



NATIONAL SCIENCE FOUNDATION
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ALEXANDRIA, VIRGINIA 22314

NSF 21-071

Dear Colleague Letter: Geoscience Opportunities for Leadership in Diversity - Expanding the Network (GOLD-EN)

April 20, 2021

Dear Colleagues:

Science, as a body of knowledge, is a uniquely qualified source of vetted, objective information that could be brought to bear on many societal issues facing humanity and the Planet. Science, as something that is practiced, is at the mercy of those doing it. The World is facing "all minds needed" problems, but due to historical systemic structures, all minds have not been fully engaged. Recent research shows that underrepresented science scholars produce higher rates of scientific novelty, yet they do not persist in the systems where the innovation is created (¹Hofstra et al. 2020). Because the geosciences continue to lag behind other STEM fields in creating a diverse community of researchers, scholars, and practitioners, disruptive strategies and evidence-based practices are needed in an effort to recruit and specifically retain individuals who historically have not been included in geoscience education, research and careers.

Past efforts to improve the number of women in the geosciences have not been successful in making significant impact for the recruitment and retention of geoscientists from underrepresented groups. This suggests that there is no "one size fits all" set of strategies. Because there are several major factors that lead to underrepresentation in the geosciences, there must be multiple corrective approaches (²O'Connell and Holmes 2011, ³Starks and Matthaeus 2018). Specific strategies need to be identified to attract and retain students, researchers, and faculty from these groups (⁴Hurtado et al., 2010; ⁵National Research Council, 2011; ⁶Chang et al., 2014; ⁷Bernard and Cooperdock, 2018; ³Starks and Matthaeus, 2018; ⁸National Academies of Sciences, Engineering, and Medicine, 2019), so they can operate with a strong sense of belonging in their respective areas of learning, training and research.

To continue expansion and scaling efforts from NSF's Geosciences Opportunities for Leadership in Diversity (GOLD) Program and related activities to broaden participation in the

geosciences, and to develop unique approaches for greater inclusion in the geoscience education and research community, NSF welcomes submission of the following types of proposals:

Early-Concept Grants for Exploratory Research (EAGER) Proposals: The program is interested in supporting novel and innovative approaches for greater inclusion in the geoscience education and research community. EAGER projects should be "high-risk/high-reward" projects, and thus should either be piloting high-risk efforts, involve radically new techniques and/or methods, applying new expertise, or engaging novel disciplinary, interdisciplinary or convergent perspectives.

NSF welcomes EAGER proposals that envision new efforts to create educational or degree granting geoscience programs at [Minority Serving Institutions](#) (MSIs) or scale existing geoscience programs into graduate programs at MSIs with the following elements in mind:

- Consideration of the necessary steps to create or scale an educational or degree granting geoscience program through partnerships and collaborations, with an emphasis on [collaborative infrastructure](#) as defined under the ⁹NSF INCLUDES Program.
- Development of pilot bridge programs (high school to undergraduate or undergraduate to graduate) to grow the pool of potential geoscience program majors at MSIs.
- Use of internship programs (academic or non academic) to prepare students to enter or remain in geoscience programs at MSIs.
- Identification and reduction of barriers (e.g., grants infrastructure or institutional policies) that may hinder the creation and sustainability of educational and degree granting geoscience programs at MSIs.

NSF also welcomes EAGER proposals that would support efforts and training that focus on the creation of BAJEDI (Belonging Access Justice Equity Diversity Inclusion) leaders - with the following questions in mind:

- What are the requirements for taking model professional development programs to scale?
- What barriers exist within academia and/or the geosciences that prevent the development of diversity champions?
- What strategies could be employed to create and sustain cohorts of diversity leaders to maximize collective impact?

EAGER proposals will be funded for up to 24 months and up to \$300,000 maximum.

Conference Proposals Convenings that invite new project ideas for broadening participation in the geosciences with a strong emphasis on the role of the social and behavioral sciences

are encouraged.

- Disseminate information on lessons learned from GOLD and GOLD-EN projects and the NSF INCLUDES National Network to the geoscience community, and encourage new opportunities for collaboration across other [NSF Broadening Participation Programs](#).
- Provide a forum for increased engagement from social and behavioral science experts to address issues related to BAJEDI in the geosciences.
- Offer professional development (PD) training in BAJEDI for graduate students and postdocs who will soon be on the job market.
- Support efforts and training that help academic units develop or implement BAJEDI plans – with an emphasis on:
 - a. PD training for writing BAJEDI plans.
 - b. Identification and incorporation of appropriate expertise and perspectives prior to plan development (e.g., Native/indigenous, other abilities, etc.).
 - c. PD training for developing implementation strategies as companion plans.
 - d. Developing and administering institutional climate surveys with an eye towards results-based implementation.

Conference proposals will be funded for up to 12 months and up to \$100,000 maximum.

Research Coordination Networks (RCNs): RCNs should advance a field or create new directions in research or education by supporting groups of investigators to communicate and coordinate their research, training and educational activities across disciplinary, organizational, geographic and international boundaries.

For the purposes of this DCL, NSF welcomes RCN proposals that will foster new collaborations that would focus on:

- Practices related to the valuation of BAJEDI leaders and their activities in institutional promotion systems.
- Practices and standards for BAJEDI in multi-institutional field campaigns
- Creation of a coordinating unit to assist in supporting or building the grants management infrastructure at MSIs.
- Efforts that support the development and training of early career BAJEDI leaders in the geosciences.
- New collaborations that would allow geoscience departments or institutions to partner in order to identify necessary changes to successfully meet the requirements of [AAAS' SEA Change](#) initiative.

RCN awards are not meant to support existing networks; nor are they meant to support the activities of established collaborations. RCN awards also do not support primary research.

RCN proposals will be funded for up to 60 months and up to \$500,000 maximum.

RCN proposals should be prepared and submitted in accordance with the guidance in the [RCN solicitation](#), including the seven guidance items outlined in Section II. Program Description.

PROPOSAL PREPARATION AND SUBMISSION

Proposals must be received by 5 p.m., submitter's local time on June 1, 2021.

Eligible Principal Investigators are strongly encouraged to **contact the GOLD Program** (geogold@nsf.gov) by **April 30, 2021** to discuss their requests for support prior to submitting to NSF.

Proposals should be prepared and submitted in accordance with the guidance in the [NSF Proposal & Award Policies & Procedures Guide](#) (PAPPG) or the relevant program solicitation. See below for specific guidance:

- [Conference Proposals](#) PAPPG Chapter II.E.7
- [EAGER Proposals](#) PAPPG Chapter II.E.2
- RCN Proposals: [NSF 17-594](#)

Requests for conference and EAGER proposals will be subject to internal NSF review. RCN proposals will be subject to NSF's merit review process, as described in the RCN solicitation.

Competitive funding requests will explicitly describe and demonstrate their alignment and/or connections to the mission and goals of NSF's GOLD Program. Failure to sufficiently demonstrate relevancy to NSF's GOLD Program will result in the funding request being declined. Awards are subject to the availability of funds.

Participating NSF Directorate:

Directorate for Geosciences

Cognizant Program Director:

M. Brandon Jones, GEO/OAD, email: geogold@nsf.gov

Sincerely,

William E. Easterling
Assistant Director for Geosciences

REFERENCES:

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