NATIONAL SCIENCE FOUNDATION
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ARLINGTON, VIRGINIA 22230

NSF 17-091

Dear Colleague Letter: Non-Academic Research Internships for Graduate Students (INTERN) Supplemental Funding

May 22, 2017

Dear Colleague:

NSF has identified improvement of graduate student preparedness for the Science, Technology, Engineering and Mathematics (STEM) workforce as one of its priorities. As part of this effort, a supplemental funding opportunity is available in fiscal year (FY) 2018 and FY 2019 to provide support for non-academic research internships for graduate students to support career opportunities in any sector of the U.S. economy. NSF currently invests in a number of graduate student preparedness activities and has historically encouraged principal investigators (PIs) to include such activities in research proposals to NSF. This Dear Colleague Letter (DCL) describes new commitments and funding opportunities at NSF to ensure graduate students are prepared for the 21st-century STEM workforce.

BACKGROUND

With rapidly accelerating changes in technology driven global and national economies, today's graduate students have a wide choice of career paths to pursue over their professional lives. Graduate students have the potential to make important contributions in careers outside academia: in organizations ranging from startups to large corporations; government agencies, and non-profit organizations. The 2016 *Science and Engineering Indicators* report shows that 55% of doctoral STEM graduates and 79% of master's-level graduates are in non-academic employment[1]. It is therefore important that graduate students supported by NSF grants be provided opportunities to develop skills that prepare them to be successful for a broad range of academic and non-academic career paths. In addition to deep and broad preparation in their technical areas of expertise, skills and knowledge regarding communication, innovation and entrepreneurship, leadership and management, policy and outreach are becoming increasingly valuable to enter any sector of the workforce.

SUPPLEMENTAL FUNDING OPPORTUNITY

NSF will provide support for supplements to current NSF grants awarded by the Directorate for Education and Human Resources (EHR), Directorate for Engineering (ENG), and Office of

Advanced Cyberinfrastructure (OAC) within the Directorate for Computer and Information Science and Engineering (CISE), to enhance professional development opportunities for graduate students as described below. Supplements to existing NSF awards will enable the PIs of grants to request up to six months of additional support for graduate students to pursue new activities aimed at acquiring professional development experience that will enhance their preparation for multiple career pathways after graduation.

These supplements could provide graduate students with the opportunity to augment their research assistantships with additional non-academic research internship activities and training opportunities that will complement their academic research training. PIs are encouraged to involve graduate students from groups that have traditionally been underrepresented and underserved in the STEM enterprise: women, persons with disabilities, African Americans/Blacks, Hispanic Americans, American Indians, Alaska Natives, Native Hawaiians, Native Pacific Islanders, and persons from economically disadvantaged backgrounds. Grantees are also encouraged to include NSF Graduate Research Fellows and Honorable Mentions in their proposals.

Each supplemental funding request must include the INTERN DCL title and number in the summary section of the request.

INTERNSHIP ACTIVITIES SUPPORTED

The PI of an active NSF award may request supplemental funding for one or more graduate students to gain knowledge, skills and experiences that will augment his/her preparation for a successful long-term career through an internship in a non-academic setting, including the following:

- Industry laboratories or industry research and development groups;
- Start-ups, such as (but not limited to) those funded through the NSF's Small Business Innovation Research (SBIR) program and Small Business Technology Transfer (STTR) program;
- Government agencies and National Laboratories;
- Policy think-tanks; and
- Non-profit organizations.

PIs are encouraged to discuss with the cognizant NSF program director activities that are synergistic with the project scope. It is expected that the graduate student and the PI on the NSF grant will work together to identify innovative experiences that add the most educational value for the graduate student. Further, it is expected that the internship on-site at the host organization, will be research-focused in a STEM field or in STEM educational research. Additionally, OAC expects multi-disciplinary activities that pursue development of innovative cyberinfrastructure approaches specific to advancing science and engineering research.

ELIGIBILITY

This supplemental funding opportunity is open to PIs supporting graduate students with an active NSF award; note, however, that OAC will only support graduate students who are doctoral

candidates. Graduate students must have completed at least one year in their graduate programs and be making satisfactory progress towards the completion of their degrees.

SUPPLEMENT FUNDING REQUEST PREPARATION INSTRUCTIONS AND ALLOWABLE COSTS

Supplemental funding requests must be prepared in accordance with the following requirements:

1. Two-page summary describing the internship. The request must include a concise statement from the student describing how the activity will better prepare him/her to enter the workforce.

2. One-page resume of the student with the following information:
    A. Professional Preparation
        i. Institution
        ii. Major
        iii. Year of study
    B. Academic/Professional Appointments
    C. Publications/Products *(most closely related)*
    D. Publications/Products *(other)*
    E. Synergistic Activities/Research Experience
    F. Collaborators

    We encourage students supported by funding described in this DCL to register for an ORCID ID and for this identifier to be provided to NSF in the PI's annual project report. ORCID® (http://orcid.org) is an open, non-profit, community-driven effort to create and maintain a registry of unique researcher identifiers and a transparent method of linking research activities and outputs to these identifiers. An ORCID identifier provides a unique and persistent digital identifier to distinguish individual researchers. While NSF encourages the use of an ORCID ID, submission of the ORCID ID is optional.

3. Letter of collaboration from an authorized official at the host organization describing the internship opportunity and mentorship to be provided to the student during the internship. This letter should include a statement confirming that neither the graduate student nor the PI has a financial interest in the organization hosting the internship.

4. Letter from the PI requesting supplemental funding through this DCL confirming that the student meets the eligibility requirements specified in this DCL. The letter must describe how the proposed internship activity will contribute to the student's graduate education experience and how it may impact time to degree.

5. The NSF awardee and the organization hosting the graduate student must agree in advance as to how intellectual property (IP) rights will be handled. A signed agreement on IP (including publication and patent rights) must be submitted before the supplemental funding will be awarded. NSF will examine this document to ensure that the graduation of students will not be unduly affected. NSF is responsible neither for the agreement reached nor the IP information exchanged between the NSF awardee and the host organization.

PERIOD OF SUPPORT

The supplement will provide up to six months of support for an internship. Up to two supplemental requests may be made on a grant to allow the student two internship periods up to six months each (i.e., a maximum of 12 months per student).

SUPPLEMENT FUNDING AMOUNT

The amount of funding requested should not exceed $50,000 per student per six month period or 20% of the original award total (whichever is lower).

NSF plans to fund up to approximately 75 supplements each in FY 2018 and FY 2019, depending on availability of funds.

SUBMISSION DEADLINES

All supplemental funding requests must be received by June 23, 2017 to be reviewed for possible funding using available fiscal year (FY) 2017 funds. In FY 2018, all submissions received on or before June 1st, 2018 will be reviewed. In FY 2019, all submissions must be received by June 3rd, 2019. Supplemental funding requests may be submitted at any time but no later than the deadlines stated above in each fiscal year.

ALLOWABLE EXPENSES

Funds may be used to support travel, tuition and fees, health insurance, additional stipend and temporary relocation costs for the graduate student. Spousal and dependent travel are not permitted. The grantee is permitted to request indirect costs in accordance with their approved/negotiated indirect cost rate. The total requested budget cannot exceed the limits listed under the "Supplement funding amount" section above.

SUBMISSION AND REVIEW

Supplemental funding requests should be prepared and submitted in accordance with the guidance in the NSF Proposal and Award Policies and Procedures Guide (PAPPG), Part II: Award, Administration and Monitoring of Grants and Cooperative Agreements, Chapter VI.E.4 (NSF 17-1). A PI on an NSF grant should contact his/her cognizant program director prior to submission. Requests for supplemental funding submitted in response to this DCL will be reviewed internally by NSF Program Directors. All supplements are subject to (a) the availability of funds, and (b) review of the quality of the supplemental funding request.

For further information, please contact:

- for EHR supplements: Dr. Earnestine Easter (eeaster@nsf.gov) or Dr. Christopher Hill (chill@nsf.gov)
- for ENG supplements: Dr. Prakash Balan (pbalan@nsf.gov)
- for OAC supplements: Dr. Sushil K. Prasad (sprasad@nsf.gov)

Sincerely,

William J. Lewis, Assistant Director (Acting)
Directorate for Education and Human Resources

Barry W. Johnson, Assistant Director (Acting)
Directorate for Engineering

Jim Kurose, Assistant Director
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[1] https://www.nsf.gov/statistics/2016/nsb20161/#/figure/fig03-10, *Science and Engineering Indicators 2016*.