

Web of Biological Data Act of 2026

Overview

The **Web of Biological Data Act of 2026** would direct the Secretary of Energy to establish the Web of Biological Data (WOBD), a single point of entry for researchers to access high-quality biological data, especially those managed or funded by the federal government.

Background

The National Security Commission on Emerging Biotechnology (NSCEB) assessed in April 2025 that China systematically accesses and exploits publicly available data, including from the United States, while harvesting its own domestic datasets and closing them off to the rest of the world, creating an asymmetric advantage over the United States.

Currently, the United States takes an uncoordinated approach to biological data, which makes collating large datasets a burdensome process for researchers, slowing potential discoveries. U.S. biological data are generated from a wide variety of sources and organized for different purposes. These data are organized differently within organizations across academia, government, and industry, and even across individual labs within the same organization.

While there are noteworthy examples of biological databases within certain federal departments and agencies, most are incomplete for a future that requires data for new AI models, which depend upon the ability to standardize, combine, and analyze biological data generated from different places, organisms, or experiments. A resource that combines biological datasets in a usable way would allow U.S. researchers to spend less time curating biological data and more time testing hypotheses, training models, designing novel biological functions, and ultimately ensuring America outcompetes strategic competitors such as China.

House bill number pending

Sponsor:	Original Co-Sponsor:
Rep. Matt Van Epps (R-TN-07)	Rep. Jake Auchincloss (D-MA-04)

Senate bill number pending

Sponsor:	Original Co-Sponsor:
Sen. Todd Young (R-IN)	Sen. Alex Padilla (D-CA)
	Sen. Mike Rounds (R-SD)
	Sen. Andy Kim (D-NJ)

Congress established the National Security Commission on Emerging Biotechnology (NSCEB) to assess biotechnology's national security impact and recommend strategies to ensure American leadership.

Read the NSCEB's April 2025 report at <https://www.biotech.senate.gov/final-report>

Legislative Details

Implementation Plan

Within 1 year, the Secretary would submit an implementation plan to Congress for establishing the WOBD at a DOE national laboratory, a plan to explore and implement a cost-sharing agreement with non-governmental organizations, and a WOBD cybersecurity plan.

Phase I

Within 2 years, the Secretary would select a DOE national lab to execute the WOBD, starting with an initial pilot focused on a preliminary set of specific biological data subtypes, cybersecurity safeguards, and research and development (R&D) projects to improve the science of biological data management and curation.

Phase II

Within 5 years, the selected national lab would expand the WOBD to a fully realized single point-of-access for biological data with interoperability frameworks, quality standards, user friendly interfaces, and mature cybersecurity requirements.

Cybersecurity Assessment

A third-party would conduct biannual independent assessments of the WOBD's cybersecurity safeguards to ensure that access is appropriately managed.

Advisory Board

The Secretary would appoint an advisory board to oversee the WOBD's implementation, provide technical expertise, and ensure that the WOBD maximizes the usability of biological datasets across sectors.

Cost

The WOBD would be funded at \$340 million over the first 3 years to build the platform, implement Phase 1, and carry out the first year of transition into Phase 2. The program would then receive \$80 million per year to continue building and sustaining Phase 2.

Endorsements

American Alliance for Biomanufacturing

Astera Institute

ATCC

BioNJ

FutureHouse

Indiana University

Innovative Genomics Institute

Pittsburgh Life Sciences Alliance

Science and Technology Action Committee

Texas Medical Center

Transfyr

Interested in leading or co-sponsoring this bill?

Please contact ideas@biotech.senate.gov

