tional Science Foundation and other relevant Federal agencies on helium conservation activities.

(d) Duration

The program established under this section shall receive support for a period of not more than 5 years, subject to the availability of appropriations.

(e) Renewal

Upon expiration of any period of support of the program under this section, the Director may renew support for the program for a period of not more than 5 years.

(Pub. L. 115–246, title III, § 314, as added Pub. L. 117–167, div. B, title I, § 10112(a), Aug. 9, 2022, 136 Stat. 1460.)

§ 18653. Office of Science Biological Threat Preparedness Research Initiative

(a) In general

The Secretary shall establish within the Office of Science a cross-cutting research initiative, to be known as the ''Biological Threat Preparedness Research Initiative'', to leverage the innovative analytical resources and tools, user facilities, and advanced computational and networking capabilities of the Department in order to support efforts that prevent, prepare for, predict, and respond to biological threats to national security, including infectious diseases.

(b) Competitive, merit-reviewed process

The Secretary shall carry out the initiative established under subsection (a) through a competitive, merit-reviewed process, and consider applications from National Laboratories, institutions of higher education, multi-institutional collaborations, industry partners and other appropriate entities.

(c) Activities

In carrying out the initiative established under subsection (a), the Secretary shall—

(1) determine a comprehensive set of technical milestones for the research activities described in that subsection;

(2) prioritize the objectives of—

(A) supporting fundamental research and development in advanced analytics, experimental studies, materials synthesis, and high-performance computing technologies needed in order to more quickly and effectively characterize, model, simulate, and predict complex natural phenomena and biological materials related to emerging biological threats;

(B) supporting the development of tools that inform epidemiological modeling, and applying artificial intelligence, machine learning, and other computing tools to accelerate such processes;

(C) supporting research and capabilities that enhance understanding and modeling of the transport of pathogens in indoor and outdoor air and water environments;

(D) identifying priority research opportunities and capabilities for molecular design and modeling for medical countermeasures;

(E) ensuring that new experimental and computational tools are accessible to relevant research communities, including private sector entities and other Federal research institutions; and

(F) supporting activities and projects that combine computational modeling and simulation with experimental research facilities and studies;

(3) leverage the research infrastructure of the Department, including scientific computing user facilities, x-ray light sources, neutron scattering facilities, nanoscale science research centers, and sequencing and biocharacterization facilities;

(4) leverage experience from existing modeling and simulation research and work sponsored by the Department and promote collaboration and data sharing between National Laboratories, research entities, and user facilities of the Department by providing necessary access and secure data transfer capabilities; and

(5) ensure that new experimental and computational tools are accessible to relevant research communities, including private sector entities, to address emerging biological threats.

(d) Coordination

In carrying out the initiative established under subsection (a), the Secretary shall coordinate activities with—

(1) other relevant offices of the Department;

(2) the National Nuclear Security Administration;

(3) the National Laboratories;

(4) the Director of the National Science Foundation;

(5) the Director of the Centers for Disease Control and Prevention;

(6) the Director of the National Institutes of Health;

(7) the Assistant Secretary for Preparedness and Response;

(8) the heads of other relevant Federal agencies;

(9) institutions of higher education; and

(10) the private sector.

(e) Infectious Diseases High Performance Computing Research Consortium

(1) In general

The Secretary, in coordination with the Director of the National Science Foundation and the Director of the Office of Science and Technology Policy, shall establish and operate an Emerging Infectious Diseases High Performance Computing Research Consortium (referred to in this section as the ''Consortium''), to support the initiative established under subsection (a) by providing, to the extent practicable, a centralized entity for multidisciplinary, collaborative, emerging infectious disease and biosecurity research and development through high performance computing and advanced data analytics technologies and processes, in conjunction with the experimental research facilities and studies supported by the Department.

(2) Membership

The members of the Consortium may include representatives from relevant Federal agen-

cies, the National Laboratories, the private sector, and institutions of higher education, which can each contribute relevant compute time, capabilities, or other resources.

(3) Activities

The Consortium shall—

(A) match applicants with available Federal and private sector computing resources;

(B) consider supplemental awards for computing partnerships with Consortium members to qualifying entities on a competitive merit-review basis;

(C) encourage collaboration and communication among member representatives of the Consortium and awardees;

(D) provide access to the high-performance computing capabilities, expertise, and user facilities of the Department and the National Laboratories; and

(E) submit an annual report to the Secretary summarizing the activities of the Consortium, including—

(i) describing each project undertaken by the Consortium;

(ii) detailing organizational expenditures; and

(iii) evaluating contributions to the achievement of technical milestones as determined in subsection (a).

(4) Coordination

The Secretary shall ensure the coordination of, and avoid unnecessary duplication of, the activities of the Consortium with the activities of other research entities of the Department, other Federal research institutions, institutions of higher education, and the private sector.

(f) Report

Not later than 2 years after August 9, 2022, the Secretary shall submit to the Committee on Science, Space, and Technology and the Committee on Energy and Commerce of the House of Representatives, and the Committee on Energy and Natural Resources, the Committee on Commerce, Science, and Transportation, and the Committee on Health, Education, Labor, and Pensions of the Senate, a report detailing the effectiveness of—

(1) the interagency coordination among each Federal agency involved in the initiative established under subsection (a);

(2) the collaborative research achievements of that initiative, including the achievement of the technical milestones determined under that subsection; and

(3) potential opportunities to expand the technical capabilities of the Department.

(g) Funding

Out of funds authorized to be appropriated for the Office of Science in a fiscal year, there is authorized to be appropriated to the Secretary to carry out the activities under this section $50,000,000 for each of fiscal years 2023 through 2027.

(Pub. L. 115–246, title III, §315, as added Pub. L. 117–167, div. B, title I, §10112(a), Aug. 9, 2022, 136 Stat. 1461.)

§18654. Midscale instrumentation and research equipment program

(a) In general

The Director shall establish a midscale instrumentation and research equipment program to develop, acquire, and commercialize research instrumentation and equipment needed to meet the missions of the Department and to provide platform technologies for the broader scientific community.

(b) Activities

Under the program established under subsection (a), the Director shall—

(1) enable the development and acquisition of novel, state-of-the-art instruments that—

(A) range in cost from $1,000,000 to $20,000,000 each; and

(B) would significantly accelerate scientific breakthroughs at user facilities; and

(2) strongly encourage partnerships among—

(A) National Laboratories;

(B) user facilities; and

(C)(i) institutions in a State receiving funding under the Established Program to Stimulate Competitive Research established under section 13503(b)(3) of this title;

(ii) historically Black colleges or universities;

(iii) minority-serving institutions of higher education; or

(iv) institutions of higher education in a rural area.

(c) Coordination with other programs

The Director shall coordinate the program established under subsection (a) with all other programs carried out by the Office of Science of the Department.

(d) Research equipment and technology development coordination

The Director shall encourage coordination among the Office of Science, the National Laboratories, the Office of Technology Transitions, and relevant academic and private sector entities to identify, disseminate, and commercialize research instruments, equipment, and related technologies developed to aid basic science research discoveries that meet the mission of the Department.

(e) Authorization of appropriations

Out of funds authorized to be appropriated for the Office of Science in a fiscal year, there is authorized to be appropriated to carry out this section $150,000,000 for each of fiscals[1] years 2023 through 2027.

(Pub. L. 115–246, title III, §316, as added Pub. L. 117–167, div. B, title I, §10112(a), Aug. 9, 2022, 136 Stat. 1463.)

§18655. Authorization of appropriations

There are authorized to be appropriated to the Secretary to carry out the activities described in this subchapter—

(1) $8,902,392,400 for fiscal year 2023;

(2) $9,541,895,744 for fiscal year 2024;

[1] So in original. Probably should be ''fiscal''.