

(6) develop seminars, courses, and other educational opportunities for students, post-doctoral researchers, faculty, and other relevant staff at institutions of higher education to increase awareness and understanding of entrepreneurship, patenting, business planning, research security, and other areas relevant to technology transfer, and connect students and researchers to relevant resources, including mentors in the private sector; and

(7) create, support, or fund entities or competitions to allow entrepreneurial students and faculty to illustrate the commercialization potential of their ideas, including through venture funds of institution of higher education.

(d) Limitations on funding

(1) Awards made under this section shall be at least 3 years in duration and shall not exceed \$1,000,000 per fiscal year.

(2) Awards made under this section shall not support the development or operation of capital investment funds.

(e) Application

An eligible entity seeking funding under this section shall submit an application to the Director at such time, in such manner, and containing such information and assurances as such Director may require. The application shall include, at a minimum, a description of—

(1) how the eligible entity submitting an application plans to sustain the proposed activities beyond the duration of the award;

(2) the steps the applicant will take to enable technology transfer and adoption and why such steps are likely to be effective;

(3) how the applicant will encourage the training and participation of students and potential entrepreneurs and the transition of research results to practice, including the development of new businesses;

(4) as relevant, potential steps to drive economic growth in a particular region, by collaborating with industry, venture capital entities, non-profit organizations, and State and local governments within that region; and

(5) background information that the Director determines is relevant to demonstrate the success of the innovation and entrepreneurship support models proposed by the applicant to commercialize technologies.

(f) Collaborative innovation resource center program

(1) In general

The Director shall make awards under this section to eligible entities to establish collaborative innovation resource centers that promote regional technology transfer and technology development activities available to more than one institution of higher education and to other entities in a region.

(2) Use of funds

An eligible entity that receives an award under this subsection shall use award funds to carry out one or more of the following activities, to the benefit of the region in which the center is located:

(A) Providing start-ups and small business concerns (as defined in section 632 of title 15)

within the region with access to facilities, scientific infrastructure, personnel, and other assets as required for technology maturation.

(B) Supporting entrepreneurial training for start-up and small business personnel.

(3)¹ Providing engineering and entrepreneurial experiences and hands-on training for students enrolled in participating institutions of higher education.

(g) Reporting on commercialization metrics

The Director shall establish—

(1) metrics related to commercialization for an award under this section; and

(2) a reporting schedule for recipients of such awards that takes into account both short- and long-term goals of the programs under this section.

(h) Geographic diversity

The Director shall ensure regional and geographic diversity in issuing awards under this section.

(i) Authorization of appropriations

From within funds authorized for the Directorate for Technology, Innovation, and Partnerships, there are authorized to carry out the activities under this section \$3,100,000,000 for fiscal years 2023 through 2027.

(Pub. L. 117-167, div. B, title III, §10391, Aug. 9, 2022, 136 Stat. 1586.)

§ 19112. Entrepreneurial fellowships

(a) In general

The Director, acting through the Directorate for Technology, Innovation, and Partnerships, shall award fellowships to scientists and engineers to help develop leaders capable of maturing promising ideas and technologies from lab to market or other use and forge connections between academic research and the government, industry, financial sectors, and other end users.

(b) Application

An applicant for a fellowship under this section shall submit to the Director an application at such time, in such manner, and containing such information as the Director may require. At a minimum, the Director shall require that applicants—

(1) have completed a doctoral degree in a STEM field no more than 5 years prior to the date of the application, or have otherwise demonstrated significant postbaccalaureate scientific research experience and are considered early career, according to requirements established by the Director; and

(2) have included in the application a proposal for how the fellow will be embedded in a host institution's research environment.

(c) Outreach

The Director shall conduct program outreach to recruit fellowship applicants—

(1) from diverse research institutions;

(2) from all regions of the country; and

(3) from groups historically underrepresented in STEM fields.

¹ So in original. Probably should be "(C)".

(d) Administration agreements

The Director may enter into an agreement with a qualified third-party entity to administer the fellowships, subject to the provisions of this section.

(e) Authorization of appropriations

There are authorized to be appropriated to the Director a total of \$125,000,000 for fiscal years 2023 through 2027, to carry out the activities outlined in this section.

(Pub. L. 117-167, div. B, title III, §10392, Aug. 9, 2022, 136 Stat. 1588.)

§ 19113. Scholarships and fellowships**(a) In general**

The Director, acting through the Directorate, shall fund undergraduate scholarships (including at community colleges), graduate fellowships and traineeships, and postdoctoral awards in the key technology focus areas.

(b) Implementation

The Director may carry out subsection (a) by making awards—

- (1) directly to students; and
- (2) to institutions of higher education or consortia of institutions of higher education, including those institutions or consortia involved in operating Regional Innovation Engines established under section 19108 of this title.

(c) Broadening participation

In carrying out this section, the Director shall take steps to increase the participation of populations that are underrepresented in STEM, which may include—

- (1) establishing or augmenting programs targeted at populations that are underrepresented in STEM;
- (2) supporting traineeships or other relevant programs at historically Black colleges and universities, Tribal Colleges or Universities, and minority-serving institutions;
- (3) enabling low-income populations to pursue associate, undergraduate, or graduate level degrees in STEM;
- (4) addressing current and expected gaps in the availability or skills of the STEM workforce, or addressing needs of the STEM workforce, including by increasing educational capacity at institutions and by prioritizing awards to United States citizens, permanent residents, and individuals that will grow the domestic workforce; and
- (5) addressing geographic diversity in the STEM workforce.

(d) Encouraging innovation

In carrying out this section, the Director shall encourage innovation in graduate education, including through encouraging institutions of higher education to offer graduate students opportunities to gain experience in industry or Government as part of their graduate training, and through support for students in professional master's programs related to the key technology focus areas or to the societal, national, and geostrategic challenges.

(e) Areas of funding support

Subject to the availability of funds to carry out this section, the Director shall—

(1) issue—

- (A) postdoctoral awards,
- (B) graduate fellowships and traineeships, inclusive of the NSF Research Traineeships and fellowships awarded under the Graduate Research Fellowship Program; and
- (C) scholarships, including undergraduate scholarships, research experiences, and internships, including—
 - (i) scholarships to attend community colleges; and
 - (ii) research experiences and internships under sections 1862p-5, 1862p-6, and 1862p-7 of this title;

(2) ensure that not less than 10 percent of the funds made available to carry out this section are used to support additional awards that focus on community college training, education, and teaching programs that increase the participation of populations that are historically underrepresented in STEM, including technical programs through programs such as the Advanced Technological Education program; and

(3) if funds remain after carrying out paragraphs (1) and (2) make awards to institutions of higher education to enable the institutions to fund the development and establishment of new or specialized programs of study for graduate, undergraduate, or technical college students and the evaluation of the effectiveness of those programs of study.

(f) Low-income scholarship program**(1) In general**

The Director shall award scholarships to low-income individuals to enable such individuals to pursue associate, undergraduate, or graduate level degrees in STEM fields.

(2) Eligibility**(A) In general**

To be eligible to receive a scholarship under this subsection, an individual—

(i) must be a citizen of the United States, a national of the United States (as defined in section 1101(a) of title 8), an alien admitted as a refugee under section 1157 of title 8, or an alien lawfully admitted to the United States for permanent residence;

(ii) shall prepare and submit to the Director an application at such time, in such manner, and containing such information as the Director may require; and

(iii) shall certify to the Director that the individual intends to use amounts received under the scholarship to enroll or continue enrollment at an institution of higher education (as defined in section 1001(a) of title 20) in order to pursue an associate, undergraduate, or graduate level degree in STEM fields designated by the Director.

(B) Ability

Awards of scholarships under this subsection shall be made by the Director solely on the basis of the ability of the applicant, except that in any case in which 2 or more applicants for scholarships are deemed by the Director to be possessed of substantially