The Under Secretary for Science
Washington, DC 20585

November 12, 2026

Dr. Persis Drell
Chair
Office of Science Advisory Committee

Dear Dr. Drell:

Today, biological science is at a profound historical inflection point. The rapid convergence of high-throughput experimental biology, synthetic genomics, large-scale user facilities, advanced Super Intelligence (SI) capabilities, and precision bioengineering are fundamentally reshaping discovery and the modern bioeconomy.
From biomanufacturing to health, agricultural resilience and national biosecurity, the global competitiveness of the United States (U.S). biotechnology enterprise depends on strategic investments in fundamental biological science research with access to large-scale, reproducible data sets and state-of-the-art instrumentation. The time is ripe to establish a comprehensive, forward-looking biological research strategy.

For decades, the Biological and Environmental Research (BER) program in the Department of Energy's (DOE) Office of Science has pioneered large-scale, team-driven biological discoveries. Historically recognized as an originator of the Human Genome Project, BER's sustained leadership has continuously provided the underlying scientific bedrock for systems-level research in modern genomics, synthetic biology, and complex environmental systems. BER has consistently tackled scientific questions of a scale and complexity unique in the federal funding space and relevant to DOE's energy mission. Through foundational user-facilities and data assets, BER provides an essential backbone for the broader U.S. bioeconomy research enterprise.

With the historical advances at the nexus of biology and emerging technologies, I request the Office of Science Advisory Committee (SCAC) to establish a dedicated subcommittee to re-envision the long-term mission, strategic posture, and operational impact of biological sciences within the BER program. Items for consideration by the subcommittee include:

- Provide a decadal-scale vision for BER's biological science during this time of SI-driven inflection of potentials. What fundamental biological challenges should BER prioritize that are vital to advancing national leadership in biotechnology innovation? What is the expected impact of addressing these challenges and the lost opportunity if not?
- Addressing these grand challenges and biotechnology advancement depends upon developing key SI-enabled autonomous laboratory infrastructure, curated data, and models.

    - How might BER expand and advance its user facilities, automated platforms, and other capabilities paced to address the rapidly advancing science?
    - What role should BER play to develop and steward accurate predictive biological models and to gather, curate, and steward the datasets needed to inform these models?
- Biotechnology advancement requires effective coordination across communities.
    - How might BER leverage science endeavors in BER's environmental research and with other SC Program Offices?
    - How might BER coordinate with DOE's applied offices, other agencies, and the broader community and appropriately provide fundamental science advances suited to advance the various biotechnology missions and national needs?

I look forward to the subcommittee's findings and strategic guidance on this vital effort. I request an interim briefing and report by March 2027, followed by a final strategic report submitted to SCAC by July 2027.

Thank you for your service and dedication to advising the Office of Science as we position our nation's biological enterprise for the decade ahead.

Sincerely,

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Darío Gil
Under Secretary for Science