117TH CONGRESS
1ST SESSION

# S. _____

To direct the Secretary of Energy to establish a National Laboratory Biotechnology Program to address biotechnology threats, and for other purposes.

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IN THE SENATE OF THE UNITED STATES

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Mr. LUJÁN introduced the following bill; which was read twice and referred to the Committee on _____

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# A BILL

To direct the Secretary of Energy to establish a National Laboratory Biotechnology Program to address biotechnology threats, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

**SECTION 1. SHORT TITLE.**

This Act may be cited as the ''National Laboratory Biotechnology Research Act of 2021''.

**SEC. 2. DEFINITIONS.**

In this Act:

(1) DEPARTMENT.—The term ''Department'' means the Department of Energy.

(2) NATIONAL LABORATORY.—The term ''National Laboratory'' has the meaning given the term in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801).

(3) NNSA.—The term ''NNSA'' means the National Nuclear Security Administration.

(4) OFFICE.—The term ''Office'' means the joint program office established under section 3(b).

(5) OFFICE OF INTELLIGENCE AND COUNTERINTELLIGENCE.—The term ''Office of Intelligence and Counterintelligence'' means the Office of Intelligence and Counterintelligence of the Department.

(6) OFFICE OF SCIENCE.—The term ''Office of Science'' means the Office of Science of the Department.

(7) PROGRAM.—The term ''Program'' means the National Laboratory Biotechnology Program established under section 3(a).

(8) SECRETARY.—The term ''Secretary'' means the Secretary of Energy.

**SEC. 3. NATIONAL LABORATORY BIOTECHNOLOGY PROGRAM.**

(a) IN GENERAL.—The Secretary shall establish a National Laboratory Biotechnology Program to integrate the resources of the Department, including the Office of

Science, the Office of Intelligence and Counterintelligence, and the NNSA, to provide research, development, test and evaluation, and response capabilities to respond to—

(1) long-term biotechnology threats facing the United States; and

(2) any remaining threats posed by COVID–19.

(b) JOINT PROGRAM OFFICE.—To carry out the Program, the Secretary shall establish a joint program office, which shall comprise appropriate leadership from the Office of Science, the NNSA, and the National Laboratories.

(c) FUNCTIONS.—The Office shall—

(1) oversee the development and operation of major research activities of the Program;

(2) periodically review and recommend updates as necessary to Program policies and guidelines for the development and operation of major research activities;

(3) collaborate with the directors of research directorates of the Department, directors of National Laboratories, and other senior Department officials, as appropriate, to gain greater access to top researchers and new and potentially transformative ideas;

(4) enable access to broad scientific and technical expertise and resources that will lead to the de-

ployment of innovative products, including through—

(A) research and development, including proof of concept, technical development, and compliance testing activities; and

(B) early-stage product development, including through—

(i) computational modeling and simulation;

(ii) molecular structural determination;

(iii) genomic sequencing;

(iv) epidemiological and logistics support;

(v) knowledge discovery infrastructure and scalable protected data;

(vi) advanced manufacturing to address supply chain bottlenecks;

(vii) new capabilities for testing of clinical and nonclinical samples;

(viii) understanding environmental fate and transport of viruses; and

(ix) discovery of potential therapeutics through computation and molecular structure determination;

(5) provide access to user facilities with advanced or unique equipment, services, materials, and other resources to perform research and testing;

(6) support technology transfer and related activities; and

(7) promote access and development across the Federal Government and to United States industry, including startup companies, of early applications of the technologies, innovations, and expertise beneficial to the public that are derived from Program activities.

(d) BIODEFENSE EXPERTISE.—

(1) IN GENERAL.—In carrying out the Program, the Office shall support research that harnesses the capabilities of the National Laboratories to address advanced biological threats of national security significance through assessments and research and development programs that—

(A) support the near- and long-term biodefense needs of the United States;

(B) support the national security community in reducing uncertainty and risk;

(C) enable greater access to top researchers and new and potentially transformative ideas for biodefense of human, animal, plant,

environment, and infrastructure assets (including physical, cyber, and economic infrastructure); and

(D) enable access to broad scientific and technical expertise and resources that will lead to the development and deployment of innovative biodefense assessments and solutions, including through—

(i) the accessing, monitoring, and evaluation of biological threats to reduce risk, including through analysis and prioritization of gaps and vulnerabilities across open-source and classified data;

(ii) development of scientific and technical roadmaps—

(I) to address gaps and vulnerabilities;

(II) to inform analyses of technologies; and

(III) to accelerate the application of unclassified research to classified applications; and

(iii) demonstration activities to enable deployment, including—

(I) threat signature development and validation;

(II) automated anomaly detection using artificial intelligence and machine learning;

(III) fate and transport dynamics for priority scenarios;

(IV) data curation, access, storage, and security at scale; and

(V) risk assessment tools.

(2) RESOURCES.—The Secretary shall ensure that the Office is provided and uses sufficient resources to carry out paragraph (1).

(e) STRENGTHENING INSTITUTIONAL RESEARCH AND PRIVATE PARTNERSHIPS.—

(1) IN GENERAL.—The Office shall, to the maximum extent practicable, promote cooperative research and development activities under the Program, including collaboration between appropriate industry and academic institutions to promote innovation and knowledge creation.

(2) ACCESSIBILITY OF INFORMATION.—The Office shall develop, maintain, and publicize information on scientific user facilities and capabilities supported by laboratories of the Department for com-

bating biotechnology threats, which shall be accessible for use by individuals from academic institutions and industry.

(3) ACADEMIC PARTICIPATION.—The Office shall, to the maximum extent practicable—

(A) conduct outreach about internship opportunities relating to activities under the Program primarily to institutions of higher education (as defined in section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001)) and minority-serving institutions of higher education;

(B) encourage the development of research collaborations between research-intensive universities and the institutions described in subparagraph (A); and

(C) provide traineeships at the institutions described in subparagraph (A) to graduate students who pursue a masters or doctoral degree in an academic field relevant to research advanced under the Program.

(f) EVALUATION AND PLAN.—

(1) IN GENERAL.—Not less frequently than biennially, the Secretary shall—

(A) evaluate the activities carried out under the Program; and

(B) develop a strategic research plan under the Program, which shall be made publicly available and submitted to the Committee on Energy and Natural Resources of the Senate and the Committee on Energy and Commerce of the House of Representatives.

(2) CLASSIFIED INFORMATION.—If the strategic research plan developed under paragraph (1)(B) contains classified information, the plan—

(A) shall be made publicly available and submitted to the committees of Congress described in paragraph (1)(B) in an unclassified format; and

(B) may, as part of the submission to those committees of Congress only, include a classified annex containing any sensitive or classified information, as necessary.

(g) INTERAGENCY COLLABORATION.—The Office may collaborate with the Secretary of Homeland Security, the Secretary of Health and Human Services, the Secretary of Defense, and the heads of other appropriate Federal departments and agencies to advance biotechnology research and development under the Program.

(h) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary to carry out this section, to remain available until expended—

(1) $30,000,000 for fiscal year 2022;

(2) $40,000,000 for fiscal year 2023;

(3) $45,000,000 for fiscal year 2024; and

(4) $50,000,000 for each of fiscal years 2025 and 2026.