict, prevent, diagnose and treat diseases. Life-saving clinical research today could not be undertaken without the advances first made through basic research.

Yet barely [half \(51%\) of the NIH's budget](#) supports basic scientific research, and, notably, an analysis of NIH funding found that all but two of the 210 new drugs approved by the Food and Drug Administration from 2010 to 2016 was made possible because of NIH-funded research.

The ASBMB urges policymakers to ensure the NIH is robustly and sustainably funded so the agency can continue supporting scientists who are focused on basic scientific research that lays the foundation for scientific breakthroughs and innovation. The cost of conducting scientific research has risen in recent years, and grant dollars are stretched at the expense of supporting vital scientific talent. Policymakers must ensure basic scientific research is robustly and sustainably funded to support a thriving innovation pipeline and skilled workforce.

Recommendation 2: Ensure the National Institute of General Medical Sciences (NIGMS) is fully and adequately funded

Among the NIH Institutes, the NIGMS plays a pivotal role in supporting the U.S. economy by funding a broad portfolio of basic scientific research that fosters innovation by promoting highly creative research across scientific disciplines, building a robust research workforce, and broadening the geographic distribution of research capacity and infrastructure.

[With a budget of \\$3.2 billion in FY2023](#), NIGMS supports more than 4,800 investigators and more than 5,200 trainees. NIGMS is unique in that it supports fundamental research on basic biological processes across the spectrum of molecules, cells and organisms, which has far-reaching implications for human health and disease broadly and further implications for our food systems, environment, and energy.

Despite this broad impact, NIGMS's budget has grown modestly over the past several years, and about [40% of the institute's budget is allocated](#) through section 301 and title IV of the Public Health Service Act. Without funding through the PHS Act, NIGMS's budget would shrink from \$3.25 billion to \$1.41 billion, which would have devastating consequences for the U.S. research enterprise.

The ASBMB strongly urges policymakers to ensure NIGMS's budget is supported either through the PHS mechanism or through a full appropriations budget of over \$3 billion. Without adequate funding for NIGMS, the U.S. research enterprise would lose foundational research that paves the way for breakthrough treatments and therapies and would lose valuable STEM talent across the country.

Recommendation 3: Encourage the NIH to develop an agency-wide intentional strategy for education and training

One key building block to a thriving, innovative research enterprise is recruiting and retaining a diverse group of trainees. The NIH dedicates a remarkable portion of its funding to institutional training grants (T type), individual fellowships (F type) and career-developments grants (K type); in FY23, for example, it allocated [almost a billion dollars to the next generation of scientists through those grant types](#). And this investment in career-development grants has a strong return; [K awardees were 24.1% more likely](#) to obtain an investigator-initiated research grant than researchers without these awards.

These mechanisms have significant success in growing and retaining a talented scientific workforce, but the NIH does not have an agency-wide intentional strategy for education and training. Each NIH institute allocates a different amount of funding to training and career-development grants and the objectives for these grants vary by institute. While it's important to recognize that different scientific disciplines have different training needs, encouraging the NIH to develop an agency-wide intentional strategy for training and education will ensure that the responsibility of training does not fall on any institutes disproportionately.

In addition, an agency-wide intentional strategy will encourage NIH institutes to share their objectives and strategies in successfully training the next generation of scientists with one another and the broader scientific community.

Recommendation 4: Recognize NIH's proactive work to strengthen research security, address research misconduct and mitigate sexual harassment in the scientific enterprise

The NIH has been at the forefront of addressing emerging issues and has convened multiple working groups to understand how the NIH can strengthen its research security policies, address foreign influence to research integrity and to uphold the highest standards of research conduct, including preventing and addressing sexual harassment in the scientific enterprise. For example, in October 2023, the NIH Office of the Director [updated and strengthened its regulations and policies](#) governing how the

agency addresses research misconduct and actively sought feedback from the scientific community on the proposed changes to ease administrative burden. The NIH has also paved the way in [transparency when it comes to research misconduct cases](#) and has provided concrete case studies from which scientists can learn.

Lastly, the NIH has [implemented numerous recommendations](#) from the NIH Advisory Committee to the Director Working Group on Changing the Culture to End Sexual Harassment.

NIH has provided significant clarity on how individuals can report harassment; it has made public [all cases since 2018](#); and it is continuously monitoring the impact of policy changes to ensure individuals across the research enterprise are learning and working in safe and inclusive environments.

The ASBMB recommends policymakers closely track and understand the short- and long-term impacts of the policies the NIH has already enacted to address these challenging issues before changing these policies on a broad scale.

Recommendation 5: Support a thriving scientific workforce with funding opportunities to encourage re-entry into the scientific enterprise

The traditional pipeline model of workforce development — in which an individual follows a linear path through undergraduate education, graduate education and postdoctoral training to become a scientist — does not adequately capture the experience of scientists today. [Nearly half](#) of those who become scientists or engineers take a nonlinear path. To better support the training of the next generation of scientists, policymakers must create multiple and frequent on-ramps to STEM careers. Funding mechanisms that support re-entry into scientific careers will ensure the U.S. enterprise isn't permanently losing vital scientific talent.

To establish an inclusive and equitable research enterprise, it's important to acknowledge that [women and underrepresented groups](#) are often those who are pushed out of the STEM pipeline. Creating more funding opportunities with optimal flexibility will allow people from all backgrounds to enter or re-enter the research field and sustain a thriving scientific workforce. The NIH has implemented [several funding mechanisms](#) that support re-entry to the research enterprise after departures due to caregiving responsibilities, parental responsibilities or instances of harassment. But the agency has limited funds to fully support programs like this and each NIH institute has varying policies on their re-entry and reintegration programs.

The agency should expand these mechanisms and further investigate what contributing factors result in successful re-entry to the research enterprise. The ASBMB recommends policymakers investigate funding opportunities and policies like these that enable scientists from all backgrounds to fully participate in the U.S. research enterprise. This will ensure that the U.S. remains at the forefront of leading global research and development and support a thriving STEM workforce, leading to more innovative research and discoveries.

Recommendation 6: Maintain and fund the Common Fund for use by the NIH director to pilot new programs and determine which IC can best support the program beyond the 10-year timeframe.

In 2002, the concept of the “roadmap” was introduced as a novel approach to identify significant opportunities and challenges no single institute or center could tackle on its own. The [NIH roadmap launched in 2004](#) and eventually became the NIH Common Fund following the 2006 NIH Reform Act. It has been two decades since the Common Fund was initiated, and it is an important source of money available to the NIH Director for [high-priority initiatives](#) in biomedical and behavioral research.

These initiatives support researchers in removing roadblocks to research discovery, push the boundaries of biomedical science, and help enhance the research workforce to ultimately address and solve key problems through innovation and teamwork across the NIH institutes. These short-term initiatives from the Common Fund aim to achieve a set of high-impact goals within a five-to-ten-year timeframe and evaluate if an IC may become the new source of support (funding) or offer as a resource for use within the scientific community.

The Common Fund is currently [supporting 27 programs](#) and archived [32 additional programs](#) from its portfolio. For example, the [NIH Medical Research Scholars Program](#) was supported by the Common Fund from FY 2004 to FY 2014 with the aim of providing training for the next generation of clinical scientists to learn about translational research. Since FY 2014, the MRSP program was transferred to the NIH Clinical Center’s portfolio [with continued success](#), with several alumni getting funded by NIH and publishing peer-reviewed articles on research conducted during and after program.

The ASBMB recommends maintaining and funding the Common Fund for use by the NIH Director to pilot new programs and determine their success. Starting these initiatives in the Common Fund allows the NIH to be fiscally conservative while ensuring the program's impact is worth the long-term investment. The ASBMB recommends maintaining and funding the Common Fund for use by the NIH director to pilot new programs and evaluate their outcomes, which allows the NIH to be fiscally conservative while ensuring a program’s impact is worth long-term investment.

Recommendation 7: Policymakers and science policy experts must fully study the potential impact of changing facilities and administrative costs policies

The ASBMB recommends policymakers fully research the necessity of facilities and administrative costs (F&A costs) and encourage the use of the term F&A costs instead of indirect costs. The U.S. has a flourishing research enterprise partly due to the infrastructure that academic institutions provide. Each institution has different contributing factors that determine their F&A costs, and it’s important for policymakers to fully understand the issue before implementing significant policy changes that could unintentionally derail the academic-government partnership that supports the U.S. research enterprise.

Recommendation 8: Encourage NIH institutes to enact policies ensuring equitable funding across principal investigators, institutions and career stage

The ASBMB strongly agrees that grant recipients must remain dynamic and that grant funding must be distributed equitably while still enabling the most innovative scientific research. The NIH has been diligently tracking research project grant funding disparities since 2013 and introduced new programs and changed existing policies to ensure equity across principal investigators.

One example is the [Next Generation of Researchers Initiative](#), which provides additional funding opportunities for early career investigators, ensuring that they stay in the STEM pipeline and become established principal investigators (PIs). This program has had significant success ensuring mid-career scientists are receiving an equitable percentage of grant funding and has helped reduce funding inequities across career stage. Thanks to the NIH’s Office of Director’s proactive work, which includes this initiative and others, NIH grant funding is distributed more equally across career stages and demographics. As recent as fiscal year 2022, [fewer than 10% of PIs have three or more grants](#), and that number has been steadily declining since 2017.

In addition to the NIH tackling funding inequity, individual NIH institutes are changing their policies to ensure their awards are not concentrated on a few already-well-funded principal investigators. For example, the National Institute on Mental Health recently implemented a [new policy](#) that requires special council review for any grant applications from a PI receiving more than \$2 million. NIGMS [requires extra evaluation for applications from well-funded labs](#) (which it defines as labs with over \$1.5 million in annual total costs for research support) to ensure that the research being proposed is truly innovative. And, lastly, the National Institute of Neurological Disorders and Stroke implemented a [stringent payline](#) for all grant applicants requesting \$500,000 or more in direct costs. All these efforts illustrate that individual NIH institutes are changing their policies to ensure funding is equitably distributed across the scientific workforce and that their institute budgets are fully utilized.

The ASBMB strongly recommends Congress encourage NIH institutes to explore what policies would benefit their budgets and research priorities instead of implementing a cap on the number of grants one PI can hold without clear definitions on “research engagements.”