

Oportunidades de Fondos Externos

Vicepresidencia de Recursos Externos

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LA MEJOR EDUCACIÓN A TU ALCANCE

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UPR external funding success is of utmost importance to strengthen the connection between its investigators/faculty and funding entities who have the potential to sponsor their research and academic endeavors. This publication has been developed in order to summarize funding opportunities and promote the participation of faculty and collaborative research groups in their intent to apply for external funds. Such efforts are aligned with the UPR Strategic Plan 2017-2022: A New Era of Innovation and Transformation for Student Success; Certification 50 (2016-2017) of the Governing Board, December 19, 2016. Strategic Area: Research and Creative Work. Goal 2: Increase Applications for and awards of external funds for research and creative work.

SELECTED FUNDING OPPORTUNITIES

This is a selection of identified funding opportunities for the period ending 9/10/2024 and is in no way all-inclusive of funding opportunities available. Further information has been shared with External Resource Coordinators and Research Coordinators at each UPR campus.

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1. Leadership Development for Mid-Level Managers, National Institutes of Corrections

Application Deadline: October 21, 2024

Award Amount: up to \$150,000.00 for a 12-month project period

The National Institute of Corrections (NIC) is the only federal agency with a legislative mandate (Public Law 93-415) to provide specialized services to corrections from a national perspective. NIC provides direct service as the primary means of carrying out its mission and responds directly to needs identified by practitioners working in state and local adult corrections, the Federal Bureau of Prisons, the Department of Justice, other federal agencies, and the United States Congress. As a center of learning, innovation, and leadership that shapes and advances effective correctional practice and public policy, NIC is a vital partner in planning, developing, delivering, and supporting capacity-building leadership training in the field of corrections.

NIC is seeking to update its existing Leadership Development for Mid-Level Managers virtual instructor-led training (VILT) program targeted toward agencies that are interested in developing their midlevel manager staff. This curriculum is based upon the Manager Managerial Profile from NIC's Correctional Leadership Competencies for the 21st Century: Manager and Supervisor Levels. See this link (<https://s3.amazonaws.com/static.nicic.gov/Library/020475.pdf>) for sample job and responsibility areas that are appropriate for NIC's Leadership Development for Mid-Level Managers training program.

Program-Specific Information

NIC is seeking an instructional design practitioner(s) to revise and refresh an in-house curriculum for the Leadership Development for Mid-Level Managers course (see <https://nicic.gov/leadership-developmentmid-level-managers-virtual-instructor-led-vilt-series>), a multi-session virtual instructor-led series, into a comprehensive "hand-off"-level curriculum package. The body of work to be completed for this project includes comprehensive "hand-off"-level curriculum package development and attend and audit one pilot virtual delivery to a class of 25 mid-level managers who are representative of NIC's corrections customer base.

A proposal responsive to this solicitation should provide substantiated documentation of proposed project team members (subject to approval by the NIC program manager) with (1) a minimum of 10 years of experience in learner-centered curriculum design and development, which should be supported with submission of "hand-off"-level curriculum package samples; (2) a minimum of 10 years of substantiated design, development and evaluation of "hand-off"-level curriculum packages for use with national participant groups; (3) 10 years of substantiated experience in designing virtual "hand-off"-level curriculum packages, including submitting virtual instructor-led (VILT) curriculum samples; (4) credentialed / certified virtual curriculum designers, producers and facilitators on proposed project team; (5) a minimum of 10 years of experience setting up, hosting, producing, designing, facilitating and evaluating virtual instructor training using a variety of industry standard virtual platforms; (6) proposed project team members must have 10 years minimum experience, credentials and qualifications to administer, interpret, and facilitate Everything DiSC® individual and 360 assessments; and (7) 10 years of experience facilitating virtual experiential leadership training activities and tying them through content and leadership competencies to on-the-job leadership correctional applications.

Respondents must demonstrate and document grounding in current learning and performance research, virtual instructor-led curriculum design, and its unique strengths and challenges in contrast to in-person training design, facilitation, and evaluation. Respondents should also demonstrate knowledge of evidence base of best practices of virtual learning design and facilitation for adult learners. A responsive proposal will include "hand-off"-level curriculum package samples to substantiate the applicant's experience and expertise. The applicant must have demonstrated experience and proposed project team member expertise in the ADDIE Model of Instructional Design, Bloom's Taxonomy of Performance Objectives, the Kirkpatrick Model of Evaluation, and demonstrated proposed project team member expertise in the specifics of developing virtual instructor-led "hand-off"-level curriculum packages. All curriculum materials will be developed using the ITIP model of instructional design (see <https://nicic.gov/resources/nic-library/alllibrary-items/itip-toolkit-guide-working-curriculum-developers>) and use NIC-branded curriculum templates for all curriculum materials.

Goals

The goal of this cooperative agreement is to create a complete NIC-branded and formatted “hand-off”-level curriculum package (facilitator and participant guides, slide decks, video clips, and other required materials) using existing in-house curriculum materials.

Objectives

A proposal responsive to this solicitation should, at a minimum identify a plan to address the scope and timeframe of the project; determine the methodology and resources necessary to deliver the work products, identify a team with demonstrated subject matter expertise, experience in designing and developing VILT curricula and instructional materials for adult learners.

The objectives to be completed at a minimum are:

- Participate in a kickoff project team meeting using NIC’s virtual instructor-led platform and clarify the deliverables, work products, and time frames for this project.
- Consult with the NIC program manager to gain an understanding of the history, purpose, and objectives of the Leadership Development for Mid-Level Managers course and formulate recommendations for the design, format, and layout of instructional materials for the course.
- Submit draft course materials to the NIC program manager for review and approval.
- Attend and audit a pilot to evaluate the effectiveness of the training curriculum based on the Instructional Theory Into Practice (ITIP) model.
- Complete edits and/or revisions as a result of the pilot and submit the final draft of “hand-off”-level curriculum package for the course for NIC review and approval.

Link to Additional Information: <https://nicic.gov/about-nic/funding-opportunities/nic-fy-2025-leadership-development-mid-level-managers>

2. Ethical, Legal, and Social Implications (ELSI) Congress, NIH

Application Deadlines: November 19, 2024

Award Information: up to \$350,000 direct costs per year in a year in which an ELSI Congress is held

This funding opportunity will support three ELSI Congresses, to be held biennially in 2026, 2028 and 2030. The ELSI Congress is anticipated to be a multi-day research conference comprising a mix of invited plenary lectures, submitted individual presentations, panel sessions, and poster sessions, but may involve other innovative components as well. The awardee will be responsible for selecting and securing appropriate venues, conference publicity, and archiving presentations. The awardee will work with site hosts and vendors before and during the conference, arrange for AV needs, register attendees, arrange travel for plenary speakers, prepare conference materials, and conduct a post-conference survey of attendees. The awardee will develop materials and resources to help attendees navigate the conference, such as a conference website and/or app. In addition, the awardee will develop a robust process for invitation, submission, review, and selection of abstracts as part of the conference programming process.

The awardee will work in consultation with the NHGRI ELSI Research Program staff to form an Organizing Committee with representation from across the ELSI research community. The ELSI Congress Organizing Committee will identify one or more themes for the Congress; design the program; and identify and invite plenary speakers. The awardee will also publicize the conference and invite abstract submissions to ensure broad and accessible participation in the conference including among trainees, international ELSI researchers, researchers conducting ELSI-relevant work in NIH and NHGRI consortia and programs and other individuals interested in ELSI research regardless of whether they receive funding from the NHGRI ELSI Research Program or self-identify as ELSI researchers. The ELSI Congress Organizing Committee will include representatives from various career stages (including trainees), disability communities, and ELSI researchers based outside the United States to ensure a broad array of perspectives in the planning of an inclusive conference. The

awardee will develop a transparent process to peer-review abstract submissions. The awardee will also develop a process for review of travel award applications from trainees, researchers from resource-limited institutions, and/or researchers from low- and middle-income countries.

Per the NIH Grants Policy Statement 14.6.3 Plans to Promote Safe Environments at Conferences, conference grant applicants recommended for funding will be required to provide to NIH upon request as part of Just-In-Time (JIT) materials a “safety plan” that will be communicated to all conference/meeting attendees. Safety plans must include all of the following elements:

- Statement of commitment to provide a safe environment.
- Expectations of behavior
 - Including list of behaviors considered harassing (specific emphasis on harassment, sexual, racial, ethnic, or otherwise).
- Instructions on how to confidentially report alleged violations of the expectations of behavior to conference organizers.
- Description of how the organizers will assess allegations and the consequences for those who are found to violate the expectations of behavior.
- Information explaining that individuals who have questions, concerns or complaints related to harassment are also encouraged to contact the conference organizer or the HHS Office for Civil Rights (OCR).
- Information about how to file a complaint with HHS OCR (see OCR’s webpage, Filing a Civil Rights Complaint).
- Information explaining that filing a complaint with the conference organizer is not required before filing a complaint of discrimination with HHS OCR, and that seeking assistance from the conference organizer in no way prohibits filing complaints with HHS OCR.
- Information explaining how individuals can notify NIH about concerns of harassment, including sexual harassment, discrimination, and other forms of inappropriate conduct at NIH-supported conferences (see NIH’s Find Help webpage).

R13/U13 applicants must also provide to NIH upon request as part of Just-in-Time (JIT) materials:

- a description of the strategy that will be used to communicate the Safety Plan to conference attendees and a plan to document allegations and resulting actions.
- information on the steps the organizers will take to ensure a safe and respectful environment for all attendees, free from discrimination and harassment.

Additionally, all NIH sponsored and/or supported conferences must be held at accessible sites, as outlined by section 504 of the Rehabilitation Act of 1973 and, as applicable, the Americans with Disabilities Act of 1990. Conference registration materials should provide a questionnaire that will allow attendees with disabilities to voluntarily identify any special needs, so that conference organizers can make plans to accommodate these needs. NHGRI encourages the awardee to develop a proactive approach in designing a conference that enables participation by individuals with differing abilities or who may require various accommodations or features in order to fully participate in the conference. This proactive approach to accessibility should begin early in the conference planning process. All conference platforms (e.g., website, registration, abstract submission, live-streaming, etc.) should include accessibility features, such as being screen reader-friendly and keyboard accessible. The awardee should consider strategies to maximize the accessibility of the ELSI Congress for people with disabilities including, but not limited to, real-time high-quality captioning, accessible slides, and other materials provided in advance, provision of accessibility guidelines for platform and poster presenters, adequate spacing for mobility aids, and conference formats that enable the use of assistive technologies and other supports. Meeting formats, including social and networking events, should include accessibility features to enable participation from all conference attendees.

The conference awardee will describe how they will facilitate broad attendance through the use of in-person and virtual content to maximize participation and allow attendance by individuals who may be unable to attend in-person due to limited travel funds, disabilities, medical concerns, family obligations, and/or other circumstances. To the extent feasible,

virtual attendees should have the ability to seamlessly and actively participate in most conference presentations and sessions including, but not limited to, viewing presentations with sufficient video and audio quality, posing questions to presenters, and joining virtual networking sessions.

The website, NIH Support for Conferences and Scientific Meetings (<https://grants.nih.gov/grants/funding/r13/>) centralizes information regarding grants for scientific conferences.

Link to Additional Information: <https://grants.nih.gov/grants/guide/rfa-files/RFA-HG-24-028.html>

3. Quantum Leap Challenge Institutes, NSF

Application Deadlines:

- **Letter of Intent (required):** February 07, 2025
- **Preliminary Proposal (required):** March 07, 2025
- **Full Proposal (by invitation):** September 17, 2025

Expected Amount: budgets are not limited, but need to reflect the actual needs of the proposed project

Quantum information science and technology (QIST) uses quantum physics phenomena such as coherence, superposition, wave-particle duality, interference, and entanglement for revolutionary approaches to computing, sensing, and networking³. Emerging Industries may benefit from new applications of quantum computation, quantum communication, quantum simulation and quantum sensing. However, there are several challenges at the frontiers of quantum information science and engineering that must be overcome before the full potential of quantum information technology can be realized. This is the motivation for the Challenge Institutes.

The goal of the Quantum Leap Challenge Institute (QLCI) program is to support timely and bold research agendas aimed at making breakthroughs on clearly identified and compelling challenges in quantum information science and engineering within a 6-year period. Quantum Leap Challenge Institutes are expected to: engage intellectually diverse communities in pursuit of solutions to major challenges; contribute to education and workforce training in fields underpinning QIST; and demonstrate value added from coordination both within the Institute and with the larger QIST community. As part of their research, education, and coordination activities, Challenge Institutes are expected to enable new and existing partnerships, improve access to infrastructure, facilitate international collaborations, and provide opportunities for technology translation.

Program Description

The Quantum Leap Challenge Institute (QLCI) program will fund Institutes comprised of multidisciplinary groups of scientists and engineers united by a common challenge theme for advancing the research frontiers in focus areas such as quantum networking, quantum computation, quantum simulation and/or quantum sensing. The Challenge Institutes will also contribute to the development of a well-trained workforce through cross-disciplinary and collaborative basic research, project-driven training, and innovative curricula. The QLCI program is expected to facilitate research, training, and education through exposure of trainees to theoretical frameworks, algorithmic techniques, experimental platforms and testbeds, and interactions with national laboratories, industry, and international partners. The Challenge Institutes will build on prior investments in quantum information science and engineering and are expected to coordinate and integrate with ongoing and new NSF QIST initiatives, including center-scale, infrastructure, and workforce development activities.

The salient Characteristics of an Institute and the Major Activities performed by an Institute are next described below:

- A. **Characteristics of a Quantum Leap Challenge Institute** - The QLCI program will support institutes led by Principal Investigators based at institutions of higher education to pursue major breakthroughs in critical areas at the intellectual and technological frontiers of quantum information science and engineering. Multidisciplinary approaches can be supported, as motivated by the scientific and engineering needs of the proposed research and associated challenges that the Institute seeks to address. The QLCI program is designed to enable new types of

joint efforts that may be needed to address the most pressing challenges in QIST. Accordingly, Challenge Institutes may vary in size and exhibit various forms of organization, collaboration and operation suited to their individual needs.

Through the major activities discussed below, competitive QLCI proposals will demonstrate:

- **Unifying Research Themes**
 - A research challenge at the frontiers of Quantum Information Science and Engineering with compelling goals, milestones, and impacts that can galvanize a community of researchers and partners.
 - A research approach that fosters community engagement and brings together experts and stakeholders from multiple disciplines to overcome important challenges in QIST research, development, and demonstration.
- **Coherent Approaches to Education and Workforce Development**
 - Training and mentoring in the context of cutting-edge research.
 - Innovative and substantive approaches to curricular and professional development, including multidisciplinary and practical activities, as motivated by the research challenges and the associated QIST ecosystem.
 - Community engagement including outreach at all levels and industry engagement in the workforce development activities.
- **Synergistic Coordination Demonstrating Value-Added from an Institute**
 - Partnerships that accelerate progress on the research theme and the education and training activities.
 - Infrastructure enhancements, including new instrumentation, upgrades, staffing, and access to infrastructure in furtherance of the research and training goals.
 - Coordination that unites the institute community, accelerates dissemination of results, facilitates technological innovation and development of new applications for QIST in service to the community and the nation, and justifies the value-added from an institute.

B. Major Activities - Each Challenge Institute is expected to carry out its mission through major activities in three areas:

1. **Research** - Suggested examples of a unifying research theme for a Challenge Institute may include quantum frontiers such as:
 - Expanding Opportunities for Quantum Technologies to Benefit Society
 - Building the Discipline of Quantum Engineering
 - Targeting Materials Science for Quantum Technologies
 - Exploring Quantum Mechanics through Quantum Simulations
 - Harnessing Quantum Information Technology for Precision Measurements
 - Generating and Distributing Quantum Entanglement for New Applications
 - Characterizing and Mitigating Quantum Errors
 - Understanding the Universe through Quantum Information
 - Exploring Quantum Phenomena in Relevant Environments such as Room Temperature Devices or Biological Systems.
2. **Education and Workforce Development** - Rapid development of quantum technologies and sustained progress in scientific advances and commercial applications require a growing and qualified workforce with interdisciplinary skill sets. The QLCI program aims to facilitate training of students with the combination of skills required for the conceptualization, development, and translation of new quantum

technologies. The QLCI program requires activities to promote the training of students in environments that expose them to a convergent set of disciplines and help them acquire qualifications and skills needed in industry, national laboratories, and academia. New approaches to collaboration with industry are anticipated in a Challenge Institute not only to increase the translational impact of research, but also as a tool to assure the training and generation of a well-qualified workforce in quantum information science and engineering.

3. **Coordination** - Challenge Institutes are expected to galvanize the community, facilitate partnerships, and enhance infrastructure in ways that provide value added from the institute approach.

The Challenge Institute teams are expected to coordinate with their constituent organizations and partners to develop a concrete and workable plan for leveraging existing infrastructure resources in support of the Institute goals and objectives, including relevant laboratory facilities, testbeds and cyberinfrastructure to facilitate training and collaboration.

Types of Awards

- **Challenge Institute Awards:** will be funded for 6 years and will enable the establishment and or operation of Quantum Leap Challenge Institutes. The size of these awards as well as the structure of the Institutes will be based, in part, on the targeted community and its research, technology and workforce development needs. Awards are expected to be cooperative agreements between NSF and the recipient institution(s). The release of funding increments will be subject to agreed-upon milestones, periodic project reviews, site visits, approval by NSF and the availability of funds.
- **Preliminary proposals are required:** Preliminary proposals will undergo full merit review. At the end of this process, proposers will be informed whether or not a full proposal is invited for the project. Only full proposals received in response to an invitation will be considered. The review of the invited full QLCI proposals will include a presentation by the proposing team at the NSF headquarters in Alexandria, VA.

Link to Additional Information: <https://new.nsf.gov/funding/opportunities/quantum-leap-challenge-institutes-qlci/nsf24-599/solicitation>

4. Advancing Informal STEM Learning (AISL), NSF

Application Deadlines: January 8, 2025

Award Amount:

- **Type 1: Synthesis:** range from \$100,000 to \$500,000 for a duration of 2 to 3 years
- **Type 2: Conferences:** range from \$75,000 to \$250,000 for a duration of 1 to 2 years
- **Type 3: Partnership Development and Planning:** range from \$50,000 to \$150,000 for a duration of 1 to 1.5 years
- **Type 4: Integrating Research and Practice:** range from \$250,000 to \$2 million for a duration of 2 to 5 years
- **Type 5: Research in Support of Wide-reaching Public Engagement with STEM:** range from \$1 million to \$3.5 million for a duration of 2 to 5 years

The Advancing Informal STEM Learning (AISL) Program is the only NSF program that exclusively invests in research and practice on how people learn STEM outside of formal education. The AISL Program is committed to funding research and practice, with continued focus on investigating a range of informal STEM learning (ISL) experiences and environments that make lifelong learning a reality. This AISL solicitation specifically seeks proposals that center engagement, broadening participation, and belonging in STEM, and further the well-being of individuals and communities who have historically been and continue to be excluded, under-served, or underrepresented in STEM along several dimensions. The solicitation encourages proposals from institutions and organizations that serve public audiences, and

specifically focus on public engagement with and understanding of STEM, including community STEM; public participation in scientific research (PPSR); science communication; intergenerational STEM engagement; and STEM media.

Program Description

The informal STEM learning field comprises a broad community of STEM education researchers, practitioners, learning organizations, associations, and communities who seek to understand the theoretical and empirical foundations for effective informal experiences and environments. Almost any environment can support the self-directed nature of informal STEM learning. This vast array of learning environments creates an opportunity to understand how learners can be supported to develop interest and learning, and to bridge across interest areas and settings. The contexts of AISL investments may include everyday activities, such as cooking (chemistry) or tracking personal health and screen time data (data visualization); or self-directed experiences such as stargazing (astronomy), creating mini games (computer science), or birdwatching (ornithology). Informal STEM learning can also happen in intentionally designed experiences and environments, such as, but not limited to:

- exhibitions and programs in museums, zoos, aquaria, botanic gardens/arboreta, planetariums, nature centers, parks, libraries, homes, community centers, and other environments.
- science communication.
- traditional or intergenerational knowledge sharing, such as Story Circles.
- community and participatory science.
- radio, television, film, media programs or series, or podcasts.
- Do-It-Yourself (DIY) or maker initiatives.
- opportunities for the public to engage in research, including crowd-sourcing and Public Participation in Scientific Research (PPSR).
- online and other digital experiences (e.g., games, simulations, social media).

A proposal funded by the AISL Program should be of interest and utility to public audiences, such as individuals and communities; informal STEM practitioners (AISL Goal #4 below provides a broad definition of practitioners); educational, scientific, and/or community-based researchers; and other stakeholders, such as STEM education leaders, community leaders (communities may include local, tribal, shared identities, common interests), decision-makers, and policymakers.

AISL Goals for Proposals

1. Goal #1: Learning STEM in Informal Experiences and Environments (required of all proposals)

All AISL proposals must be clear with respect to (1) how learning relates to the proposed work and (2) how the proposed project is specifically informal. Proposals not specifically or clearly related to learning in informal experiences and environments are not appropriate for submission to this solicitation. Competitive proposals will clearly explain how and why the proposed project fits as "learning STEM in informal experiences and environments," as well as how it advances and adds value to the collective understanding of learning STEM in informal experiences and environments.

Informal STEM learning (ISL) broadly encompasses:

- Awareness, knowledge or understanding of STEM concepts, skills, and processes.
- Engagement or interest in multiple ways of learning and knowing STEM, STEM education, and STEM careers.
- STEM identity development and belonging.
- Discerning among evidence, opinion, misinformation, and disinformation.

- Enacting behaviors and agency around STEM and related societal issues.

2. **Goal #2: Advancing the Knowledge Base of Informal STEM Learning** (required of all proposals)

All AISL proposals should detail a high-quality plan to generate knowledge through research, evaluation, and practice. To advance the knowledge base, the work must be situated in the existing practice, literature, research, and theory in informal STEM contexts, and address questions of importance to those who learn and/or work in informal STEM experiences and environments. Methods (e.g., quantitative, qualitative, others) and analyses should be described and thoughtfully aligned with the people and places where informal STEM learning is occurring. Iterative, design-based research and community-based and participatory research approaches are encouraged, when appropriate, and should be grounded in relevant methodological approaches (e.g., Jason, et al., 2004). Coherence among the proposal goals, hypotheses, and knowledge building should be illustrated by including a table or diagram that aligns questions, data, analyses, and potential claims to the proposed activities. An explicit theoretical framework as well as either a logic model or theory of action should guide proposed projects. Proposals should generate products that are useful to practitioners (see AISL Goal #4) and/or researchers and should include targeted communication strategies for different audiences to ensure broad impact.

Areas for advancing the knowledge base of informal STEM learning include but are not limited to:

- Prioritizing the interests, needs, questions, and experiences of learners and practitioners (see also AISL Goal #4).
- Exploring what works, for whom, why, and in what contexts.
- Understanding affective, behavioral, cultural, social components, and implications of learning STEM through informal experiences and environments.
- Creating and enhancing the theoretical and empirical foundations for informal STEM learning research and practice.
- Studying specific innovative models, productions, programs, technologies, resources, or systems areas of informal STEM learning.
- Investigating innovative methods or practices for assessing learning in these distinctive learning experiences and environments.
- Testing the reproducibility of important findings.
- Conducting syntheses, meta-syntheses, meta-analyses, systematic literature reviews, and conferences.

3. **Goal #3: Broadening Participation in STEM** (required of all proposals)

AISL is an NSF Broadening Participation Focused Program, which recognizes that all people belong in the STEM enterprise. While everyone should be able to thrive, engage in, and contribute to STEM, if they choose, there are groups who have been and continue to be excluded, under-served, or underrepresented in STEM and informal STEM learning along several dimensions. All AISL proposals should address broadening participation and belonging in STEM. Proposals should reflect a well-rounded understanding of the focal learners and their communities, public and professional, and include specific plans or strategies for integrating that understanding throughout the proposed work (e.g., team composition and management, research and development processes and activities, budget allocations, etc.).

4. **Goal #4: Intentionally Community/Practitioner Driven**

One way to achieve AISL Goals #1-3 and strengthen the potential for broader impacts is to include those most impacted by the work up front. Depending on the focal audience, learners or members of their communities (public audiences) and/or practitioners (professional audiences) can be important contributors in shaping projects to ensure relevance to their lives and practices.

Competitive proposals clearly identify and define the practitioners, learners, and/or community partners involved, describe how they will meaningfully lead or contribute to proposed activities, and discuss how the project is relevant to them.

For purposes of this solicitation:

- **Practitioners** - are defined as the people engaged in designing, offering, and/or supporting informal learning experiences, and who have a deep familiarity with the settings and culture of informal STEM (e.g., educators, developers, producers, community partners, and science communicators engaged with informal STEM).
- **Communities** - are defined rather broadly going beyond the traditional characterization that communities represent a group of individuals sharing a local, physical location. Communities can also represent any collection of individuals who are unified along certain common dimensions including but not limited to: objectives; professional practices; interests, identities; and/or informal STEM learning priorities.

5. Goal #5: Professional Capacity Building & Informal STEM Infrastructure

Building capacity, whether for ISL professionals or organizations, is one way to advance the field of informal STEM learning. Capacity building may take the form of professional development opportunities, supporting collaborations and connections within and across sectors of informal STEM learning and beyond, or both. Attention may also be on the infrastructure of ISL (e.g., design of learning spaces, policies and practices, tools, networks). Work focused on understanding systems-level drivers is encouraged.

6. Goal #6: Support Learners' Participation in and Understanding of STEM practices

Learners' participation in and understanding of science, technology, engineering, and mathematics in informal environments and experiences is key to the future success of the nation. As such, proposals should consider and elaborate on strategies to engage learners in STEM advancements, such as emerging areas of technology, and the practices of STEM professionals. AISL is particularly interested in proposals that foster critical appraisal of connections between STEM and society, and support learners in making informed judgments as STEM intersects with their daily lives. This includes bold approaches to understanding and addressing misinformation and disinformation about the STEM enterprise.

PROJECT TYPES

The AISL Program supports five types of projects.

- **Type 1: Synthesis** - AISL supports various types of syntheses, such as systematic literature reviews, meta-syntheses, meta-analyses, and other approaches to understanding questions, issues, or topics of central or emerging importance to the informal STEM learning field that align with AISL goals for proposals.
- **Type 2: Conferences** - Conferences are an important way for the AISL Program to support capacity building (AISL Goal #5) for informal STEM learning professionals. To do that work, conferences bring combinations of researchers, practitioners (see AISL Goal #4), policymakers, and/or learners together to share and discuss recent research, practice, and/or experiences to inform current and future informal STEM learning efforts.
- **Type 3: Partnership Development and Planning** - Proposals submitted under this category are intended to foster strong partnerships among practitioners, researchers, learners or members of their community and support effective integration of their varied epistemologies, lived experiences, perspectives, requirements, goals, and expectations. Partnerships should work toward a research and development project or agenda responsive to the AISL solicitation. Activities within the scope include, but are not limited to, multidisciplinary workshops, stakeholder meetings, project planning and explorations regarding the positioning and capacity of the team to work together to advance informal STEM learning.

- **Type 4: Integrating Research and Practice** - This project type fosters research-practice integration by addressing questions from practice through research to advance the field. Research-practice integration may include studying research findings applied to practice or innovations of informal STEM learning experiences and environments. AISL Goal #4, Intentionally Community/Practitioner Driven, provides a broad definition of practitioners. Proposals submitted to this category should conduct work through collaborative approaches that involve genuine and reciprocal partnerships among researchers and practitioners. This project type offers opportunities for diverse teams to study emergent issues, promising ideas, and innovative approaches that may potentially transform informal STEM learning as we know it. While the range for funding is broad, PIs are encouraged to consider small- and medium-scale investigations as commensurate with the nature of the research questions and design components.
- **Type 5: Research in Support of Wide-reaching Public Engagement with STEM** - This project type seeks proposals that reach upwards of hundreds of thousands of informal STEM learners. It supports genuine partnerships between researchers and practitioners. It is up to the team to determine the balance between the proposal's focus on research, development, and implementation. Examples of this project type may include large-scale public engagement proposals, such as broadcast/streaming video, giant screen films, and exhibitions. They may also include scale-up research proposals designed to expand the reach of informal STEM learning approaches that have established evidence of success at a smaller scale.

Proposers are strongly encouraged to contact a program officer (DRLAISL@nsf.gov) prior to submission to discuss proposal idea(s).

Link to Additional Information: <https://new.nsf.gov/funding/opportunities/advancing-informal-stem-learning-aisl/nsf24-601/solicitation>

5. Humanities Research Centers on Artificial Intelligence, NEH

Application Deadlines:

- **Optional Draft:** October 2, 2024
- **Full Proposal:** December 11, 2024

Award Amount: up to \$500,000 for a duration of 36 months, with a maximum of \$200,000 per year

This notice solicits applications for the Humanities Research Centers on Artificial Intelligence (AI) program offered by the Division of Research Programs.

AI is one of the most powerful technologies of our time and will have profound consequences for civil rights and civil liberties, safety and security, and democratic values. Questions about the ethical, legal, and societal implications of AI are fundamentally rooted in the humanities, which include ethics, law, history, philosophy, language and linguistics, anthropology, sociology, media studies, and cultural studies. NEH is particularly interested in projects that explore the risks of AI-related technologies on truth, trust, and democracy; safety and security; and privacy, civil rights, and civil liberties.

In your application to this program, you must propose to create a Center with a specific research focus related to the ethical, legal, or societal implications of AI. A Center is a sustained collaboration among multiple scholars focused on exploring the humanities implications of AI through two or more related scholarly activities. Competitive Centers typically identify a specific topical, methodological, or disciplinary lens through which to focus their efforts. NEH particularly encourages Centers interested in equity, privacy, and civil-rights topics. Centers should aim to advance humanities research on their chosen topic beyond the period of the grant.

In addition to establishing the Center, your project should engage in at least two activities that support research into the ethical, legal, or societal implications of AI. Appropriate activities may include, but are not limited to, collaborative

research and writing efforts; education and mentoring; convenings, such as conferences, symposia, and workshop; lecture series; and the creation of digital tools to increase or advance scholarly discourse about AI. You must present a plan to disseminate the results of each activity. Allowable costs include, but are not limited to, salary replacement; compensation of collaborators, post-doctoral students, consultants, and research assistants; fringe benefits; the purchase of computing equipment or software; and travel, lodging, and per diem costs for lecturers or convening participants.

Program Outputs

You must propose outputs (deliverables) that contribute to the creation and long-term development and sustainability of your Humanities Research Center, as well as its research profile. All project outcomes and outputs must address the Center's chosen thematic focus and convey interpretive humanities work.

Your project must result in a leadership structure, a mission statement, and an institutional plan for long-term sustainability by the end of the first year of the period of performance. Activities related to this institutional planning should appear in your work plan. In addition to establishing your Center, you must produce at least two deliverables during the grant period. Additional deliverables may include, but are not limited to:

- a lecture series, workshops, colloquia, summer institutes, or similar convenings.
- digital infrastructure for enabling multi-disciplinary or multi-institutional research about the humanistic implications of AI.
- curriculum development or training courses for AI literacy in the humanities.
- multi-authored books, peer-reviewed articles in academic journals, educational materials, or articles for the general public.

NEH Areas of Interest

- Humanities Perspectives on Artificial Intelligence
- American Tapestry: Weaving Together Past, Present, and Future
- United We Stand: Connecting Through Culture

Link to Additional Information: <https://www.neh.gov/program/humanities-research-centers-artificial-intelligence>

6. Digital Humanities Advancement Grants, NEH

Application Deadlines:

- **Optional Draft:** November 13, 2024
- **Full Proposal:** January 9, 2025

Award Information:

- **Level I:** up to \$75,000 for a duration of up to 24 months
- **Level II:** \$75,001 to \$150,000 for a duration of up to 24 months
- **Level III:** \$150,001 to \$350,000 for a duration of up to 36 months

This notice solicits applications for the Digital Humanities Advancement Grants (DHAG) program from the Office of Digital Humanities.

The Digital Humanities Advancement Grant program supports work that is innovative, experimental, and contributes to the critical infrastructure that underpins scholarly research, teaching, and public programming in the humanities. In addition to the program's emphasis on experimentation and innovation, DHAG values extensibility, reuse, replicability, and accessibility. If your project is funded, you must analyze your workflow and publish your results in a white paper that NEH will share widely. This body of work contributes to the digital humanities' research base.

Funding Levels

Awards are available at three funding levels to allow you to identify a level appropriate to the scope and maturity of your project. You do not need to have had a Level I award to apply for a Level II project, nor do you need to have had a Level I or II award to apply for a Level III project. NEH will assign your project to the funding level based on the total outright funds requested. Please be mindful of this when indicating your funding level in the narrative section of the application.

- **Level I**
 - Supports smaller-scale projects or experimental or exploratory stages of larger projects.
 - Activities might include developing research agendas, piloting new methods, convening planning sessions with stakeholders or conducting audience and user experience research, designing prototypes, and facilitating convenings to address field-wide questions.
- **Level II**
 - For projects that can demonstrate completion of an initial planning phase but are not yet ready for Level III funding; should include plans for extending work beyond the applicant institution.
 - Activities might include developing beta prototypes of open-source tools or software; evaluating and refining methods and workflows; conducting workshops or tutorials to disseminate project results.
- **Level III**
 - For scaling up and expanding mature projects.
 - Must document completion of a planning or prototyping stage, current user statistics, and dissemination plans beyond the applicant institution.
 - Activities might include code review and bug fixing; creating training materials and documentation to promote wide use of the grant products; preparing data, software, or websites for future preservation; conducting accessibility compliance review.

Program Outputs

Examples of outputs include:

- **Level I:** new consortia or partnerships, user experience testing reports and evaluations, planning documents for next stages, alpha stage experiments, and pilot studies.
- **Level II:** working prototypes of tools, code libraries, or add-ons; beta version of the digital project; new workflows; and training data or models.
- **Level III:** launch of the expanded/enhanced digital project; release of final software, code, or datasets; robust outreach activities beyond the applicant institution; implementation of sustainability plans.
- **All levels:** conference presentations, workshops, tutorials, publications, training materials, and implementation of data management and sharing plans.

Partnership with Institute of Museum and Library Services

The Institute of Museum and Library Services (IMLS) anticipates providing funding through this program in support of its efforts to advance national information infrastructures in libraries and archives, subject to the availability of funds and agency discretion. These funds may support DHAG projects that further the IMLS mission to advance, support, and empower America's libraries, archives, museums, and related organizations. IMLS funding supports innovative collaborations between library and archives professionals, humanities professionals, information scientists, and relevant public communities that advance the preservation of, access to, and public engagement with, digital collections and services. IMLS encourages DHAG applicants to work in collaboration with, and employ the expertise of, library and

archives staff at your institution or across the country to strengthen knowledge networks, empower community learning, foster civic cohesion, advance research, and support the traditionally underserved.

Link to Additional Information: <https://www.neh.gov/grants/odh/digital-humanities-advancement-grants>

7. Discovery Research PreK-12 Program Resource Center on Transformative Education Research and Translation (DRK-12 RC), NSF

Application Deadline: February 28, 2025

Anticipated Funding Amount: \$5,000,000 over five years, pending the availability of funds.

The DRK-12 Program is the only NSF program that supports applied research and development at the preK-12 level in all areas of formal STEM education. The DRK-12 Program's goal is to catalyze research and development that enhances all preK-12 teachers' and students' opportunities to engage in high-quality STEM learning experiences. Situated at the intersection of fundamental and applied research and development, the DRK-12 Program supports efforts to advance both generalizable scientific knowledge and applied classroom strategies based upon strong evidence. The DRK-12 Program invests in projects with potential to address longstanding challenges, inequities, and opportunities in formal education. It also invests in projects that anticipate and provide the foundation for future formal preK-12 STEM education.

The DRK-12 Program's objectives are to: (1) build knowledge about how to develop preK-12 students' and teachers' STEM content knowledge, practices, and skills; (2) support collaborative partnerships among STEM education researchers, STEM education practitioners, and school leaders with the goals of developing more effective practice while also extending relevant research literatures; and (3) build the field of STEM education by supporting knowledge syntheses, interdisciplinary interactions across fields and stakeholders, and the development of novel and robust ways of assessing teacher and student learning, engagement, and skills. Outcomes of DRK-12 projects can include but are not limited to promising, evidence-based products that can be used by others to support the success of all teachers and all students (e.g., curriculum, teaching and research tools, and models of collaboration).

The DRK-12 Program intends to support one project that fulfills the Resource Center activities described below.

Proposers submitting to the DRK-12 Resource Center on Transformative Education Research and Translation solicitation should demonstrate their capacity to plan, develop, and manage a center that supports knowledge translation between researchers and practitioners, catalyzes communication and collaboration within the research community, and provides technical support for a diverse array of research and development project types, including the identification and strategic translation of promising findings with potential for classroom use. The DRK-12 Program seeks an intellectual partner that can facilitate the strategic advancement of promising findings and practices from discovery to efficacy and implementation.

Resource Center activities include but are not limited to:

- 1. Synthesizing and communicating about the DRK-12 Program's investments and impacts:** The RC is expected to facilitate the broad dissemination of DRK-12 project outcomes, findings, and evidence of promising practices to various formal STEM education communities. This responsibility includes providing topically oriented synthesis with recommendations for how to advance scientific inquiry to the next phase, reports that summarize findings from funded or completed DRK-12 projects, and comprehensive reports of DRK-12 program activities and outcomes. A competitive DRK-12 RC proposal will demonstrate the project team's capacity to collect, analyze, synthesize, and disseminate public information about the DRK-12 Program to its diverse audiences. Moreover, a competitive proposal will demonstrate how the project team will assist DRK-12 award recipients and proposers in responding to the DRK-12 Program solicitation's call for dissemination / communication plans that go beyond traditional researcher-focused avenues to foster researchers' two-way communication with diverse audiences.
- 2. Capacity Building:** The DRK-12 Resource Center is expected to support STEM education researchers' capacity

to submit competitive proposals, across the full range of project types described in the program solicitation, that advance the DRK-12 Program's mission to:

- a. share knowledge among STEM education researchers and teachers, schools, and community members;
 - b. promote knowledge-, field-, and partnership-building activities;
 - c. develop synergistic networks within and across the STEM education research and practice communities that can enact knowledge translation pathways.
3. **Broadening Participation:** The DRK-12 Resource Center is expected to engage geographic regions, community types, and organizations that are underrepresented in the DRK-12 portfolio. A competitive proposal will explain how the project team will use innovative modes of engagement to reach and serve a range of organizations and individuals, including EPSCoR jurisdictions (see <https://new.nsf.gov/funding/initiatives/epscor/state-websites>).
4. **Technical Support:** The DRK-12 Resource Center on Transformative Education Research and Translation is expected to provide prospective Principal Investigators with access to information about DRK-12 Program projects, outcomes, and resources. It is also expected to provide technical assistance appropriate to the full range of DRK-12 research and development project types, especially Partnership Development, Exploratory, Impact, and Implementation and Improvement projects. A competitive proposal will explain how the project team will meet these expectations by applying its expertise in STEM disciplines, rigorous education research methodologies, formal preK-12 STEM education, and theoretical and conceptual frameworks that guide potentially transformative STEM education research.

Proposers should have demonstrated expertise in STEM disciplines, rigorous education research methodologies including measurement and assessment of learning outcomes, and STEM teacher professional development. Demonstrated expertise in theoretical and conceptual frameworks that guide STEM education research, partnership development and collaboration are essential.

Link to Additional Information: https://new.nsf.gov/funding/opportunities/drk-12-rc-discovery-research-prek-12-program-resource-center/nsf24-602/solicitation?WT_mc_id=USNSF_25&WT_mc_ev=click

8. Biomedical Research Initiative for Next-Gen BioTechnologies-SynBio Control (BRING SynBio), NSF

Application Deadline: December 4, 2024

Award Information:

- **Phase I:** \$150,000 in total cost per award for a duration of two years
- **Phase II:** \$275,000 in direct cost per award for a duration of two years

The National Science Foundation Directorate for Engineering (NSF/ENG) and the National Institute of Biomedical Imaging and Bioengineering (NIH/NIBIB) announce the Biomedical Research Initiative for Next-Gen BioTechnologies-SynBio Control (BRING-SynBio) Solicitation. The BRING-SynBio Control solicitation aims to accelerate the translation of novel fundamental synthetic and engineering biology advances to early-stage biomedical technologies through interagency collaboration.

Program Description

The goal of the BRING-SynBio solicitation is to support fundamental and interdisciplinary proof of principle approaches in synthetic and engineering biology that spur the development of novel, early-stage biomedical technologies. This solicitation is focused on the use of biological control theory in the design and characterization of new synthetic biological tools and parts and their downstream application to technology development in the biomedical field. In this solicitation, biological control theory is defined as control strategies that are analogous to those exhibited in natural systems and include, but are not limited to, nested loops, multiple induction and inhibition interactions, feedback control, sensing and signaling functions, and switching between alternate pathways. Proposals must address research on fundamental aspects of synthetic and engineering biology and their potential to lead to early-stage biomedical technology development projects

eligible for support through the NIH/NIBIB. Clinical Trials are not supported by this activity.

Projects are expected to include a two-year plan (Phase I) of fundamental, proof of principle research involving novel, biological control-guided aspects of synthetic gene circuit design and a two-year plan (Phase II) describing exploratory research focused on further development and validation of Phase I emerging technologies that offer novel capabilities for biomedical technology development to achieve overall project objectives. Phase II efforts should be predicated upon the proof of principle established during Phase I and should address major feasibility gaps for the technology that require further development and rigorous validation in a biomedically relevant setting. NSF/ENG will support fundamental research at the institution of higher education or non-profit organization in Phase I. The early-stage biomedical technology development efforts in Phase II will be supported separately by NIH/NIBIB.

NSF will coordinate and manage the review of the proposals. Proposals will be shared with NIH/NIBIB Program staff to determine programmatic fit to NIBIB's mission and suitability for funding. Investigators are advised to consult with NSF/ENG and NIH/NIBIB program officers early in their proposal planning process. No more than 21 months after the Phase I start date, award recipients may submit a Phase II transition package via email to the Program Officer at NIH/NIBIB including a Phase I report describing in detail progress towards completion of the Phase I milestones and may be asked to include other information necessary for successful evaluation of the Phase I of the project. This transition package may be shared with NSF Program Staff. Satisfactory completion of the Phase I milestones will be assessed administratively by agency staff to determine eligibility for transition to Phase II. Transition to Phase II is neither automatic nor guaranteed. After administrative review of the Phase I progress, it is possible that a project will not be recommended for transition to Phase II. Transition to Phase II will depend upon demonstration of milestone completion, feasibility of plans, programmatic priorities, and availability of funds. See Section VI.B for additional information.

Potential areas of interest for BRING-SynBio include but are not limited to:

Novel design principles for the characterization and design of new synthetic biology tools and parts:

- Gene circuit designs that enhance robustness, reliability, predictability, and tuneability of current designs.
- Modular designs for tools and parts that, when combined, result in predictable network outcomes.
- New strategies to improve upon size limitations of gene circuit designs.

Regulation and control of biological processes in cells/tissues:

- Synthetic gene regulatory networks for controlled modulation of gene expression and dynamic noise filtering.
- Design of synthetic circuits that incorporate novel feedback control strategies.

Projects that address only one of the phases, do not pursue advances in synthetic biology that incorporate biological control theory, or do not address a challenge with clear relevance to the mission of NIBIB are non-responsive. Non-responsive projects will be returned without review.

Link to Additional Information: <https://new.nsf.gov/funding/opportunities/bring-synbio-biomedical-research-initiative-next-gen-biotechnologies/nsf24-603/solicitation>

9. Ethical and Responsible Research (ER2), NSF

Application Deadline: January 23, 2025

Anticipated Funding Amount:

- **Conference Projects:** up to \$50,000 for a duration of up to 12 months
- **Incubation Projects:** up to \$100,000 for a duration of up to 12 months
- **Standard Research Projects:** up to \$400,000 for a duration of up to 3 years
- **Partnership for Transformational Research Projects:** up to \$700,000 for a duration of up to 4 years

The ER2 program supports projects that focus on what constitutes or promotes responsible and ethical research in STEM fields. The ER2 program promotes the development, improvement, and dissemination of responsible and ethical research practices and aims to build on organizational cultures that value and reward such practices. Proposers to the ER2 program may examine responsible and ethical research practices across one or more career stages. This can include, for example, the research practices of students, postdoctoral fellows, faculty, or practitioners. ER2 projects seek to improve responsible and ethical STEM research practices in teams, organizations, or communities, or between researchers and the public. ER2 projects can include the development of interventions that promote responsible and ethical research practices, including in multidisciplinary, inter-organizational, cross-sector, translational or international contexts. An ER2 project could also identify challenges that undermine or erode responsible and ethical research practices in STEM fields and evaluate measures to prevent or mitigate such challenges. A comprehensive approach to responsible and ethical research not only influences individual behavior, but it also contributes to an inclusive, equitable, and respectful research culture. Thus, proposers could examine organizational or other factors that positively influence responsible and ethical research practices in STEM fields.

Research questions of interest to the program include but are not limited to:

- What constitutes responsible and ethical research practice in STEM and why?
- Which strategies promote effective mentoring, and foster inclusive, equitable, and respectful research environments?
- Which organizational practices positively promote responsible and ethical research, and how can these practices be translated and integrated into other settings?
- What are responsible and ethical approaches to co-designing research activities? This could, for example, involve a research partnership with a local community organization, industry, an Indigenous population, or a group historically underrepresented in STEM.
- What are similarities and differences in responsible and ethical research practices across different STEM fields or sectors (for example, academia, industry and non-profit), and what can these fields or sectors learn from one another about such practices?
- How does the use of technology such as artificial intelligence inform or change responsible and ethical research practices in STEM? For example, how could technology impact the ethics of knowledge discovery, authorship, communicating research findings, or data management, or the responsibilities that researchers have to the public?
- Which approaches enable STEM researchers to engage with the public responsibly or design their research activities in a way that fosters the well-being of the public?

ER2 projects can include qualitative, quantitative, or mixed methods approaches. When working with partners such as local, regional, national, or international communities, the ER2 program expects project teams to treat each partner equitably and respectfully. This could, for example, involve upholding best practices for co-creating knowledge and sharing research findings with each partner.

A proposal submitted to the ER2 program must intersect with one or more of the following STEM areas or fields that NSF supports:

- Social, Behavioral and Economic Sciences
- Biological Sciences
- Computer and Information Science and Engineering
- Engineering
- Geosciences
- Mathematical and Physical Sciences
- STEM Education
- Technology, Innovation and Partnerships
- International Science and Engineering

Types of Proposals

- **Conference Projects** - supports conferences designed to bring together researchers and other stakeholders, especially those who have not partnered previously, to foster new research, identify emerging challenges and opportunities, or develop new standards on responsible and ethical research practices within STEM communities. The ER2 program does not support gatherings whose primary purpose is to share the results of completed research. Conference proposals should generally be submitted a year in advance of the proposed event.
- **Incubation Projects** - enable research teams across multiple organizations to collaborate to develop and later submit an ER2 Standard Research of Partnership for Transformational Research proposal. An Incubation Project must span at least two organizations. The project may involve a pilot study and/or workshop as a component of the incubation activities.

Those who intend to submit an Incubation Project proposal should consult with an ER2 program officer before submitting to ascertain the suitability of the envisioned activity.

- **Standard Research Projects** - should produce new knowledge about what fosters responsible and ethical research practices in one or more STEM fields. They can also be called collaborative.
- **Partnership for Transformational Research Projects** - designed to support the development, implementation, and evaluation of innovative strategies that promote responsible and ethical research practices within a partnership of two or more organizations. PTR Projects should contribute to the knowledge base of what fosters responsible and ethical practices in STEM research communities and serve as a catalyst for embedding such practices at each of the partner organizations. It is highly recommended that at least one senior member of the administration from each partnering organization serves as part of the research team's leadership.

Link to Additional Information: <https://new.nsf.gov/funding/opportunities/er2-ethical-responsible-research/nsf24-604/solicitation>

10. Basic Research in Cancer Health Disparities (R21 Clinical Trial Not Allowed), NIH

Application Deadline: October 16, 2024

Award Budget: up to \$275,000 for a duration of two years

This Notice of Funding Opportunity (NOFO) encourages grant applications from investigators interested in conducting basic research studies into the biological/genetic causes and mechanisms of cancer health disparities. These awards will support pilot and feasibility studies designed to investigate biological/genetic bases of cancer health disparities, such as (1) mechanistic studies of identified biological factors associated with cancer health disparities, (2) the development and testing of new methodologies and models, and (3) secondary data analyses. This FOA is also designed to aid and facilitate growth of a nationwide cohort of scientists with a high level of basic research expertise in cancer health disparities who can expand available resources and tools, such as biospecimens, cell lines and methods that are necessary to conduct basic research in cancer health disparities. In addition, the NOFO will further the development of scientific areas, providing support for early-stage exploratory projects that lead to future in-depth mechanistic studies (such as R01 projects) of the biology of cancer health disparities.

Specific Research Objectives

The goal of this NOFO is to stimulate interest in the characterization and functional analysis of biological factors associated with cancer health disparities and to provide funding opportunities in this area. Applications should focus on basic cancer research, consistent with the research interests of the NCI's Division of Cancer Biology (DCB), Division of Cancer Prevention (DCP), and Center for Cancer Health Equity (CCHE).

- DCB - supports research on the discovery and characterization of basic pathways and mechanisms that regulate the development of a pre-malignant state, initiation of cellular transformation and cancer cell progression, formation of tumor microenvironment, metastasis, and host responses to cancer, including immunologic or metabolic responses.
- CCHE - supports cancer health disparity research focused on basic, hypothesis driven studies that explicitly address the unequal burden of cancer amongst racial/ethnic minorities or other underserved populations across the cancer continuum (prevention, early detection, diagnosis, treatment, and survivorship).
- DCP - supports research that will generate new information about molecular processes that are susceptible to intervention throughout the cancer continuum until invasive cancer and underlying mechanisms of cancer and its sequelae (i.e., mechanistic studies on the prevention or treatment of acute and chronic symptoms and morbidities related to cancer and its treatment), developing effective cancer screening and prevention strategies, discovering early detection biomarkers, and pinpointing mechanistically targeted nutrients in cancer prevention.

This NOFO encourages basic research projects that will develop and test new methodologies and new research technologies focused on specific topics in cancer health disparities. The availability of annotated clinical samples as well as enabling technologies (genomics/epigenomics, proteomics, metabolomics, single cell analysis, imaging) make it feasible to study biological factors that contribute to cancer health disparities among different racial/ethnic populations.

Research projects must propose to investigate the interplay of race/ethnicity and/or other social determinants with cancer biology to mechanistically explain an unequal burden of cancer among populations. As such, proposed studies are encouraged to use biospecimens, patient derived models, and/or data sets derived from different racial/ethnic and/or underserved groups. Studies investigating age or gender disparities, in the absence of race/ethnicity variables, are not solicited. Research projects using a comparative research design between at least two populations are encouraged, in which one or more is underserved.

Research topics of interest include but are not limited to:

- Investigating causal drivers of early onset cancer types in specific populations
- Researching genetic/epigenetic mechanisms of cancer susceptibility differences among racial/ethnic populations, such as epigenetic drivers and or suppressors
- Understanding how race/ethnicity impacts disease penetrance in individuals who inherit a cancer susceptibility gene
- Understanding if race/ethnicity has a role in regression of precancerous lesions
- Understanding if risk factors, including environmental exposures, differ across race/ethnicity to influence development of precancerous lesions
- Identifying cancer risk and early detection biomarkers among underrepresented populations
- Examining how stress impacts the progression of symptoms across different population groups
- Identifying underlying mechanisms of symptoms that are responsible for altering treatment regimens that increase the risk of mortality for racial/ethnic minority patients with cancer
- Understanding the process through which precision therapies improve symptom management to reduce health disparities
- Investigating similarities and differences in cancer metabolism (e.g. alterations in metabolic fuel sources, fatty acid synthesis, lipid metabolism, glycolysis, nutrient uptake) among racial/ethnic populations
- Studying how new 3D cellular models, organoids, xenografts, patient-derived models and microfluidic systems are designed to recapitulate and investigate cancer health disparities
- Identifying epithelial and mesenchymal markers in circulating tumor cells in cancer patients of distinct racial/ethnic groups
- Investigating how social health disparities may cause adverse gene expression that confers increased cancer risk and/or aggressiveness

- Understanding the role of the microbiota in cancer health disparities during tumorigenesis and cancer progression
- Investigating the role of oncogenic pathogens in the development of cancer health disparities during tumorigenesis and cancer progression in different population groups
- Using computational analysis and modeling for predicting aggressive tumors in distinct racial/ethnic populations
- Understanding the biological mechanisms behind the differences in toxicity and symptoms seen in various racial/ethnic populations during cancer treatment
- Understanding biological mechanisms of how stress impacts progression of symptoms in different population groups
- Deciphering the mechanisms of accumulated exposure to environmental toxins across populations
- Understanding the biological processes through which precision interventions improve symptom management to reduce cancer health disparities
- Examining the biological bases of differences among racial/ethnic populations in responses to cancer immunotherapies and/or development of immune-related adverse events induced by cancer immunotherapies.

Link to Additional Information: <https://grants.nih.gov/grants/guide/pa-files/PA-24-291.html>

Scholarships and Fellowships

1. CaribOx Visiting Fellowship Scheme 2025, The Oxford Research Center in the Humanities, University of Oxford

CaribOx is a new visiting fellowship and travel-grant program designed to support researchers across all disciplines based at Caribbean research institutions and to facilitate collaborations with researchers based at the University of Oxford. The CaribOx Fellowship is an opportunity to develop meaningful and high-quality research collaborations between researchers in Caribbean research institutions and the University of Oxford. It is hoped that the fellowship will enrich the intellectual lives and work of not only the fellows, but their academic collaborators and the wider University.

Link to Additional Information: <https://torch.ox.ac.uk/event/caribox-visiting-fellowship-scheme>

Forecasted Opportunities

1. University Training and Research for Fossil Energy and Carbon Management, National Energy Technology Laboratory

The University Training and Research (UTR) Program, sponsored by Office of Fossil Energy and Carbon Management (FECM) and administered by the National Energy Technology Laboratory (NETL), has the following primary mission objectives: 1) educate and train the next generation of engineers and scientists; 2) support novel, early-stage research at U.S. colleges and universities; 3) increase research and development opportunities for underrepresented and structurally marginalized communities; 4) ensure that students are being equipped with cutting-edge, translatable skillsets that will allow them to contribute to the U.S. workforce and greater economy over the course of a longstanding and enduring career.

Link to Additional Information: <https://www.grants.gov/search-results-detail/356189>

2. Head Start/Early Head Start Recipient, Administration for Children and Families

The Administration for Children and Families, Office of Head Start (OHS) will solicit applications from public or private non-profit organizations, including community-based and faith-based organizations, or for-profit organizations that wish to compete for funds to provide Head Start and/or Early Head Start services to eligible children and families.

Link to Additional Information: <https://www.grants.gov/search-results-detail/356296>

Proposals Accepted Anytime

1. Division of Environmental Biology, NSF
<https://new.nsf.gov/funding/opportunities/division-environmental-biology-deb/nsf24-543/solicitation>
2. Computational and Data-Enabled Science and Engineering in Mathematical and Statistical Sciences, NSF
<https://beta.nsf.gov/funding/opportunities/computational-and-data-enabled-science-and-engineering-mathematical-and>
3. Condensed Matter and Materials Theory (CMMT), NSF
https://www.nsf.gov/pubs/2022/nsf22610/nsf22610.htm#pgm_desc_txt
4. Division of Materials Research: Topical Materials Research Programs (DMR: TMRP), NSF
<https://www.nsf.gov/pubs/2022/nsf22609/nsf22609.htm>
5. Research in the Formation of Engineers, NSF
<https://beta.nsf.gov/funding/opportunities/research-formation-engineers-rfe>
6. Computer and Information Science and Engineering (CISE): Core Programs, NSF – Small Projects
<https://www.nsf.gov/pubs/2022/nsf22631/nsf22631.htm>
7. Manufacturing Systems Integration (MSI), NSF
<https://beta.nsf.gov/funding/opportunities/manufacturing-systems-integration-msi>
8. Cybersecurity Innovation for Cyberinfrastructure (CICI), NSF
<https://www.nsf.gov/pubs/2023/nsf23532/nsf23532.htm>
9. Division of Molecular and Cellular Biosciences Core Programs (MCB), NSF
<https://new.nsf.gov/funding/opportunities/division-molecular-cellular-biosciences-core/nsf24-539/solicitation>
10. Division of Integrative Organismal Systems Core Programs, NSF
<https://www.nsf.gov/pubs/2023/nsf23547/nsf23547.htm>
11. Electronics, Photonics and Magnetic Devices (EPMD), NSF
<https://beta.nsf.gov/funding/opportunities/electronics-photonics-magnetic-devices-epmd-0>
12. Plant Genome Research Program (PGRP), NSF
<https://www.nsf.gov/pubs/2023/nsf23559/nsf23559.htm#elig>
13. Communications, Circuits, and Sensing-Systems (CCSS), NSF
<https://beta.nsf.gov/funding/opportunities/communications-circuits-sensing-systems-ccss-0>
14. Fluid Dynamics, NSF
<https://beta.nsf.gov/funding/opportunities/fluid-dynamics-2>
15. Biophotonics, NSF
<https://beta.nsf.gov/funding/opportunities/biophotonics-2>
16. Environmental Sustainability, NSF
<https://beta.nsf.gov/funding/opportunities/environmental-sustainability-2>
17. Particulate and Multiphase Processes, NSF
<https://beta.nsf.gov/funding/opportunities/particulate-multiphase-processes-2>

18. Interfacial Engineering, NSF
<https://beta.nsf.gov/funding/opportunities/interfacial-engineering-0>
19. Nanoscale Interactions, NSF
<https://beta.nsf.gov/funding/opportunities/nanoscale-interactions-0>
20. Combustion and Fire Systems (CFS), NSF
<https://new.nsf.gov/funding/opportunities/combustion-fire-systems-cfs>
21. Infrastructure Innovation for Biological Research (Innovation), NSF
<https://www.nsf.gov/pubs/2023/nsf23578/nsf23578.htm>
22. Infrastructure Capacity for Biological Research (Capacity), NSF
<https://www.nsf.gov/pubs/2023/nsf23580/nsf23580.htm>
23. Energy, Power, Control, and Networks (EPCN), NSF
<https://new.nsf.gov/funding/opportunities/energy-power-control-networks-epcn-0>
24. Engineering of Biomedical Systems, NSF
<https://new.nsf.gov/funding/opportunities/engineering-biomedical-systems-0>
25. Catalysis, NSF
<https://new.nsf.gov/funding/opportunities/catalysis-2>
26. Process Systems, Reaction Engineering, and Molecular Thermodynamics, NSF
<https://new.nsf.gov/funding/opportunities/process-systems-reaction-engineering-molecular-2>
27. Disability and Rehabilitation Engineering (DARE), NSF
<https://new.nsf.gov/funding/opportunities/disability-rehabilitation-engineering-dare-2>
28. Cellular and Biochemical Engineering, NSF
<https://new.nsf.gov/funding/opportunities/cellular-biochemical-engineering-0>
29. Facility and Instrumentation Request Process (FIRP), NSF
<https://www.nsf.gov/pubs/2023/nsf23602/nsf23602.htm>
30. Research Infrastructure in the Social and Behavioral Sciences (RISBS), NSF
<https://new.nsf.gov/funding/opportunities/research-infrastructure-social-behavioral-sciences>
31. Secure and Trustworthy Cyberspace (SaTC), NSF
<https://www.nsf.gov/pubs/2024/nsf24504/nsf24504.htm>
32. Mind, Machine and Motor Nexus (M3X), NSF
<https://new.nsf.gov/funding/opportunities/mind-machine-motor-nexus-m3x>
33. Cyberinfrastructure for Public Access and Open Science, NSF
<https://new.nsf.gov/funding/opportunities/cyberinfrastructure-public-access-open-science-ci>

Announcing Previous Important Funding Opportunities

1. Cyber-Physical Systems (CPS), NSF
Submission Window Date(s): June 01, 2024 - May 31, 2025 (Small & Medium)
<https://new.nsf.gov/funding/opportunities/cyber-physical-systems-cps/nsf24-581/solicitation>
2. Precision Mental Health: Develop Tools to Inform Treatment Selection in Depression (UG3/UH3 Clinical Trial Optional), NIH
Deadline: September 18, 2024 (LOI); October 18, 2024 (FP)
<https://grants.nih.gov/grants/guide/rfa-files/RFA-MH-25-190.html>
3. Collaborative Research, NEH
Deadline: September 18, 2024 (Optional Draft); November 20, 2024 (FP)
<https://www.neh.gov/grants/research/collaborative-research-grants>
4. Mentored Career Enhancement Awards to Build Cross-Disciplinary Knowledge and Skills for Comparative Studies of Human and Nonhuman Primate Species with Differing Life Spans (K18 Clinical Trial Not Allowed), NIH
Deadline: September 20, 2024 (LOI); November 1, 2024 (FP)
<https://grants.nih.gov/grants/guide/rfa-files/RFA-AG-25-028.html>
5. National Leadership Grants for Libraries, IMLS
Deadline: September 20, 2024 (Preliminary Proposal); March 10, 2025 (Invited Full Proposal)
<https://www.ims.gov/grants/available/national-leadership-grants-libraries>
6. Historically Black Colleges and Universities/Minority Institutions (HBCU/MI) Program, Department of the Navy (DoN)
Deadline: September 20, 2024 (Mandatory WP); December 13, 2024 (FP by invitation only)
<https://www.nre.navy.mil/work-with-us/funding-opportunities/fiscal-year-fy-2025-department-navy-don-historically-black>
7. Laura Bush 21st Century Librarian Program, IMLS
Deadline: September 20, 2024 (Preliminary Proposal); March 10, 2025 (Invited Full Proposal)
<https://www.ims.gov/grants/available/laura-bush-21st-century-librarian-program>
8. Privacy-Preserving Data Sharing in Practice, NSF
Deadline: September 27, 2024
<https://new.nsf.gov/funding/opportunities/privacy-preserving-data-sharing-practice-pdasp/nsf24-585/solicitation>
9. National Cancer Institute Youth Enjoy Science Research Education Program (R25 Clinical Trial Not Allowed), NIH
Deadline: September 27, 2024
<https://grants.nih.gov/grants/guide/rfa-files/RFA-CA-24-026.html>
10. Bridges to the Doctorate Research Training Program (T32), NIH
Deadline: September 27, 2024
<https://www.nigms.nih.gov/Research/mechanisms/Pages/bridgesdoctoral.aspx>
11. BRAIN Initiative: Research on the Ethical Implications of Advancements in Neurotechnology and Brain Science (R01 Clinical Trial Optional), NIH
Deadline: September 29, 2024 (LOI); October 11, 2024 (FP)
<https://grants.nih.gov/grants/guide/rfa-files/RFA-MH-25-170.html>

12. Advanced Scientific Computing Research (ASCR), Department of Energy
Deadline: September 30, 2024
<https://science.osti.gov/ascr>
13. Biological and Environmental Research (BER), Department of Energy
Deadline: September 30, 2024
<https://science.osti.gov/ber>
14. F24AS00431 FY24 Recovery Implementation, Fish and Wildlife Service
Deadline: September 30, 2024
<https://www.grants.gov/web/grants/view-opportunity.html?oppId=350612>
15. Basic Energy Sciences (BES), Department of Energy
Deadline: September 30, 2024
<https://science.osti.gov/bes/>
16. Fusion Energy Sciences (FES), Department of Energy
Deadline: September 30, 2024
<https://science.osti.gov/fes/>
17. Scholarly Editions and Translations, NEH
Deadline: September 30, 2024 (Optional Draft); December 4, 2024 (FP)
<https://www.neh.gov/grants/research/scholarly-editions-and-translations-grants>
18. Spotlight on Humanities in Higher Education, NEH
Deadline: October 1, 2024
<https://www.neh.gov/program/spotlight-humanities-higher-education>
19. Revolutionizing Innovative, Visionary Environmental Health Research (RIVER) (R35 Clinical Trial Optional), NIH
Deadline: October 1, 2024 (LOI); November 1, 2024 (FP)
<https://grants.nih.gov/grants/guide/rfa-files/RFA-ES-24-004.html>
20. Computer and Information Science and Engineering: Core Programs, NSF
Submission Window Date(s): Oct 1, 2024 - Oct 23, 2024 (OAC Core Projects & Medium); Oct 1, 2024 – Sept 30, 2025 (Small)
<https://new.nsf.gov/funding/opportunities/computer-information-science-engineering-core/nsf24-589/solicitation>
21. Advanced Technological Education, NSF
Deadline: October 3, 2024
<https://new.nsf.gov/funding/opportunities/advanced-technological-education-ate/nsf24-584/solicitation>
22. Advancement and Innovation in Measurement of Language Development and Predictors (R01 Clinical Trial Not Allowed), NIH
Deadline: October 5, 2024
<https://grants.nih.gov/grants/guide/pa-files/PAR-24-243.html>
23. Engineering Research Initiation, NSF
Deadline: October 9, 2024
<https://new.nsf.gov/funding/opportunities/engineering-research-initiation-eri/nsf24-590/solicitation>
24. Mathematical Foundations of Artificial Intelligence, NSF
Deadline: October 10, 2024
<https://new.nsf.gov/funding/opportunities/mathematical-foundations-artificial-intelligence>

25. NINDS Faculty Development Award to Promote Diversity in Neuroscience Research (K01 Independent Clinical Trial Not Allowed), NIH
Deadline: October 12, 2024
<https://grants.nih.gov/grants/guide/pa-files/PAR-24-228.html>
26. NHLBI Career Transition Award for Intramural Postdoctoral Fellows and Research Trainees (K22 Clinical Trial Required), NIH
Deadline: October 12, 2024
<https://grants.nih.gov/grants/guide/pa-files/PAR-24-211.html>
27. Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC) Postdoctoral Career Transition Award to Promote Diversity (K99/R00 - Independent Basic Experimental Studies with Humans Required (BESH)), NIH
Deadline: October 12, 2024
<https://grants.nih.gov/grants/guide/pa-files/PAR-24-227.html>
28. Mentored Career Development Award to Promote Faculty Diversity in Biomedical Research (K01 Independent Clinical Trial Not Allowed), NIH
Deadline: October 14, 2024
<https://grants.nih.gov/grants/guide/rfa-files/RFA-HL-25-009.html>
29. B-INSPIRE: Research on Behavioral Interventions that Promote Careers in the Biomedical Research Enterprise (R01 - Clinical Trial Not Allowed), NIH
Deadline: October 17, 2024
<https://grants.nih.gov/grants/guide/pa-files/PAR-24-230.html>
30. Innovative Programs to Enhance Research Training (IPERT) (R25 Independent Clinical Trial Not Allowed), NIH
Deadline: October 17, 2024
<https://grants.nih.gov/grants/guide/pa-files/PAR-24-252.html>
31. MUREP Earth System Science Research (MUREP ESSR), NASA
Deadline: October 30, 2024
<https://nspires.nasaprs.com/external/solicitations/summary!init.do?solId=%7b69136F4F-AD18-694B-E4BE-C176EC4EF408%7d&path=open>
32. Building Sustainable Software Tools for Open Science (R03 Clinical Trial Not Allowed), NIH
Deadline: November 3, 2024 (LOI); December 4, 2024 (FP)
<https://grants.nih.gov/grants/guide/pa-files/PAR-24-204.html>
33. Postdoctoral Research Fellowships in Biology (PRFB), NIH
Deadline: November 7, 2024
<https://new.nsf.gov/funding/opportunities/postdoctoral-research-fellowships-biology-prfb/nsf24-593/solicitation>
34. PFE: Research Initiation in Engineering Formation (PFE: RIEF), NSF
Deadline: November 12, 2024
<https://new.nsf.gov/funding/opportunities/pfe-research-initiation-engineering-formation-pfe>
35. Strengthening Program Evaluation Capacity: Building Evidence of Effectiveness of Strategies To Increase Postsecondary Student Success, Department of Education
Deadline: November 14, 2024
<https://www.govinfo.gov/content/pkg/FR-2024-08-15/pdf/2024-18275.pdf>

36. National Science Foundation Research Traineeship Program, NSF
Deadline: November 14, 2024
<https://new.nsf.gov/funding/opportunities/us-national-science-foundation-research/nsf24-597/solicitation>
37. Museum Grants for American Latino History and Culture, IMLS
Deadline: November 15, 2024
<https://www.ims.gov/grants/available/museum-grants-american-latino-history-and-culture>
38. Mid-scale Research Infrastructure-1 (Mid-scale RI-1), NSF
Deadline: November 18, 2024 (Preliminary Proposal); March 19, 2025 (FP by invitation only)
<https://new.nsf.gov/funding/opportunities/mid-scale-research-infrastructure-1-mid-scale-ri-1>
39. Education Activities for Responsible Analyses of Complex, Large-Scale Data (R25 - Clinical Trial Not Allowed), NIH
Deadline: November 18, 2024 (LOI); December 18, 2024 (FP)
<https://grants.nih.gov/grants/guide/rfa-files/RFA-DA-25-039.html>
40. Science and Technology Centers: Integrative Partnerships, NSF
Deadline: November 20, 2024 (Preliminary Proposal); June 2, 2025 (FP by invitation only)
<https://new.nsf.gov/funding/opportunities/science-technology-centers-integrative/nsf24-594/solicitation>
41. Molecular Foundations for Sustainability: Sustainable Polymers Enabled by Emerging Data Analytics, NSF
Deadline: December 5, 2024 (LOI); January 16, 2024 (FP)
<https://new.nsf.gov/funding/opportunities/molecular-foundations-sustainability-sustainable/nsf24-567/solicitation>
42. Translation Project Fellowships, NEA
Deadline: January 16, 2025
<https://www.arts.gov/grants/translation-project-fellowships>
43. Focus on Recruiting Emerging Climate and Adaptation Scientists and Transformers, NSF
Deadline: January 29, 2025 (Track 1); April 30, 2025 (Track 2)
<https://new.nsf.gov/funding/opportunities/focus-recruiting-emerging-climate-adaptation/nsf24-558/solicitation>
44. NIDCR Mentored Career Development Award to Promote Broad Participation in Research (K01 Independent Clinical Trial Not Allowed), NIH
Deadline: February 12, 2025
<https://grants.nih.gov/grants/guide/pa-files/PAR-25-022.html>
45. Summer Research Education Experience Program (R25 Clinical Trial Not Allowed), NIH
Deadline: February 15, 2025 (LOI); March 18, 2025 (FP)
<https://grants.nih.gov/grants/guide/pa-files/PAR-24-204.html>
46. Science, Technology, Engineering and Mathematics (STEM), Office of Naval Research
Deadline: April 4, 2025
<https://www.nre.navy.mil/work-with-us/funding-opportunities/onr-science-technology-engineering-and-mathematics-stem-program>
47. Computer and Information Science and Engineering (CISE): Core Programs, Large Projects, NSF
Submission Window Date(s): September 15, 2025 - September 29, 2025
<https://new.nsf.gov/funding/opportunities/computer-information-science-engineering-core-0/nsf24-572/solicitation#elig>

48. Research and Development (RAD) Directed Energy (RD) University Assistance Instruments, Dept. of the Air Force, Air Force Research Lab
Deadline: until July 18, 2029 (Mandatory LOI); by invitation only (FP)
<https://www.grants.gov/search-results-detail/355499>



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