

[COMMITTEE PRINT]

APRIL 9, 2010

111TH CONGRESS  
2D SESSION

**H. R.** \_\_\_\_\_

To authorize appropriations for fiscal years 2011 through 2015 for the National Science Foundation, and for other purposes.

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IN THE HOUSE OF REPRESENTATIVES

M. \_\_\_\_\_ introduced the following bill; which was referred to the Committee on \_\_\_\_\_

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**A BILL**

To authorize appropriations for fiscal years 2011 through 2015 for the National Science Foundation, 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; TABLE OF CONTENTS.**

4 (a) SHORT TITLE.—This Act may be cited as the  
5 “National Science Foundation Authorization Act of  
6 2010”.

1 (b) TABLE OF CONTENTS.—The table of contents for  
2 this Act is as follows:

Sec. 1. Short title; table of contents.

TITLE I—GENERAL PROVISIONS

- Sec. 101. Definitions.
- Sec. 102. Authorization of appropriations.
- Sec. 103. National Science Board administrative amendments.
- Sec. 104. Broader impacts review criterion.

TITLE II—RESEARCH AND INNOVATION

- Sec. 201. Support for potentially transformative research.
- Sec. 202. Facilitating interdisciplinary collaborations for national needs.
- Sec. 203. National Science Foundation manufacturing research.
- Sec. 204. Strengthening institutional research partnerships.
- Sec. 205. National Science Board report on mid-scale instrumentation.
- Sec. 206. Sense of Congress on overall support for research infrastructure at the Foundation.

TITLE III—STEM EDUCATION AND WORKFORCE TRAINING

- Sec. 301. Graduate student support.
- Sec. 302. Postdoctoral fellowship in STEM education research.
- Sec. 303. Robert Noyce teacher scholarship program.
- Sec. 304. Institutions serving persons with disabilities.
- Sec. 305. Institutional integration.
- Sec. 306. Postdoctoral research fellowships.
- Sec. 307. Broadening participation training and outreach.

3 **TITLE I—GENERAL PROVISIONS**

4 **SEC. 101. DEFINITIONS.**

5 In this Act:

6 (1) DIRECTOR.—The term “Director” means  
7 the Director of the National Science Foundation es-  
8 tablished under section 2 of the National Science  
9 Foundation Act of 1950 (42 U.S.C. 1861).

10 (2) FOUNDATION.—The term “Foundation”  
11 means the National Science Foundation established  
12 under section 2 of the National Science Foundation  
13 Act of 1950 (42 U.S.C. 1861).

1           (3) INSTITUTION OF HIGHER EDUCATION.—The  
2 term “institution of higher education” has the  
3 meaning given such term in section 101(a) of the  
4 Higher Education Act of 1965 (20 U.S.C. 1001(a)).

5           (4) STATE.—The term “State” means one of  
6 the several States, the District of Columbia, the  
7 Commonwealth of Puerto Rico, the Virgin Islands,  
8 Guam, American Samoa, the Commonwealth of the  
9 Northern Mariana Islands, or any other territory or  
10 possession of the United States.

11          (5) STEM.—The term “STEM” means science,  
12 technology, engineering, and mathematics.

13          (6) UNITED STATES.—The term “United  
14 States” means the several States, the District of Co-  
15 lumbia, the Commonwealth of Puerto Rico, the Vir-  
16 gin Islands, Guam, American Samoa, the Common-  
17 wealth of the Northern Mariana Islands, and any  
18 other territory or possession of the United States.

19 **SEC. 102. AUTHORIZATION OF APPROPRIATIONS.**

20 (a) FISCAL YEAR 2011.—

21          (1) IN GENERAL.—There are authorized to be  
22 appropriated to the Foundation \$8,219,670,000 for  
23 fiscal year 2011.

24          (2) SPECIFIC ALLOCATIONS.—Of the amount  
25 authorized under paragraph (1)—

1 (A) \$6,600,000,000 shall be made avail-  
2 able for research and related activities;

3 (B) \$1,104,000,000 shall be made avail-  
4 able for education and human resources;

5 (C) \$166,000,000 shall be made available  
6 for major research equipment and facilities con-  
7 struction;

8 (D) \$330,000,000 shall be made available  
9 for agency operations and award management;

10 (E) \$4,840,000 shall be made available for  
11 the Office of the National Science Board; and

12 (F) \$14,830,000 shall be made available  
13 for the Office of Inspector General.

14 (b) FISCAL YEAR 2012.—

15 (1) IN GENERAL.—There are authorized to be  
16 appropriated to the Foundation \$8,932,080,000 for  
17 fiscal year 2012.

18 (2) SPECIFIC ALLOCATIONS.—Of the amount  
19 authorized under paragraph (1)—

20 (A) \$7,128,000,000 shall be made avail-  
21 able for research and related activities;

22 (B) \$1,192,320,000 shall be made avail-  
23 able for education and human resources;

1 (C) \$235,000,000 shall be made available  
2 for major research equipment and facilities con-  
3 struction;

4 (D) \$356,400,000 shall be made available  
5 for agency operations and award management;

6 (E) \$5,010,000 shall be made available for  
7 the Office of the National Science Board; and

8 (F) \$15,350,000 shall be made available  
9 for the Office of Inspector General.

10 (c) FISCAL YEAR 2013.—

11 (1) IN GENERAL.—There are authorized to be  
12 appropriated to the Foundation \$9,555,160,000 for  
13 fiscal year 2013.

14 (2) SPECIFIC ALLOCATIONS.—Of the amount  
15 authorized under paragraph (1)—

16 (A) \$7,626,960,000 shall be made avail-  
17 able for research and related activities;

18 (B) \$1,275,780,000 shall be made avail-  
19 able for education and human resources;

20 (C) \$250,000,000 shall be made available  
21 for major research equipment and facilities con-  
22 struction;

23 (D) \$381,350,000 shall be made available  
24 for agency operations and award management;

1 (E) \$5,180,000 shall be made available for  
2 the Office of the National Science Board; and

3 (F) \$15,890,000 shall be made available  
4 for the Office of Inspector General.

5 (d) FISCAL YEAR 2014.—

6 (1) IN GENERAL.—There are authorized to be  
7 appropriated to the Foundation \$10,112,940,000 for  
8 fiscal year 2014.

9 (2) SPECIFIC ALLOCATIONS.—Of the amount  
10 authorized under paragraph (1)—

11 (A) \$8,084,580,000 shall be made avail-  
12 able for research and related activities;

13 (B) \$1,352,330,000 shall be made avail-  
14 able for education and human resources;

15 (C) \$250,000,000 shall be made available  
16 for major research equipment and facilities con-  
17 struction;

18 (D) \$404,230,000 shall be made available  
19 for agency operations and award management;

20 (E) \$5,370,000 shall be made available for  
21 the Office of the National Science Board; and

22 (F) \$16,440,000 shall be made available  
23 for the Office of Inspector General.

24 (e) FISCAL YEAR 2015.—

1           (1) IN GENERAL.—There are authorized to be  
2           appropriated to the Foundation \$10,704,180,000 for  
3           fiscal year 2015.

4           (2) SPECIFIC ALLOCATIONS.—Of the amount  
5           authorized under paragraph (1)—

6                   (A) \$8,569,650,000 shall be made avail-  
7                   able for research and related activities;

8                   (B) \$1,433,470,000 shall be made avail-  
9                   able for education and human resources;

10                   (C) \$250,000,000 shall be made available  
11                   for major research equipment and facilities con-  
12                   struction;

13                   (D) \$428,480,000 shall be made available  
14                   for agency operations and award management;

15                   (E) \$5,550,000 shall be made available for  
16                   the Office of the National Science Board; and

17                   (F) \$17,020,000 shall be made available  
18                   for the Office of Inspector General.

19 **SEC. 103. NATIONAL SCIENCE BOARD ADMINISTRATIVE**  
20 **AMENDMENTS.**

21           (a) STAFFING AT THE NATIONAL SCIENCE BOARD.—  
22           Section 4(g) of the National Science Foundation Act of  
23           1950 (42 U.S.C. 1863(g)) is amended by striking “not  
24           more than 5”.

1           (b) SCIENCE AND ENGINEERING INDICATORS DUE  
2 DATE.—Section 4(j)(1) of the National Science Founda-  
3 tion Act of 1950 (42 U.S.C. 1863(j)(1)) is amended by  
4 striking “January 15” and inserting “May 31”.

5           (c) NATIONAL SCIENCE BOARD REPORTS.—Section  
6 4(j)(2) of the National Science Foundation Act of 1950  
7 (42 U.S.C. 1863(j)(2)) is amended by inserting “within  
8 the authority of the Foundation (or otherwise as requested  
9 by the Congress or the President)” after “individual policy  
10 matters”.

11          (d) BOARD ADHERENCE TO SUNSHINE ACT.—Sec-  
12 tion 15(a) of the National Science Foundation Authoriza-  
13 tion Act of 2002 (42 U.S.C. 1862n–5(a)) is amended—

14           (1) by striking paragraph (3) and redesignating  
15 paragraphs (4) and (5) as paragraphs (3) and (4),  
16 respectively;

17           (2) in paragraph (3), as so redesignated by  
18 paragraph (1) of this subsection—

19           (A) by striking “February 15” and insert-  
20 ing “April 15”; and

21           (B) by striking “audit required under  
22 paragraph (3) along with”; and

23           (3) in paragraph (4), as so redesignated by  
24 paragraph (1) of this subsection, by striking “To fa-



1 facilitate the audit required under paragraph (3) of  
2 this subsection, the” and inserting “The”.

3 **SEC. 104. BROADER IMPACTS REVIEW CRITERION.**

4 (a) GOALS.—The Foundation shall apply a Broader  
5 Impacts Review Criterion to achieve the following goals:

6 (1) Increased economic competitiveness of the  
7 United States.

8 (2) Development of a globally competitive  
9 STEM workforce.

10 (3) Increased participation of women and  
11 underrepresented minorities in STEM.

12 (4) Increased partnerships between academia  
13 and industry.

14 (5) Improved K-12 STEM education and teach-  
15 er development.

16 (6) Improved undergraduate STEM education.

17 (7) Increased public scientific literacy.

18 (8) Increased national security.

19 (b) POLICY.—Not later than 6 months after the date  
20 of enactment of this Act, the Director shall develop and  
21 implement a policy for the Broader Impacts Review Cri-  
22 terion that—

23 (1) provides for educating professional staff at  
24 the Foundation, merit review panels, and applicants

1 for Foundation research grants on the policy devel-  
2 oped under this subsection;

3 (2) clarifies that the activities of grant recipi-  
4 ents undertaken to satisfy the Broader Impacts Re-  
5 view Criterion shall—

6 (A) to the extent practicable employ proven  
7 strategies and models and draw on existing pro-  
8 grams and activities; and

9 (B) when novel approaches are justified,  
10 build on the most current research results;

11 (3) allows for some portion of funds allocated to  
12 broader impacts under a research grant to be used  
13 for assessment and evaluation of the broader im-  
14 pacts activity;

15 (4) encourages institutions of higher education  
16 and other nonprofit organizations to develop and  
17 provide, either as individual institutions or in part-  
18 nerships thereof, appropriate training and programs  
19 to assist Foundation-funded principal investigators  
20 at their institutions in achieving the goals of the  
21 Broader Impacts Review Criterion as described in  
22 subsection (a); and

23 (5) requires principal investigators applying for  
24 Foundation research grants to provide evidence of  
25 institutional support for the portion of the investiga-

1       tor's proposal designed to satisfy the Broader Im-  
2       pacts Review Criterion, including evidence of rel-  
3       evant training, programs, and other institutional re-  
4       sources available to the investigator from either their  
5       home institution or organization or another institu-  
6       tion or organization with relevant expertise.

## 7                   **TITLE II—RESEARCH AND** 8                   **INNOVATION**

### 9       **SEC. 201. SUPPORT FOR POTENTIALLY TRANSFORMATIVE** 10                   **RESEARCH.**

11       (a) **POLICY.**—The Director shall establish a policy  
12       that requires the Foundation to use at least 5 percent of  
13       its research budget to fund basic, high-risk, high-reward  
14       research proposals. Support for facilities and infrastruc-  
15       ture, including preconstruction design and operations and  
16       maintenance of major research facilities, shall not be  
17       counted as part of the research budget for the purposes  
18       of this section.

19       (b) **IMPLEMENTATION.**—In implementing such policy,  
20       the Foundation may—

21               (1) develop solicitations specifically for high-  
22               risk, high-reward research;

23               (2) establish review panels for the primary pur-  
24               pose of selecting high-risk, high-reward proposals or  
25               modify instructions to standard review panels to re-

1       quire identification of high-risk, high-reward pro-  
2       posals; and

3               (3) support workshops and participate in con-  
4       ferences with the primary purpose of identifying new  
5       opportunities for high-risk, high-reward research, es-  
6       pecially at interdisciplinary interfaces.

7       (c) DEFINITION.—For purposes of this section, the  
8       term “high-risk, high-reward research” means research  
9       driven by ideas that have the potential to radically change  
10      our understanding of an important existing scientific or  
11      engineering concept, or leading to the creation of a new  
12      paradigm or field of science or engineering, and that is  
13      characterized by its challenge to current understanding or  
14      its pathway to new frontiers.

15      **SEC. 202. FACILITATING INTERDISCIPLINARY COLLABORA-**  
16                                      **TIONS FOR NATIONAL NEEDS.**

17      (a) IN GENERAL.—The Director shall award competi-  
18      tive, merit-based awards in amounts not to exceed  
19      \$5,000,000 over a period of up to 5 years to interdiscipli-  
20      nary research collaborations that are likely to assist in ad-  
21      dressing critical challenges to national security, competi-  
22      tiveness, and societal well-being and that—

23               (1) involve at least 2 co-equal principal inves-  
24      tigators at the same or different institutions;

1           (2) draw upon well-integrated, diverse teams of  
2           investigators, including students or postdoctoral re-  
3           searchers, from one or more disciplines; and

4           (3) foster creativity and pursue high-risk, high-  
5           reward research.

6           (b) PRIORITY.—In selecting grant recipients under  
7           this section, the Director shall give priority to applicants  
8           that propose to use advances in cyberinfrastructure and  
9           simulation-based science engineering.

10 **SEC. 203. NATIONAL SCIENCE FOUNDATION MANUFAC-**  
11 **TURING RESEARCH.**

12           The Director shall carry out a program to award  
13           merit-reviewed, competitive grants to institutions of higher  
14           education to support fundamental research leading to  
15           transformative advances in manufacturing technologies,  
16           processes, and enterprises that will support United States  
17           manufacturing through improved performance, produc-  
18           tivity, sustainability, and competitiveness. Research areas  
19           may include—

20           (1) nanomanufacturing;

21           (2) manufacturing and construction machines  
22           and equipment, including robotics, automation, and  
23           other intelligent systems;

24           (3) manufacturing enterprise systems;

25           (4) advanced sensing and control techniques;

1           (5) materials processing; and  
2           (6) information technologies for manufacturing,  
3       including predictive and real-time models and sim-  
4       ulations, and virtual manufacturing.

5 **SEC. 204. STRENGTHENING INSTITUTIONAL RESEARCH**  
6                                   **PARTNERSHIPS.**

7       (a) IN GENERAL.—For any Foundation research  
8       grant, in an amount greater than \$2,000,000, to be car-  
9       ried out through a partnership that includes one or more  
10      minority-serving institutions or predominantly under-  
11      graduate institutions and one or more institutions de-  
12      scribed in subsection (b), the Director shall award funds  
13      directly, according to the budget justification described in  
14      the grant proposal, to at least two of the institutions of  
15      higher education in the partnership, including at least one  
16      minority-serving institution or one predominantly under-  
17      graduate institution, to ensure a strong and equitable  
18      partnership.

19      (b) INSTITUTIONS.—The institutions referred to in  
20      subsection (a) are institutions of higher education that are  
21      among the 100 institutions receiving, over the 3-year pe-  
22      riod immediately preceding the awarding of grants, the  
23      highest amount of research funding from the Foundation.

1 **SEC. 205. NATIONAL SCIENCE BOARD REPORT ON MID-**  
2 **SCALE INSTRUMENTATION.**

3 (a) MID-SCALE RESEARCH INSTRUMENTATION  
4 NEEDS.—The National Science Board shall evaluate the  
5 needs, across all disciplines supported by the Foundation,  
6 for mid-scale research instrumentation that falls between  
7 the instruments funded by the Major Research Instrumen-  
8 tation program and the very large projects funded by the  
9 Major Research Equipment and Facilities Construction  
10 program.

11 (b) REPORT ON MID-SCALE RESEARCH INSTRUMEN-  
12 TATION PROGRAM.—Not later than 1 year after the date  
13 of enactment of this Act, the National Science Board shall  
14 submit to Congress a report on mid-scale research instru-  
15 mentation at the Foundation. At a minimum, this report  
16 shall include—

17 (1) the findings from the Board's evaluation of  
18 instrumentation needs required under subsection (a),  
19 including a description of differences across dis-  
20 ciplines and Foundation research directorates;

21 (2) a recommendation or recommendations re-  
22 garding how the Foundation should set priorities for  
23 mid-scale instrumentation across disciplines and  
24 Foundation research directorates;

25 (3) a recommendation or recommendations re-  
26 garding the appropriateness of expanding existing

1 programs, including the Major Research Instrumen-  
2 tation program or the Major Research Equipment  
3 and Facilities Construction program, to support  
4 more instrumentation at the mid-scale;

5 (4) a recommendation or recommendations re-  
6 garding the need for and appropriateness of a new,  
7 Foundation-wide program or initiative in support of  
8 mid-scale instrumentation, including any rec-  
9 ommendations regarding the administration of and  
10 budget for such a program or initiative and the ap-  
11 propriate scope of instruments to be funded under  
12 such a program or initiative; and

13 (5) any recommendation or recommendations  
14 regarding other options for supporting mid-scale re-  
15 search instrumentation at the Foundation.

16 **SEC. 206. SENSE OF CONGRESS ON OVERALL SUPPORT FOR**  
17 **RESEARCH INFRASTRUCTURE AT THE FOUN-**  
18 **DATION.**

19 It is the sense of Congress that the Foundation  
20 should strive to keep the percentage of the Foundation  
21 budget devoted to research infrastructure in the range of  
22 24 to 27 percent, as recommended in the 2003 National  
23 Science Board report entitled “Science and Engineering  
24 Infrastructure for the 21st Century”.



1       **TITLE III—STEM EDUCATION**  
2       **AND WORKFORCE TRAINING**

3       **SEC. 301. GRADUATE STUDENT SUPPORT.**

4       (a) FINDING.—The Congress finds that—

5               (1) the Integrative Graduate Education and Re-  
6       search Traineeship program is an important pro-  
7       gram for training the next generation of scientists  
8       and engineers in team-based interdisciplinary re-  
9       search and problem solving, and for providing them  
10      with the many additional skills, such as communica-  
11      tion skills, needed to thrive in diverse STEM ca-  
12      reers; and

13              (2) the Integrative Graduate Education and Re-  
14      search Traineeship program is no less valuable to  
15      the preparation and support of graduate students  
16      than the Foundation’s Graduate Research Fellow-  
17      ship program.

18      (b) EQUAL TREATMENT OF IGERT AND GRF.—Be-  
19      ginning in fiscal year 2011, the Director shall increase or,  
20      if necessary, decrease funding for the Foundation’s Inte-  
21      grative Graduate Education and Research Traineeship  
22      program (or any program by which it is replaced) at least  
23      at the same rate as it increases or decreases funding for  
24      the Graduate Research Fellowship program.

1           (c) SUPPORT FOR GRADUATE STUDENT RESEARCH  
2 FROM THE RESEARCH ACCOUNT.—For each of the fiscal  
3 years 2011 through 2015, at least 50 percent of the total  
4 Foundation funds allocated to the Integrative Graduate  
5 Education and Research Traineeship program and the  
6 Graduate Research Fellowship program shall come from  
7 funds appropriated for Research and Related Activities.

8           (d) COST OF EDUCATION ALLOWANCE FOR GRF PRO-  
9 GRAM.—Section 10 of the National Science Foundation  
10 Act of 1950 (42 U.S.C. 1869) is amended—

11           (1) by inserting “(a)” before “The Foundation  
12 is authorized”; and

13           (2) by adding at the end the following new sub-  
14 section:

15           “(b) The Director shall establish for each year the  
16 amount to be awarded for scholarships and fellowships  
17 under this section for that year. Each such scholarship  
18 and fellowship shall include a cost of education allowance  
19 of at least the lesser of \$12,000 or the cost of education  
20 at the institution in which the scholarship or fellowship  
21 recipient is matriculated, subject to any restrictions on the  
22 use of cost of education allowance as determined by the  
23 Director.”.

1 **SEC. 302. POSTDOCTORAL FELLOWSHIP IN STEM EDU-**  
2 **CATION RESEARCH.**

3 (a) IN GENERAL.—The Director shall establish  
4 postdoctoral fellowships in STEM education research to  
5 provide recent doctoral degree graduates in STEM fields  
6 with the necessary skills to assume leadership roles in  
7 STEM education research, program development, and  
8 evaluation in our Nation’s diverse educational institutions.

9 (b) AWARDS.—

10 (1) DURATION.—Fellowships may be awarded  
11 under this section for a period of up to 24 months  
12 in duration, renewable for an additional 12 months.  
13 The Director shall establish criteria for eligibility for  
14 renewal of the fellowship.

15 (2) STIPEND.—The Director shall determine  
16 the amount of the award for a fellowship, which  
17 shall include a stipend and a research allowance, and  
18 may include an educational allowance.

19 (3) LOCATION.—A fellowship shall be awarded  
20 for research at any institution of higher education  
21 that offers degrees in fields supported by the Foun-  
22 dation, or at any institution or organization that the  
23 Director determines is eligible for education research  
24 grants from the Foundation.

25 (4) NUMBER OF AWARDS.—The Director may  
26 award up to 20 new fellowships per year.

1 (c) RESEARCH.—Fellowships under this section shall  
2 be awarded for research on STEM education at any edu-  
3 cational level, including grades K-12, undergraduate,  
4 graduate, and general public education, in both formal and  
5 informal settings. Research topics may include—

6 (1) learning processes;

7 (2) knowledge transfer, including curriculum  
8 development;

9 (3) uses of technology as teaching and learning  
10 tools;

11 (4) integrating STEM fields; and

12 (5) student assessment and program evaluation.

13 (d) ELIGIBILITY.—To be eligible for a fellowship  
14 under this section, an individual must—

15 (1) be a United States citizen or national, or an  
16 alien lawfully admitted to the United States for per-  
17 manent residence, at the time of application; and

18 (2) have received a doctoral degree in one of the  
19 STEM fields supported by the Foundation within 3  
20 years prior to the fellowship application deadline.

21 **SEC. 303. ROBERT NOYCE TEACHER SCHOLARSHIP PRO-**  
22 **GRAM.**

23 (a) SECTION 10 AMENDMENTS.—Section 10 of the  
24 National Science Foundation Authorization Act of 2002  
25 (42 U.S.C. 1862n–1) is amended—

1           (1) in subsection (c)(4), by striking “Service re-  
2           quired under this paragraph shall be performed in a  
3           high-need local educational agency.”; and

4           (2) in subsection (c), by adding at the end a  
5           new paragraph as follows:

6           “(5) EXCEPTION.—The period of service obliga-  
7           tion under paragraph (4) shall be reduced by 1 year  
8           for scholarship recipients whose service is performed  
9           in a high-need local educational agency. The Direc-  
10          tor shall establish and maintain a central clearing-  
11          house of information on teaching opportunities avail-  
12          able in high-need local educational agencies through-  
13          out the United States, which shall be made available  
14          to individuals having a service obligation under this  
15          section.”.

16          (b) SECTION 10A AMENDMENTS.—Section 10A of  
17          the National Science Foundation Authorization Act of  
18          2002 (42 U.S.C. 1862n–1a) is amended in subsection  
19          (h)(1) by striking “50” and inserting “30”.

20      **SEC. 304. INSTITUTIONS SERVING PERSONS WITH DISABIL-**  
21                                      **ITIES.**

22          For the purposes of the activities and programs sup-  
23          ported by the Foundation, institutions of higher education  
24          chartered to serve large numbers of students with disabil-  
25          ities, including Gallaudet University, Landmark College,

1 and the National Technical Institute for the Deaf, shall  
2 be designated as minority-serving institutions.

3 **SEC. 305. INSTITUTIONAL INTEGRATION.**

4 (a) INNOVATION THROUGH INSTITUTIONAL INTE-  
5 GRATION.—The Director shall award grants for the insti-  
6 tutional integration of projects funded by the Foundation  
7 with a focus on education or broadening participation in  
8 STEM by underrepresented groups for the purpose of in-  
9 creasing collaboration and coordination across funded  
10 projects and institutions and expanding the impact of such  
11 projects within and among institutions of higher education  
12 in an innovative and sustainable manner.

13 (b) PROGRAM ACTIVITIES.—The program under this  
14 section shall support integrative activities that involve the  
15 strategic and innovative combination of Foundation-fund-  
16 ed projects and that provide for—

17 (1) additional opportunities to increase the re-  
18 cruitment, retention, and degree attainment of  
19 underrepresented groups in STEM disciplines;

20 (2) the inclusion of programming, practices,  
21 and policies that encourage the integration of edu-  
22 cation and research;

23 (3) seamless transitions from one educational  
24 level to another; and

1           (4) other activities that expand and deepen the  
2           impact of Foundation-funded projects with a focus  
3           on education or broadening participation in STEM  
4           by underrepresented groups and enhance their sus-  
5           tainability.

6           (c) REVIEW CRITERIA.—In selecting recipients of  
7           grants under this section, the Director shall consider at  
8           a minimum—

9           (1) the extent to which the proposed project ad-  
10          dresses the goals of project and program integration  
11          and adds value to the existing funded projects;

12          (2) the extent to which there is a proven record  
13          of success for the existing projects on which the pro-  
14          posed integration project is based; and

15          (3) the extent to which the proposed project ad-  
16          dresses the modification of programming, practices,  
17          and policies necessary to achieve the purpose de-  
18          scribed in subsection (a).

19          (d) PRIORITY.—In selecting recipients of grants  
20          under this section, the Director shall give priority to pro-  
21          posals for which a senior institutional administrator, in-  
22          cluding a dean or other administrator of equal or higher  
23          rank, serves as the principal investigator.

1 **SEC. 306. POSTDOCTORAL RESEARCH FELLOWSHIPS.**

2 (a) IN GENERAL.—The Director shall establish a  
3 Foundation-wide postdoctoral research fellowship pro-  
4 gram, to award competitive, merit-based postdoctoral re-  
5 search fellowships in any field of research supported by  
6 the Foundation.

7 (b) DURATION AND AMOUNT.—Fellowships may be  
8 awarded under this section for a period of up to 3 years  
9 in duration. The Director shall determine the amount of  
10 the award for a fellowship, which shall include a stipend  
11 and a research allowance, and may include an educational  
12 allowance.

13 (c) ELIGIBILITY.—To be eligible to receive a fellow-  
14 ship under this section, an individual—

15 (1) must be a United States citizen or national,  
16 or an alien lawfully admitted to the United States  
17 for permanent residence, at the time of application;

18 (2) must have received a doctoral degree in any  
19 field of research supported by the Foundation within  
20 3 years prior to the fellowship application deadline,  
21 or will complete a doctoral degree no more than 1  
22 year after the application deadline; and

23 (3) may not have previously received funding as  
24 the principal investigator of a research grant from  
25 the Foundation, unless such funding was received as  
26 a graduate student.



1 (d) PRIORITY.—In evaluating applications for fellow-  
2 ships under this section, the Director shall give priority  
3 to applications that include—

4 (1) proposals for interdisciplinary research; or

5 (2) proposals for high-risk, high-reward re-  
6 search.

7 (e) ADDITIONAL CONSIDERATIONS.—In evaluating  
8 applications for fellowships under this section, the Direc-  
9 tor shall give consideration to the goal of promoting the  
10 participation of individuals identified in section 33 or 34  
11 of the Science and Engineering Equal Opportunities Act  
12 (42 U.S.C. 1885a or 1885b).

13 (f) NONSUBSTITUTION.—The fellowship program au-  
14 thorized under this section is not intended to replace or  
15 reduce support for postdoctoral research through existing  
16 programs at the Foundation.

17 **SEC. 307. BROADENING PARTICIPATION TRAINING AND**  
18 **OUTREACH.**

19 The Director shall provide education and training—

20 (1) to Foundation staff and grant proposal re-  
21 view panels on effective mechanisms and tools for  
22 broadening participation in STEM by underrep-  
23 resented groups, including reviewer selection and  
24 mitigation of implicit bias in the review process; and

- 1 (2) to Foundation staff on related outreach ap-
- 2 proaches.