

116TH CONGRESS
2D SESSION

H. R. 6599

To provide for coordination of research and development for pandemic disease prediction, forecasting, and computing, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

APRIL 23, 2020

Mr. LUCAS (for himself, Mr. WEBER of Texas, Mr. BABIN, Mr. MARSHALL, Mr. POSEY, Mr. OLSON, Mr. GONZALEZ of Ohio, Mr. ROONEY of Florida, and Mr. MURPHY of North Carolina) introduced the following bill; which was referred to the Committee on Energy and Commerce, and in addition to the Committee on Science, Space, and Technology, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

A BILL

To provide for coordination of research and development for pandemic disease prediction, forecasting, and computing, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “COVID Research Act
5 of 2020” or the “Computing Opportunities to Vanquish
6 Infectious Diseases Research Act of 2020”.

1 **SEC. 2. DEFINITIONS.**

2 (a) DEFINITIONS.—In this Act:

3 (1) DEPARTMENT.—The term “Department”
4 means the Department of Energy.

5 (2) NATIONAL LABORATORY.—The term “Na-
6 tional Laboratory” has the meaning given that term
7 in section 2 of the Energy Policy Act of 2005 (42
8 U.S.C. 15801).

9 (3) NATIONAL ACADEMIES.—The term “Na-
10 tional Academies” means the National Academies of
11 Sciences, Engineering, and Medicine.

12 (4) SECRETARY.—The term “Secretary” means
13 the Secretary of Energy.

14 (5) QUALIFYING ENTITY.—The term “Quali-
15 fying entity” means—

16 (A) an institution of higher education;

17 (B) an appropriate State or Federal entity,
18 including a federally funded research and devel-
19 opment center of the Department;

20 (C) a nonprofit research institution;

21 (D) a multi-institutional collaboration; or

22 (E) any other relevant entity the Secretary
23 determines appropriate.

1 **SEC. 3. EMERGING INFECTIOUS DISEASE PREDICTION AND**
2 **FORECASTING SCIENCE AND TECHNOLOGY**
3 **INTERAGENCY WORKING GROUP.**

4 (a) INTERAGENCY COMMITTEE.—The Director of the
5 Office of Science and Technology Policy, acting through
6 the National Science and Technology Council, shall estab-
7 lish or designate an interagency working group to coordi-
8 nate Federal programs and activities for emerging infec-
9 tious disease data acquisition, analysis, situational aware-
10 ness, prediction and forecasting, and other related activi-
11 ties.

12 (b) CO-CHAIRS.—The interagency working group
13 shall be co-chaired by the Director of the Office of Science
14 and Technology Policy and, on an annual rotating basis,
15 a representative from the participants of the interagency
16 working group, as selected by the Director of the Office
17 of Science and Technology Policy.

18 (c) AGENCY PARTICIPATION.—The Committee shall
19 include representatives from—

- 20 (1) the Department of Health and Human
21 Services;
22 (2) the Department of Homeland Security;
23 (3) the Department of Agriculture;
24 (4) the Department of Commerce;
25 (5) the Department of Energy;
26 (6) the Department of the Interior;

- 1 (7) the Department of Defense;
2 (8) the National Science Foundation;
3 (9) the Centers for Disease Control and Preven-
4 tion;
5 (10) the National Institutes of Health;
6 (11) the Department of State;
7 (12) the Department of Veterans Affairs;
8 (13) the Environmental Protection Agency;
9 (14) the Federal Emergency Management
10 Agency;
11 (15) the United States Agency for International
12 Development;
13 (16) the Smithsonian Institution; and
14 (17) any other Federal agency as considered
15 appropriate by the Director of the Office of Science
16 and Technology Policy.

17 (d) RESPONSIBILITIES.—The Interagency working
18 group shall—

- 19 (1) provide for interagency coordination of Fed-
20 eral research, technological development, and oper-
21 ational practice in the prediction of infectious dis-
22 ease outbreaks in humans, animals, or plants to
23 minimize their adverse health, economic, and secu-
24 rity impact;

1 (2) identify challenges in outbreak prediction
2 and modeling and develop a national strategic plan
3 for Federal actions to advance the development and
4 effective application of outbreak prediction capabili-
5 ties;

6 (3) hold workshops and seminars to engage re-
7 searchers and stakeholders from universities, indus-
8 try, public health organizations, and non-profit orga-
9 nization; and

10 (4) engage with international partners and stra-
11 tegic allies to share best practices and coordinate
12 prediction and modeling of infectious disease.

13 (e) COORDINATION WITH NATIONAL ACADEMIES
14 STANDING COMMITTEE ON EMERGING INFECTIOUS DIS-
15 EASE AND 21ST CENTURY HEALTH THREATS.—The Di-
16 rector of the Office of Science and Technology Policy shall
17 coordinate with the National Academies to ensure that at
18 least one member of the interagency working group is also
19 a member of the committee under section 4.

20 (f) BIENNIAL REPORTING.—One years after the date
21 of enactment of this Act, and at least every 2 years there-
22 after, the Director of the Office of Science and Technology
23 Policy shall provide a summary report to Congress on the
24 activities of the working group.

1 **SEC. 4. NATIONAL ACADEMIES STANDING COMMITTEE ON**
2 **EMERGING INFECTIOUS DISEASE AND 21ST**
3 **CENTURY HEALTH THREATS.**

4 (a) IN GENERAL.—The Office of Science and Tech-
5 nology Policy, and other agencies as determined by the
6 Director of the Office of Science and Technology Policy,
7 shall enter into an agreement with the National Academies
8 to create a “Standing Committee on Emerging Infectious
9 Disease and 21st Century Health Threats” (hereinafter
10 in this section referred to as the “Standing Committee”).

11 (b) PARTICIPANTS.—The Standing Committee shall
12 include members with expertise in emerging infectious dis-
13 eases, public health, public health preparedness and re-
14 sponse, biological sciences, clinical care and crisis stand-
15 ards of care, risk communication, and regulatory issues.

16 (c) PURPOSE.—The purpose of the Standing Com-
17 mittee is to facilitate the exchange of ideas among Federal
18 agencies, the private sector, and the academic community,
19 as well as other relevant stakeholders, including—

20 (1) responding on short notice to requests from
21 the Federal Government to assess and consider the
22 science and policy implications of an emerging infec-
23 tious disease or significant public health threat;

24 (2) providing a venue to enable science and pol-
25 icy discussions relevant to the Federal Government
26 on emerging issues, research, and activities through

1 in-depth knowledge of the sponsor's programs, goals,
2 and objectives;

3 (3) identifying opportunities to integrate science
4 into national preparedness and response decision
5 making;

6 (4) exploring lessons learned and best practices
7 from previous preparedness and response efforts,
8 and identify opportunities to disseminate that infor-
9 mation to a variety of stakeholders;

10 (5) serving as a forum for national policy dis-
11 cussions by experts and other leaders in the field;

12 (6) identifying and discussing strategies for ad-
13 dressing misinformation; and

14 (7) responding to the needs of the Working
15 Group established under section 3 for continuing di-
16 alog related to strategic planning and program de-
17 velopment to address emerging infectious diseases,
18 biosecurity, and public health and medical prepared-
19 ness.

20 (d) REPORT AND BRIEFING.—The agreement under
21 subsection (a) shall specify that—

22 (1) the standing committee shall periodically or-
23 ganize workshops and issue publicly available reports
24 on the topics described in subsection (c) and the ac-
25 tivities of the Standing Committee; and

1 (2) not later than one year after the date of en-
2 actment of this Act, the Academies shall provide a
3 briefing to relevant Committees of the House of
4 Representatives and Senate on the progress and ac-
5 tivities of the Standing Committee.

6 **SEC. 5. DEPARTMENT OF ENERGY EMERGING INFECTIOUS**
7 **DISEASE RESEARCH PROGRAM.**

8 (a) IN GENERAL.—The Secretary, in coordination
9 with the Director of the National Science Foundation and
10 the Director of the National Aeronautics and Space Ad-
11 ministration, shall carry out a research program to lever-
12 age the Federal Government’s innovative analytical tools
13 and advanced computational and networking capabilities
14 in order to prevent, prepare for, and respond to emerging
15 infectious diseases, including COVID–19. The Secretary
16 shall carry out this program through a competitive, merit-
17 reviewed process, and consider applications from National
18 Laboratories, institutions of higher education, multi-insti-
19 tutional collaborations, industry partners and other appro-
20 priate entities.

21 (b) PROGRAM COMPONENTS.—In carrying out the
22 program established under subsection (a), Secretary shall
23 coordinate with relevant Federal agencies to determine a
24 comprehensive set of technical milestones for these re-
25 search activities and prioritize the following objectives—

1 (1) supporting fundamental research and devel-
2 opment in advanced analytics and high-performance
3 computing technologies needed to characterize,
4 model, simulate, and predict complex phenomena re-
5 lated to emerging infectious diseases, including
6 COVID–19 mitigation challenges, including a focus
7 on bioinformatics, epidemiology, and molecular mod-
8 eling;

9 (2) using expertise from the private sector and
10 institutions of higher education, and the National
11 Laboratories to develop computational software and
12 capabilities that prospective users may accelerate
13 emerging infectious diseases research and develop-
14 ment;

15 (3) increasing the utility of the research infra-
16 structure of the Department, including scientific
17 computing user facilities and light source user facili-
18 ties, by coordinating with the Advanced Scientific
19 Computing Research and Basic Energy Sciences
20 programs within the Office of Science;

21 (4) leveraging experience from existing mod-
22 eling and simulation research and work sponsored by
23 the Department and promoting collaboration and
24 data sharing between National Laboratories, re-
25 search entities, and user facilities of the Department

1 by providing the necessary access and secure data
2 transfer capabilities; and

3 (5) ensuring that new experimental and com-
4 putational tools are accessible to relevant research
5 communities, including private sector entities en-
6 gaged in technology development to address emerg-
7 ing infectious diseases, including COVID-19 chal-
8 lenges.

9 (c) COORDINATION.—In carrying out these programs,
10 the Secretary shall ensure coordination and consultation
11 with member of the working group established in section
12 3. The Secretary shall ensure, to the maximum extent
13 practicable, coordination of these activities with the De-
14 partment of Energy National Laboratories, institutes of
15 higher education, and the private sector.

16 (d) EMERGING INFECTIOUS DISEASES HIGH PER-
17 FORMANCE COMPUTING RESEARCH CONSORTIUM.—

18 (1) IN GENERAL.—The Secretary in coordina-
19 tion with the Director of the National Science Foun-
20 dation and the Director of the Office of Science and
21 Technology Policy shall establish and operate an
22 Emerging Infectious Diseases High Performance
23 Computing Research Consortium (referred to in this
24 section as the “Consortium”), in order to support
25 the program under subsection (a) by providing, to

1 the extent practicable, a centralized location for mul-
2 tidisciplinary, collaborative, emerging infectious dis-
3 ease research and development through high per-
4 formance computing and advanced data analytics
5 technologies and processes.

6 (2) MEMBERSHIP.—The members of such con-
7 sortium shall be representatives from relevant Fed-
8 eral agencies, the private sector, institutes of higher
9 education, which can each contribute relevant com-
10 pute time, capabilities, or other resources.

11 (3) ACTIVITIES.—The Consortium shall—

12 (A) match applicants with available Fed-
13 eral and private sector computing resources;

14 (B) consider supplemental awards for com-
15 puting partnerships with Consortium members
16 to qualifying entities on a competitive merit-re-
17 view basis;

18 (C) encourage collaboration and commu-
19 nication among member representatives of the
20 consortium and awardees;

21 (D) make available the high-performance
22 computing capabilities, expertise, and user fa-
23 cilities of the Department and the National
24 Laboratories; and

1 (E) submit an annual report to the Sec-
2 retary summarizing the activities of the Consor-
3 tium, including—

4 (i) describing each project undertaken
5 by the Consortium;

6 (ii) detailing organizational expendi-
7 tures; and

8 (iii) evaluating contribution to the
9 achievement of technical milestones as de-
10 termined in subsection (a).

11 (4) COORDINATION.—The Secretary shall en-
12 sure the coordination of, and avoid unnecessary du-
13 plication of, the activities of the Consortium with the
14 activities of other research entities of the Depart-
15 ment, institutions of higher education and the pri-
16 vate sector.

17 (e) REPORT.—Not later than 2 years after the date
18 of enactment of this Act, the Secretary shall submit to
19 the Committee on Science, Space, and Technology of the
20 House, and the Committee on Energy and Natural Re-
21 sources of the Senate, and the Committee on Commerce,
22 Science, and Transportation of the Senate a report detail-
23 ing the effectiveness of—

1 (1) the interagency coordination between each
2 Federal agency involved in the research program
3 carried out under this section;

4 (2) the collaborative research achievements of
5 the program, including the achievement of the tech-
6 nical milestones determined under subsection (a);
7 and

8 (3) potential opportunities to expand the tech-
9 nical capabilities of the Department.

10 (f) PROHIBITION.—No funds allocated to the pro-
11 gram described in subsection (a) may be obligated or ex-
12 pended for commercial application of technology.

13 (g) FUNDING.—From within funds authorized to be
14 appropriated for the Department’s Office of Science, there
15 shall be made available to the Secretary to carry out the
16 activities under this section, \$50,000,000 for fiscal years
17 2021 and 2022.

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