119TH CONGRESS
1ST SESSION

S. _____

To authorize the National Science Foundation to conduct research for biotechnology risk assessment, and for other purposes.

IN THE SENATE OF THE UNITED STATES

Mr. YOUNG (for himself and Mr. PADILLA) introduced the following bill; which was read twice and referred to the Committee on _____

A BILL

To authorize the National Science Foundation to conduct research for biotechnology risk assessment, 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 Biotechnology Safety Act''.

SEC. 2. FINDINGS.

Congress finds the following:

(1) Biotechnology is routinely used to modify genetic sequences in plants, animals, and microorga-

nisms, resulting in useful products across agriculture, medicine, industry, and defense.

(2) Specific research would help inform the Federal Government, State governments, industry, and other stakeholders on how best to address safety of biotechnology products.

SEC. 3. BIOTECHNOLOGY RISK ASSESSMENT RESEARCH.

(a) PURPOSES.—The purposes of this section are to authorize and support research—

(1) to address regulatory concerns about potential environmental, human health, or animal health risks of organisms produced with biotechnology; and

(2) that aids regulators in developing clear regulatory pathways for products produced with biotechnology.

(b) ESTABLISHMENT.—

(1) IN GENERAL.—The Director of the National Science Foundation (referred to in this section as the ''Director'') shall establish a program within the Directorate for Technology, Innovation, and Partnerships to provide funding for research concerning the introduction into the environment of organisms that were produced with biotechnology.

(2) MECHANISMS.—The Director may choose funding mechanisms under this section as appro-

priate to meet the scientific need, including research grants, cooperative agreements, and temporary research consortia.

(c) RECIPIENTS.—Recipients of funds under this section may include—

(1) institutions of higher education, as defined in section 102 of the Higher Education Act of 1965 (20 U.S.C. 1002);

(2) federally funded research and development centers;

(3) nonprofit research institutions;

(4) industry and other private sector entities;

(5) other entities determined appropriate by the Director to carry out the purposes of this section; and

(6) consortia of entities described in paragraphs (1) through (5).

(d) AWARD BASIS.—

(1) SELECTION CRITERIA.—In selecting recipients for an award under this section, the Director shall consider, at a minimum—

(A) the path for developing and, as appropriate, commercializing the organism or similar organisms produced with biotechnology and resulting products in the United States;

(B) the current knowledge of similar organisms (as of the date of the award), the limits of such current knowledge, and the novelty and risks of the proposed project;

(C) the relevance of the project to the research priorities under paragraph (2) and the potential of the project to advance such priorities; and

(D) the ethical, legal, and social implications of the project.

(2) RESEARCH PRIORITIES.—In awarding funding under this section, the Director shall give priority to research designed to—

(A) identify unintended effects of biotechnology methods, including unintended genetic changes;

(B) identify and develop management practices to minimize environmental, human health, or animal health risks associated with organisms produced with biotechnology, in research or field trial conditions, in commercial production, and in use as a final product;

(C) develop methods to monitor the dispersal and persistence of organisms produced with biotechnology, including gene drives;

(D) identify the characteristics, rates, and methods of gene transfer that may occur between organisms produced with biotechnology and related wild and agricultural organisms;

(E) compare the impacts of organisms produced with biotechnology to impacts of comparable organisms that were not produced with biotechnology or to other human activities in the environment;

(F) identify potential risks of convergence of biotechnology with artificial intelligence and other emerging technologies; or

(G) address other topics that further the purposes of this section.

(e) METRICS.—When appropriate, the Director may—

(1) set metrics in the terms of an award under this section, including goals and deadlines; and

(2) use such metrics to determine whether a project carried out under this section shall be eligible for continued or additional funding.

(f) REGULATORY COORDINATION.—The Director shall consult with the Secretary of Agriculture, the Commissioner of Food and Drugs, the Administrator of the Environmental Protection Agency, and the heads of other

Federal agencies with relevant expertise as determined by the Director, to—

(1) determine the applicability of specific areas of research to the regulation of products produced with biotechnology;

(2) provide ongoing oversight and execution of projects carried out under this section; and

(3) provide regulatory assistance to facilitate the purposes of this section.

(g) FUNDING.—

(1) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Directorate for Technology, Innovation, and Partnerships to carry out this section $50,000,000 for each of fiscal years 2026 through 2030.

(2) ADDITIONAL FUNDING.—In addition to using amounts made available under paragraph (1) for the program carried out under this section, the Director may—

(A) make this program a priority of the National Science Foundation; and

(B) elect to use other funds that are available to the Director and not otherwise restricted in their use to carry out the program.

SEC. 4. NATIONAL ACADEMIES BIOTECHNOLOGY 2-PHASE STUDY AND REPORTS.

(a) IN GENERAL.—Not later than 90 days after the date of enactment of this Act, the Director of the National Science Foundation (referred to in this section as the ''Director''), in consultation with the Secretary of Agriculture, the Commissioner of Food and Drugs, the Administrator of the Environmental Protection Agency, and heads of other Federal agencies with relevant expertise as determined by the Director, shall enter into an agreement with the National Academies of Science, Engineering, and Medicine (referred to in this section as the ''National Academies'')—

(1) to conduct a 2-phase study, in accordance with subsections (b) and (c), on the safety and benefits of biotechnology; and

(2) to submit reports describing the results of the studies and including findings and recommendations, in accordance with subsection (d).

(b) PHASE ONE OF STUDY.—Not later than 1 year after the date on which the agreement described in subsection (a) is entered into, the National Academies shall complete phase one of the study, which shall, at a minimum—

(1) consider the characteristics and risks of biotechnology tools used to modify genetic sequences in

comparison to the characteristics and risks of comparable conventional methods used to modify genetic sequences;

(2) make recommendations about risk-proportionate frameworks to assess risks of products made with biotechnology tools; and

(3) identify research needed to further understand the safety of biotechnology tools.

(c) PHASE TWO OF STUDY.—Not later than 2 years after the date on which the agreement described in subsection (a) is entered into, the National Academies shall complete phase two of the study, which shall, at a minimum—

(1) consider the safety and benefits of commercialized biotechnology products alongside comparable conventional products and other human activities that may impact human health or the environment;

(2) make recommendations about evaluating the safety and potential benefits of future biotechnology products that are under development or not yet widely commercialized;

(3) make recommendations about processes, analysis, or tests that could be used to rapidly reduce or remove biotechnology-specific oversight of products that do not present a greater risk than

comparable conventional products or other human activities; and

(4) identify research needed to further understand safety or benefits of biotechnology products.

(d) REPORTS.—Within 90 days of completion of each phase of the study under subsections (b) and (c), the National Academies shall—

(1) submit a report that includes any findings and recommendations of the National Academies made pursuant to the applicable phase of the study to the Director, the heads of the agencies with which the Director consulted under subsection (a), and the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives; and

(2) make each such report submitted under paragraph (1) available on a publicly accessible website.

(e) IMPLEMENTATION PLAN.—Not later than 180 days after the date on which all reports from the National Academies under subsection (d) have been submitted to the Director, the Director, in consultation with the heads of the agencies named in subsection (a), shall submit to Congress an implementation plan for Federal research, de-

velopment, and demonstration activities for the purpose of closing any research gaps related to the safety of biotechnology tools and products.

(f) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section $1,500,000 for fiscal year 2026.