



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 10/10/2023 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 by e-mail.

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1. Interventions to Address HIV-Related Comorbidities among Highly Affected Populations Experiencing Health Disparities (R01 - Clinical Trial Required), NIH

Application Deadlines:

- **Letter of Intent: 30 days prior to the application due date**
- **Full Proposal: December 11, 2023**

Award Amount: up to \$750,000 in direct costs annually, for up to five years

The objective of this initiative is to support multilevel and multidisciplinary interventions to improve QoL and promote successful aging among PWH who are from racial and ethnic minority populations and from lower SES who are at high risk or currently experiencing comorbidities despite adequate control of HIV infection.

Projects must include a focus on populations experiencing health disparities (Populations experiencing health disparities: Racial and ethnic minority groups (Blacks or African American, Hispanic or Latino, American Indian and Alaska Native, Asian American, Native Hawaiian and Pacific Islander populations), and/or people with less privileged socioeconomic status (SES), who are disproportionately affected and living with HIV). Much of this population identify as SGM persons. NIMHD encourages proposals with an intersectional perspective on SGM persons or underserved rural populations with race and ethnicity and/or low SES who are living with HIV. Projects focusing on groups with multiple marginalized identities are encouraged (e.g., racial and ethnic minority groups living in rural areas, SGM persons from racial and ethnic minority groups).

Design, Analysis, and Sample Size for Studies to Evaluate Group-Based Interventions: Investigators who wish to evaluate the effect of an intervention are strongly encouraged to use appropriate intervention study designs, such as a parallel group- or cluster-randomized trial, a stepped-wedge group- or cluster randomized trial, a rigorous quasi-experimental design such as a group- or cluster-level regression discontinuity design or an interrupted time-series design, or a rigorous alternative. Intervention designs that lack comparison conditions or sites (e.g., an intervention implemented in a single clinic or neighborhood) are strongly discouraged. Whenever participants are assigned to study arms in groups or clusters (e.g., families, clinics, schools, worksites, communities, counties, states) and observations taken on individual participants are analyzed for intervention effects, special methods are required for analysis and sample size. Methods consistent with plans for assignment of participants and delivery of interventions should be documented in the application. Additional information is available at: <https://researchmethodsresources.nih.gov/>. Applications should also delineate outcomes and how the intervention or strategies can be sustained and scaled-up to improve population health.

Research Topics:

Specific intervention research topics may include but are not limited to the following among PWH from populations experiencing health disparities:

- Develop systems level intervening strategies to coordinate and improve care among patients with multiple comorbidities.
- Address the role of health care access and uptake of services in treatment outcomes among PWH experiencing multiple marginalized identities.
- Behavioral change/lifestyle approaches for modifiable factors such as smoking cessation and mindfulness to improve health outcomes.
- Test mHealth approaches to reduce stigma, promote resiliency, build social networks, and provide timely linkages to services and care.
- Examine peer-based integrated strategies to promote successful aging in community settings.
- Develop peer-based approaches among SGM PWH with intersecting identities and multiple comorbidities to manage disease or improve QoL.
- Test evidence-based programs to promote QoL and successful aging.
- Develop family-based and intergenerational approaches to coordinate care and promote successful aging and improve QoL.
- Implement comprehensive systems level approaches to bolster social networks and integrate care for common comorbidities such as diabetes and mental illness.
- Place-based approaches accounting for SDOH that promote QoL with multiple comorbidities.

- Develop strategies that address social needs (i.e., housing instability, food security, transportation, unemployment, financial planning) and improve health care access and quality of care.
- Strategies to increase access to and improve the quality of palliative care, pain management, and end of life care and planning.

Office of Research on Women’s Health (ORWH) is part of the Office of the Director, NIH, and works with the 27 NIH Institutes and Centers to advance rigorous research of relevance to the health of women. ORWH does not award grants but co-funds women’s health-related applications and research projects that have received an award from one of the participating NIH Institutes and Centers (ICs) listed in the announcement. Applications seeking ORWH co-funding should ensure that the proposed work is aligned with at least one goal and objective outlined in the Trans-NIH Strategic Plan for Women’s Health Research (<https://www.nih.gov/women/strategicplan>).

Link to Additional Information: <https://grants.nih.gov/grants/guide/rfa-files/RFA-MD-24-003.html>

2. Coastal Program - FY24, U.S. Fish and Wildlife Service

Application Deadlines: May 30, 2024

Award Amount: up to \$500,000 per year

The U.S. Fish and Wildlife Service (Service) Coastal Program is a voluntary, community-based program that provides technical and financial assistance primarily through cooperative agreements to coastal communities, conservation partners, and landowners to restore and protect fish and wildlife habitat on public and private lands. The Coastal Program staff coordinates with partners, stakeholders and other Service programs to identify geographic focus areas and develop habitat conservation goals and priorities within these focus areas. Geographic focus areas are where the Coastal Program directs resources to conserve habitat for Federal trust species. Projects are developed in collaboration with partners, and with substantial involvement from Service field staff. Coastal Program projects must support the missions of the U.S. Department of the Interior (DOI), U.S. Fish and Wildlife Service (Service), and the Coastal Program, and be based on biological principles and the best available science.

The Coastal Program takes an adaptive approach to designing and implementing coastal habitat protection and restoration strategies that anticipate and ameliorate the impacts of climate change and other environmental stressors. Coastal Program habitat improvement projects strive to increase coastal resiliency by improving the ability of coastal ecosystems to adapt to environmental changes and supporting natural and nature-based infrastructure projects to protect and enhance coastal habitats.

The Coastal Program also supports the vision of America the Beautiful, including:

- Pursuing a collaborative and inclusive approaches to conservation; Achieving conservation of 30 percent of U.S. lands and waters over the next 30 years.
- Encouraging locally led conservation efforts.
- Supporting the habitat conservation priorities of Tribes.
- Pursuing conservation and restoration approaches that create jobs and stimulate local economies.
- Encouraging the voluntary stewardship efforts of private landowners.
- Using the best available science as a guide.
- Building on existing tools and strategies with an emphasis on flexibility and adaptive approaches.

Goals

The Coastal Program promotes ecosystem-based practices and seeks partnerships to carry out locally-led on-the-ground conservation. This funding opportunity aims to deliver financial assistance in coordination with federal, state, and local agencies, non-governmental organizations, and private landowners, on public and private lands, working lands and Tribal lands, and in urban and underserved communities, and strives to achieve the following goals:

- **Species Conservation:** Implement habitat projects within priority areas that prevents decline or supports recovery of species of greatest conservation concern, including federal listed species, Birds of Conservation Concern, pollinators and interjurisdictional fish. This priority supports the Service’s conservation mission and our role as stewards of federal trust species with intent to make improvements in select species status.
- **Habitat Connectivity:** Integrate projects at a landscape level to improve habitat connectivity and functionality. This priority recognizes that interconnected habitats and migration corridors are vital to fish and wildlife conservation and the work of these programs can support and leverage other conservation efforts including National Wildlife Refuges and other protected lands.
- **Resilient Ecosystems:** Advance ecosystem health and resilience to climate change related impacts benefitting communities of fish, wildlife, plants and people. This priority acknowledges that climate change affects all parts of the ecosystem including those in which humans depend on and these Programs can work with diverse partners to support conservation actions to help them respond to climate change stressors.

Applicants seeking technical or financial assistance from the Coastal Program are requested to consult with the regional or local Coastal Program office BEFORE developing or submitting an application. (Visit <https://www.fws.gov/program/coastal/contact-us> for regional Coastal Program contacts).

Link to Additional Information: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=350418>

3. Enabling Partnerships to Increase Innovation Capacity, NSF

Application Deadlines:

- **Preliminary Proposal: December 15, 2023**
- **Full Proposal: May 16, 2024**

Award Amount: up to \$400,000 for a project period of three years

The Enabling Partnerships to Increase Innovation Capacity (EPIIC) program is intended to broaden participation in innovation ecosystems by supporting capacity-building efforts at institutions of higher education interested in growing external partnerships. Establishing innovation ecosystems requires broad networks of partners working together to create a virtuous cycle of use-inspired research, translation of those research results to practice, and the development of a skilled workforce. Further, diverse and inclusive innovation ecosystems that contribute to the long-term community economic health of a region require the engagement of all interested IHEs within a region to participate and contribute their unique set of skills and expertise. However, IHEs not currently classified as R1 or R2 institutions according to the 2021 Carnegie Classification of Institutions of Higher Education lack the infrastructure and resources needed to grow external partnerships and effectively contribute to innovation ecosystems, even though they are expected to play key roles within their region. This solicitation aims to provide these institutions with the support necessary to become equitable partners in innovation ecosystems.

The creation of this program is motivated by NSF's, including TIP's, commitment to accelerating scientific and technological innovation nationwide, particularly through the new NSF Regional Innovation Engine (NSF Engines) program. Importantly, participation in this solicitation is not predicated on an existing partnership with organizations submitting proposals under an NSF Engines solicitation. Furthermore, it is expected that the capacity-building efforts funded under this solicitation will provide significant innovation partnership opportunities irrespective of future participation in an NSF Engine.

Capacity-building efforts supported by this solicitation should focus on the resources, infrastructure, and expertise required for an institution to establish meaningful partnerships with external organizations to facilitate participation in the regional innovation ecosystem. Such efforts may include, but are not limited to:

- Growing corporate, community, and/or local government relations.
- Building external partnerships for nimble workforce development programs responsive to regional needs.
- Growing external partnerships to advance technology commercialization, especially those relevant to the regional innovation ecosystem.
- Expanding the institution's research enterprise (e.g. research development, research administration, research leadership, etc.) through external partnerships.

Awards made in response to full proposals under this solicitation will provide funding to support a range of activities that are currently hard to accomplish within the institution, such as award management, relief time for faculty and staff for developing external partnerships, infrastructure, and resources to facilitate participation in future NSF solicitations.

Funding Process

Because participation in NSF funding opportunities may represent significant logistical challenges for this solicitation's intended audience, this program is employing a three-phase process to provide proposing teams guidance and mentorship generating project ideas and proposal development.

1. **Submitting Preliminary Proposals:** Phase 1 requires the submission of a brief preliminary proposal. Proposing teams will be selected to participate in Phase 2 based on their institution's need for capacity-building for innovation partnerships as supported by the preliminary proposal.
2. **EPIIC Workshops:** The workshops will include virtual and in-person meetings designed to create an interactive and free-thinking environment where participants from a range of IHEs immerse themselves in collaborative thinking processes to construct impactful approaches to identifying and improving infrastructure limitations that impede an institution's ability to meaningfully engage in cross-sector partnerships to advance efforts in workforce development, R&D, and translation of R&D results to practice.

The workshops will be led by a facilitator whose role is to assist in defining the institutional challenges and foster fruitful discussions among participants. The facilitator will be joined by a small number of mentors who are selected by NSF based on their expertise. The facilitator and mentors will take full part in the workshops, but they will not be eligible to receive funding under this collaborative activity.

The EPIIC workshops will include:

- **Virtual Orientation:** The workshops will begin with this two-hour virtual kick-off meeting.
 - **Challenge Identification Workshops:** This series of four half-day virtual events will allow participants to define the scope of the institutional challenges associated with partnership building and explore possible collaborative cohorts.
 - **In-Person Solution Development and Cohort Formation Event:** This three-day, in-person workshop will be used for solution ideation, solution selection and stewarding, cohort building, and initial drafting of proposal elements with mentor assistance.
 - **Proposal Development:** Cohorts invited to submit full proposals will receive additional mentor support to develop their proposals.
3. **Phase 3:** At the conclusion of the workshops, a subset of teams will be invited to **submit collaborative full proposals**. Invitations to submit full proposals are conditioned upon full participation in the workshops by the proposing team.

Link to Additional Information: <https://www.nsf.gov/pubs/2023/nsf23625/nsf23625.htm>

4. Research on Innovative Technologies for Enhanced Learning (RITEL), NSF

Application Deadlines: January 24, 2024

Award Budget: up to \$900,000 for a duration of three years

The purpose of the Research on Innovative Technologies for Enhanced Learning (RITEL) program is to support early-stage research in emerging technologies for teaching and learning that respond to pressing needs in authentic (real-world) educational environments. RITEL supports future-oriented exploratory and synergistic research in emerging technologies (including, but not limited to, artificial intelligence (AI), robotics, and immersive or augmenting technologies) for teaching and learning. The program accepts proposals that focus on learning, teaching, or a combination of both. The scope of the program is broad and includes teaching and learning in science, technology, engineering, and mathematics (STEM) and in foundational areas that enable STEM (e.g., self-regulation, literacy, communication, collaboration, creativity, and socio-emotional skills). RITEL supports research in all learning contexts (e.g., formal, informal, workplace) and for all learner populations. RITEL has a special interest in diverse learner/educator populations and in developing new educational technologies that are cost-effective for budget-limited school districts, colleges, and universities.

Research in this program should be informed by the convergence (synthesis) of multiple disciplines: e.g., learning sciences; discipline-based education research; computer and information science and engineering; design; and cognitive, behavioral, and social sciences. These interdisciplinary areas of research could include (but are not limited to) affective computing, human-centered AI, learning analytics, social/educational robotics, intelligent conversational agents/assistants, and virtual/embody agents.

RITEL is an exploratory research program that serves as an incubator to support cutting-edge research in advanced learning and teaching technologies. Research should be theory-driven and apply human-centered design methods to explore proof-of-concept or feasibility of innovative learning technologies in support of new learning and/or teaching experiences. Emerging and innovative technologies have the potential to reshape teaching and learning processes, which in turn can influence new technology designs. RITEL encourages projects that explore new ideas and involve risk.

RITEL is unique in its requirement that projects must advance fundamental research in both learning (and/or teaching) and technology.

Projects that broaden participation, expand STEM pathways, ensure educational equity, or otherwise promote diversity, inclusion, and access in STEM education and careers are strongly encouraged. RITEL encourages proposals from Minority-Serving Institutions (MSIs).

All projects must be framed in terms of a pressing need in an authentic educational environment. The research should address a meaningful and practical teaching and/or learning problem identified by educators and/or other stakeholders who have expertise in the specific context.

This program supports a broad range of projects across:

- **Content areas:** STEM and other foundational areas supported by NSF that enable STEM learning and teaching (e.g., self-regulation, literacy, communication, collaboration, creativity, curiosity, and social skills).
- **Populations and contexts:** learners, teachers, mentors, educators, and other workers in formal (e.g., K12, higher education) or informal settings; and individual, collective, and collaborative learning and teaching across the lifespan.

The primary goal should be investigating new technology in the context of advancing teaching and/or learning. RITEL will not fund projects that are primarily about the development of a technology.

All projects must have clear research objectives that integrate teaching and/or learning and technology research to advance

the respective fields (e.g., learning sciences, discipline-based education research, computer and information sciences, engineering, and/or social, cognitive, and behavioral sciences) as described below:

- Teaching and/or learning research:
 - For teaching, this includes researching new teaching processes and approaches (e.g., andragogy and pedagogy).
 - For learning, this includes researching new learning processes, principles, and theories (e.g., cognitive, behavioral, affective, socio-cultural, social, epistemological, problem-based, project-based, developmental, and other perspectives).
- Technology research:
 - Examples of emerging technology research include (but are not limited to): AI-driven technologies; virtual, immersive, embodied, interactive, or augmented environments; multimodal modeling/sensing of cognitive or affective states; language and speech processing; learning analytics and dashboards; and robotics.
 - Technology research must advance fields involving computer science, information science, and/or engineering.
 - It is insufficient to simply implement or test an existing technology, even if innovative. Incremental advances in existing technologies or deployment/implementation of existing technologies in novel learning contexts will not be funded through this program.

Link to Additional Information: <https://www.nsf.gov/pubs/2023/nsf23624/nsf23624.htm>

5. National Rural Health Policy, Community, and Collaboration Program, HRSA

Application Deadline: November 30, 2023

Award Amounts: up to \$2,300,000 annually (reflecting direct and indirect costs)

The purpose of this program is to identify, educate, engage, and collaborate with rural stakeholders on national rural health and policy issues and promising practices to improve health care in rural areas nationwide.

Program objectives include:

1. Identifying and educating rural stakeholders about national policy issues and promising practices for rural health.
2. Maintaining projects that will help support engagement of rural communities in a broad range of activities.
3. Facilitating collaborations at the local, regional, state, and national levels to improve the exchange of information and promising practices that support rural health.
4. Identifying and providing information to rural stakeholders about existing federal funding opportunities or other programs relating to health care in rural areas.

A successful program will continue to build upon the federally funded resources that currently exist, leverage the broad network of rural health organizations and individual subject matter experts, and provide a mechanism to engage with public rural health stakeholders beyond Health Resources and Services Administration (HRSA) funded award recipients and current partners to improve health care in rural areas.

Type of Award: Cooperative Agreement

A cooperative agreement is like a grant in that we award money, but we are substantially involved with program activities. Aside from monitoring and technical assistance (TA), we also get involved in these ways:

- Providing guidance in planning, operation, and evaluation activities.
- Providing support in the identification and selection of policy issues and the analysis of key information sources

(e.g., regulations).

- Providing guidance and assistance in identifying key organizations through which to share information on emerging policy issues.
- Providing guidance and assistance in identifying key organizations with whom to partner and collaborate.
- Participating, as appropriate, in the planning of any meetings, educational activities, or workgroups conducted during the period of the cooperative agreement.
- Identifying opportunities and providing guidance on strategies for disseminating information about programs and activities.
- Reviewing and providing input on activities and findings under this award prior to public dissemination.
- Identifying or suggesting special projects, studies, products or publications around emerging rural health issues.

You must follow all relevant federal regulations and public policy requirements. Your other responsibilities will include:

- Working collaboratively with HRSA and responding to HRSA requests, comments, and questions on a timely basis.
- Engaging HRSA and rural stakeholders in the planning, execution and evaluation of activities, including the identification of technical assistance and educational/development needs and the selection of mechanisms for Implementation.
- Serving as the central organizing body for collaborator convenings, educational activities, or workgroups conducted during the period of the cooperative agreement.
- Identifying key rural health policy issues and developing educational materials to inform a broad variety of rural stakeholders, determined in collaboration with HRSA.
- Identifying opportunities and developing dissemination strategies to share pertinent information and results with various stakeholders in rural communities, determined in collaboration with HRSA.
- Highlighting unique examples of successful rural health initiatives through various platforms.

Link to Additional Information: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=349399>

6. Ideas Lab: Personalized Engineering Learning (PEL), NSF

Application Deadlines:

- **Preliminary Proposal: November 29, 2023**
- **Full Proposal: May 8, 2024**

Award Amount: up to \$1,000,000 for a duration of up to 2 years

This Ideas Lab is intended to revisit the concept of personalized learning to understand and address the effects of individual learning differences and to develop new research projects that will advance the design of, and technology for, personalized learning solutions for engineering education. It requires a thoughtful strategy around the identification, integration, and implementation of tools, resources and practices that are responsive to learners' interests and cognitive, physical, emotional, and educational needs. NSF investments have contributed through challenging the research community to identify major advances in AI-driven learning and digital platforms for formal and informal settings and integrating support for individuals with disabilities. Personalized learning for engineering education will build on these investments to break new ground toward the next frontier for engineering education and learning.

The following broad areas have been identified as possible avenues to advance knowledge in personalized learning:

1. **Personalized Engineering Education:** EER has increased our knowledge about learning in engineering classrooms, co-curricular (informal) settings and at work. Much of that research has been focused on discipline-level outcomes. This theme provides an opportunity to explore how to take those discipline-level outcomes and integrate them into more personalized learning experiences across multiple learning contexts and to increase our understanding of the engineering education system. This theme will draw upon research in science, mathematics, computer science, and technology education and the learning sciences; but also requires an understanding of how

engineering learning is distinct from non-engineering disciplines. Studies addressing this theme should represent a broad spectrum of stakeholders. Each project developed through the Ideas Lab will be expected to include a researcher with expertise in EER or educational systems.

2. **Multimodal Sensing for Personalized Learning Systems (PLS):** Much of the recent focus of PLS development has been on computing and AI systems for learning. This theme extends this work to develop and integrate multimodal sensors to better understand and model the physical and/or mental and cognitive cues and tasks that occur in engineering. Multimodal data collection could involve physiological sensors, facial and speech recognition, and computer vision, with consideration for hardware and software needs for real-time data collection and analysis at scale. Projects developed through the Ideas Lab should integrate consideration of societal impact and ethics.
3. **Team-based Personalized Learning:** Engineering is a team-based activity and the need for collaboration increases as projects become more complex. This theme provides an opportunity to investigate team-based design and the potential for human-machine co-design or co-learning. Expertise and developments in human factors, ergonomics, cognitive sciences, and learning sciences will enable the study of cognitive, social, and affective factors in design. Projects developed through the Ideas Lab should integrate consideration of societal impact and ethics.

Projects may extend beyond pre-K-12 or college student learning to consider teachers, faculty, institutions, or community.

Multiple NSF Directorates, Divisions, and Offices have partnered in recognition of the need for interdisciplinary teams and collaborations to address the challenges outlined in this solicitation.

1. Directorate for Engineering (ENG):
 - Office of Emerging Frontiers and Multidisciplinary Activities (EFMA) strategically supports projects in important emerging areas in a timely manner.
 - Division of Engineering Education and Centers (EEC) invests in the creation of 21st century engineers and discovery of technologies through transformational center-based research, research in education and inclusion, and research opportunities for students and teachers.
 - Division of Civil, Mechanical and Manufacturing Innovation (CMMI) invests in potentially transformative research in manufacturing and building technologies; efficient, economical, and sustainable transformation and utilization of engineering materials; promoting resilient and sustainable infrastructure systems, including distributed networks; data-driven decision-making in manufacturing and service enterprises and design, control, and optimization of engineered systems.
2. Directorate for Computer and Information Science and Engineering (CISE):
 - Division of Information and Intelligent Systems (IIS) studies the inter-related roles of people, computers, and information.
3. Directorate for STEM Education (EDU):
 - Division of Graduate Education (DGE) advocates for innovative, inclusive, high quality graduate education in the STEM fields.
 - Division of Research on Learning in Formal and Informal Settings (DRL) invests in projects to improve the effectiveness of STEM learning for people of all ages.
 - Division of Undergraduate Education (DUE) promotes excellence in undergraduate STEM education for all students.
4. Directorate for Social, Behavioral and Economic Sciences (SBE):
 - Division of Behavioral and Cognitive Sciences (BCS) supports basic research in the psychological, linguistic, anthropological, and geographical sciences.

5. Directorate for Technology, Innovation and Partnerships (TIP):

- Division of Translational Impacts (TI) accelerates the translation of research results to practical use through its Lab-to-Market Platform.

Important Note: Prospective PIs are strongly encouraged to consult with Cognizant Program Officers in the relevant research area(s) prior to submitting a preliminary proposal.

Link to Additional Information: <https://www.nsf.gov/pubs/2023/nsf23627/nsf23627.htm>

7. Health and Health Care Disparities Among Persons Living with Disabilities (R01 - Clinical Trials Optional), NIH

Application Due Dates: February 05, 2024

Award Amount: \$300,000 direct costs per year for a project period of 5 years

The focus of this notice of funding opportunity (NOFO) is to emphasize research at the intersection of disabilities, race and ethnicity, and socioeconomic status (SES) in persons with developmental and physical disabilities. Among racial and ethnic minority groups, the prevalence of living with at least one disability is markedly greater in American Indian and Alaska Native (30%) and Black or African American (25%) populations compared to 20% of White persons. Irrespective of racial and ethnic group, economically disadvantaged persons with disabilities are more likely to experience diminished opportunities for effective independent living driven by factors such as unemployment, adverse living conditions, housing instability, food insecurity, transportation limitations, social isolation, disaster unpreparedness, and low quality of healthcare. Additionally, residents of underserved rural communities are 9% more likely to have any disability and 24% more likely to report having three or more disabilities compared with adults in urban areas. Individuals living with disabilities, who reside in rural areas may also face barriers to healthcare access, accessible transportation, and high-quality education, and vocational or rehabilitation services. Research among sexual and gender minority persons with disabilities is scarce, although it is likely that commonly experienced barriers to accessing culturally competent physical, psychiatric, and specialty healthcare are intensified.

The overarching goals of this funding opportunity are to support innovative research that focuses on the health (e.g., conditions, outcomes, trajectories, etc.) and healthcare (e.g., modalities systemic or structural factors, access/barriers, service delivery, care quality, utilization, etc.) of persons living with disabilities and the intersections with race and ethnicity, and SES. Research focused on intersections with sexual and gender minority self-identification, and living in underserved rural locations are also of interest.

Projects may include the study of comorbid or co-occurring conditions (e.g., acute infections or chronic diseases); adaptive and maladaptive behaviors; prevention of or interventions for health risks; tailored or innovative health care processes, structures, or systems; healthcare delivery model effectiveness; and clinicians and other health care workers' practices and/or biases.

Research projects for this NOFO can consist of studies that are clinical science, behavioral, epidemiological, evaluative, or observational, as well as implementation studies, pragmatic trials, and cluster randomized trials to assess health care provision, models, delivery, services, and systems in metropolitan or rural areas, regionally, and/or nationally, including the U.S. territories. Projects can involve primary data collection and/or secondary analyses of linked datasets. Projects can include research collaborations across multiple health care settings and academic institutions.

Investigators are strongly encouraged to work collaboratively with community leaders, community-based organizations, and other relevant stakeholders and/or supporting persons with disabilities to support in-depth examination of physical, social, behavioral, ethical, structural, environmental, and policy factors. Community partnerships (e.g., tribal leadership, academic, private, safety-net health systems, community organizations, public health departments, state and local governments, health care professionals, faith-based organizations, and school or childcare settings) are strongly encouraged. Applicants proposing community-engaged research should document existing collaboration with or support from community organizations. Study budgets should provide appropriate levels of funding for community partners commensurate with the roles and level of effort of the community partners in research design and implementation, if

applicable.

Link to Additional Information: <https://grants.nih.gov/grants/guide/pa-files/PAR-23-309.html>

8. Ethical and Responsible Research (ER2), NSF

Application Deadlines: January 25, 2024

Anticipated Funding Amount:

- **Conference Projects: up to \$50,000 and a maximum duration of 12 months.**
- **Incubation Projects: up to \$90,000 and a maximum duration of 12 months.**
- **Standard Research Projects: up to \$400,000 and a maximum duration of 3 years.**
- **Institutional Transformation Research Projects: up to \$700,000 and a maximum duration of 5 years.**

The ER2 program aims to support fundamental research about what constitutes or promotes responsible and ethical conduct of research. The ER2 program aims to encourage STEM researchers, practitioners and educators at all career stages to conduct research with integrity and to educate others about RECR. A project can include the development of interventions or applications that seek to promote responsible research practices, including in interdisciplinary, inter-institutional and international contexts. A project could also seek to identify factors that undermine or erode responsible and ethical research practices and evaluate measures to prevent or mitigate such factors. A comprehensive approach to ethical STEM not only influences individual behavior, but it also maintains and fosters an ethical, equitable and just culture within an organization or research field. Thus, investigators submitting to the program are encouraged to examine organizational and cultural factors that influence ethical and responsible research practice.

Research questions of interest to the program could address ethical issues involving diversity, equity, inclusion, accessibility, bias, culture, transparency and mentoring or other interpersonal behaviors in research environments, as well as the following:

- What constitutes responsible and ethical conduct of research (RECR) and why?
- What are the similarities and differences between RECR norms in different STEM fields or sectors (for example, academia, industry and non-profit), and what can these fields or sectors learn from one another in terms of promoting ethical research practice?
- Which organizational practices, contexts and incentives promote ethical and responsible STEM research and why?
- Which practices contribute to establishing and maintaining ethical cultures, and how can these practices be transferred and integrated into other research and learning settings?

The ER2 program supports studies that advance the understanding of research integrity and the ethics of conducting research. The program also supports investigating the ethical consequences of research activities in emerging scientific and technological areas. Topics of interest to the program include but are not limited to ethical dimensions of:

- Environmental, environmental justice, geoengineering or climate change research.
- Research involving emerging technologies such as gene editing, synthetic biology, artificial intelligence, robotics or cryptography.
- Emerging technologies and their impacts on research practices such as authorship, collaboration, mentoring, peer review or research misconduct.
- Research that is co-designed with practitioners or users or that involves bringing together teams from multiple sectors (for example, academia, industry and non-profit).
- Data-related research practices such as collection, governance, access, ownership, management, sharing and reporting.
- Diversity, equity, inclusion and accessibility in STEM research, including mentoring of students and postdocs with disabilities.

- The prevention of sexual harassment in STEM fields.
- STEM research in international contexts.
- Research with Indigenous populations or other historically underrepresented groups in STEM or in locations that are owned or considered sacred by Indigenous communities.

Projects can include qualitative, quantitative or mixed methods approaches. When working with research partners such as local communities, the program expects to see best practices of responsible research being implemented, including on international projects, to co-create knowledge equitably as well as to develop durable partnerships.

Proposals should specify plans to disseminate findings to appropriate research and educational communities and assist them to implement projects or programs based on the findings. In addition, ER2 awardees must submit project deliverables such as ethics case studies, modules and instructor materials to the Online Ethics Center for Engineering and Science and share project findings at biennial ER2 PI meetings. The PI meetings may alternate between in-person and virtual formats. PIs are responsible for covering the expenses of participating in these meetings throughout the duration of their award and must include these costs in their proposed budget.

Types of Proposals

- **Conference Projects:** the program supports thematic 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 pertaining to ethical and responsible practices within STEM communities. Conference proposals should normally focus on organizational or cultural factors that impact such practices. The ER2 program does not support gatherings whose primary purpose is to share the results of completed research.
- **Incubation Projects:** provide funds for STEM researchers and administrators from multiple organizations to collaborate to develop and later submit a ER2 Standard Research or Institutional Transformation proposal. An Incubation Project can only provide one year of support, must span at least two organizations and may involve a pilot study and/or workshop(s).
- **Standard Research Projects:** should produce new knowledge about what fosters ethical research. Standard Research Project proposals can be collaborative.
- **Institutional Transformation Research Projects:** designed to support the development, implementation and evaluation of innovative systemic change strategies that promote responsible and ethical conduct of research within one or more institutions of higher education. Successful proposals typically have a comparative dimension, either (1) between or within institutional settings, or (2) over time — before and after an intervention. Investigators are expected to gather and report baseline data in the first annual report. Institutional Transformation Research Projects can be collaborative.

Link to Additional Information: <https://www.nsf.gov/pubs/2023/nsf23630/nsf23630.htm>

9. Basic Research for Electro-Optic/Infrared (EO/IR) Sensors and Sensor Processing, Office of Naval Research

Application Deadline:

- **White Papers: October 31, 2023**
- **Full Proposal: December 18, 2023**

Award Information: To Be Announced

The ONR Code 312 EO/IR portfolio seeks discovery and invention proposals to develop and demonstrate technologies for the next generation of systems in electro-optic and infrared (EO/IR) sensors. White papers and subsequent proposals

should address technology developments in the one technical area listed below.

- **Novel, fast-response, infrared (IR) detector concepts enabling higher temperature operation**

Background: Infrared (IR) imagers operating in the mid-wave infrared (MWIR) (3-5 μm) and long-wave infrared (LWIR) (8 – 12 μm) enable the Navy and Marine Corps to see long distances in all lighting conditions (day and night) as well as through challenging atmospheric conditions. Typically, these high performance imagers have detectors that must be cooled between 45 K and 120 K, depending on wave band. This is to enable them to operate at the background limited infrared photon (BLIP) condition. Progress has been made in recent years within semiconductor materials and designs to increase this operating temperature. The second class of detectors most commonly used in the LWIR band for uncooled infrared imaging is the microbolometers. While this design does enable room temperature operation, it's fundamentally limited by the material properties for electrical and thermal conductivity. In the case of the uncooled microbolometers, they are further limiting in the response time and typically must dwell longer per imaging frame compared to a cooled imager. In either case, both of these devices are ultimately limited by photon shot noise from the background leading to an inevitable cooling limit based the desired SNR.

Objective: Proposed research topics are sought to explore the space of the fundamental limit of infrared detection using completely novel architectures, materials, light-matter interactions, or some other novel means. This is a request for basic research topics to better understand the physics and quantum limitations of infrared detection beyond our current understanding, even fundamentally exploring how to overcome the shot noise and BLIP limits without sacrificing response speed or sensitivity. Example areas of research include (but not limited to) high-gain processes such as avalanche, phonon assisted gain, and stochastic photon methods. All topics should be passive based, that is, they should improve the understanding in imaging and detection without the use of active IR illumination.

Concepts are sought that explore ways in which uncooled infrared detectors and no cold shield, can achieve greater than >25 mK sensitivity and >100 kHz imaging bandwidth across most, if not all, of either the MWIR or LWIR imaging bands.

Since this is a call for basic research topics, there is no requirement to demonstrate imaging or build an imaging array. However, concepts, should discuss how the proposed method could one day be scaled up and be manufactured into a focal plane array (FPA) of comparable resolution and pixel size to those available on the market today. If this isn't known now, then discuss how the research plan will answer make progress to answering this question.

Link to Additional Information: <https://www.nre.navy.mil/work-with-us/funding-opportunities/basic-research-electro-opticinfrared-eoir-sensors-and-sensor>

10. Research Infrastructure in the Social and Behavioral Sciences (RISBS), NSF

Application Deadline: Proposal Accepted Anytime

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

The Research Infrastructure in the Social and Behavioral Sciences Program (RISBS) supports projects that create computational tools and data to facilitate basic research in the social and behavioral sciences that can lead to improved health, prosperity, and security.

Projects should be aimed at creating computational tools and data to enable research by social scientists. Examples include, but are not limited to, data collection or assembly efforts that result in new resources for a community of researchers or software platforms that facilitate data collection efforts by others. RISBS does not support research by PIs except in service of creation of the infrastructure. Innovation is especially encouraged.

RISBS directly supports three key longitudinal surveys and panel studies that provide researchers with data on how American society functions and changes over time (and in 2010 were recognized as among the 60 most significant

"discoveries or advances that... have had a large impact or influence on every American's life... call[ed] the 'Sensational 60', in honor of NSF's 60th anniversary"):

1. The American National Election Study, which started in 1948 and has been funded by NSF since 1977, provides "gold standard" data on voting, public opinion, and political participation in U.S. national elections.
2. The General Social Survey, a nationally representative interview survey of the U.S. adult population, collects data on a wide range of topics and has been funded by NSF since its inception in 1972.
3. The Panel Study of Income Dynamics, a longitudinal survey of a nationally representative sample of U.S. families begun in 1968 (with NSF taking over most of its funding in 1980) collects data on a wide array of economic, social and health factors.

The RISBS program administers separate solicitations for the American National Election Study (ANES), the General Social Survey (GSS) and the Panel Study of Income Dynamics (PSID). These solicitations have specific requirements and submission deadlines. Other infrastructure proposals may be submitted directly to the RISBS program at any time or transferred from other SBE programs following the respective program's submission guidelines. RISBS also collaborates with other programs in the social and behavioral sciences through a co-funding process to support projects that create especially valuable tools for researchers in those fields or are furthering innovations in research infrastructure.

Link to Additional Information: <https://new.nsf.gov/funding/opportunities/research-infrastructure-social-behavioral-sciences>

11. Ending the Epidemic: New Models of Integrated HIV/AIDS, Addiction, and Primary Care Services (R34 Clinical Trial Optional), NIH

Application Deadlines: August 20, 2024

Award Information: limited to \$450,000 over the 3-year R34 project period, with no more than \$225,000 in direct costs allowed in any single year

The purpose of this notice of funding opportunity (NOFO) is to address research gaps in understanding how to improve health outcomes among persons who are at heightened risk for HIV or living with HIV, Hepatitis, and substance use in the US, and to inform novel strategies for integrating primary care, HIV, Hepatitis, and substance use disorder (SUD) prevention and treatment services. Research is sought that will leverage existing resources available to public health researchers to develop and test new methods and models for implementing prevention and treatment services to improve care for at risk individuals. The NOFO will support research that promotes scalable strategies of integrated care and services designed to improve health outcomes related to HIV, Hepatitis B and C (optional) and SUD. Research applications must incorporate HIV/AIDS and SUD outcomes and the HIV/AIDS outcomes should address the HIV prevention and care continuum (i.e., care engagement, antiretroviral adherence, viral suppression), the SUD outcomes should incorporate utilization of screening, prevention services, and referral to pharmacotherapies as appropriate (e.g., all three FDA-approved medications for opioid use disorders). The inclusion of Hepatitis B and/or Hepatitis C in integrated care and services research to improve outcomes in applications is optional. Hepatitis outcomes of interest include Hepatitis B and C screening, Hepatitis B vaccination, and/or Hepatitis C treatment.

The goal of this NOFO is to develop and test replicable, scalable, and sustainable organizational and systems level interventions that provide comprehensive, integrated evidence-based care that simultaneously optimizes HIV/AIDS (and Hepatitis), SUD, and other relevant outcomes. Interventions should attend to reducing social and structural barriers to care coordination. Applicants are encouraged to focus on integration or expansion of care in single point of care delivery systems (e.g., Federally Qualified Health Centers, Ryan White providers, Syringe Service Programs, CDC-supported prevention community-based organizations). Existing or newly formed partnerships with such care delivery systems or organizations will be critically necessary for optimal comprehensive care. Participating organizations must have pre-existing collaborative relationships/partnerships or establish collaborative relationships/partnerships by the time of application.

Research objectives and specific areas of interest include but are not limited to studies that:

- Test implementation strategies or models to integrate evidence-based substance misuse prevention or SUD treatment interventions in HIV care settings.
- Apply implementation science approaches to translate strategies with demonstrated efficacy or effectiveness in other settings or locations (e.g., low resource international settings).
- Test integrated HIV/AIDS and SUD care models that leverage innovative approaches to incorporate social network components such as peer recovery coaches.
- Test integrated HIV/AIDS and SUD care approaches that capitalize on electronic health record systems and other efforts to increase integration within and between health systems.
- Test methods for improving the coordination and communication between behavioral health and HIV care providers within and across settings.
- Test implementations of direct service and consultation (e.g., project ECHO, the Collaborative Model) models of e-Health as primary modalities of integrated HIV/AIDS and SUD care in resource constrained environments. Identify the mediators and mechanisms through which the integration of the specified services to improve HIV, Hepatitis, and SUD outcomes with cost-effectiveness analyses.
- Examine interventions that implement substance use screening, brief intervention and linkage to SUD treatment from settings serving persons at high risk for HIV and Hepatitis such as sexually transmitted infection clinics.
- Examine syringe service programs as hubs for providing HIV prevention and care and linkage to SUD treatment.
- Test integrated care models that consider polypharmacy in aging adults living with HIV and have SUD e.g. pain management using alternatives to opioids, drug toxicities and interactions, simplified treatment regimens to prevent the risks of polypharmacy, etc.
- Test integrated models of HIV and SUD service delivery that ensure care continuum and increase quality of life through transitions of care for older adults living with HIV.
- Test integrated care models that address multimorbidity and substance use unique to older adults living with HIV.

Link to Additional Information: <https://grants.nih.gov/grants/guide/rfa-files/RFA-DA-25-059.html>

12. National Institute of General Medical Sciences Predoctoral Basic Biomedical Sciences Research Training Program (T32), NIH

Application Deadlines: January 25, 2024

Award Information: budgets are not limited but must reflect the actual needs of the proposed project

Through this funding announcement, NIGMS encourages changes in biomedical graduate research training to keep pace with the rapid evolution of the biomedical research enterprise, which is increasingly complex, interdisciplinary, quantitative, and collaborative. Other changes in the biomedical research enterprise include greater diversity in the backgrounds of people participating in biomedical research, the approaches utilized to investigate research questions, and the range of the careers that biomedical Ph.D. recipients are pursuing. Additionally, there is an increasing recognition of the need to enhance reproducibility of biomedical research results through scientific rigor and transparency, and to promote a culture where the highest standards of practice are used to ensure the safety of all individuals in the research environment. This funding opportunity is intended to encourage and enable the scientific community to develop and implement evidence-informed approaches to biomedical research training and mentoring that will effectively train future generations of rigorous biomedical scientists.

NIGMS strives to ensure that future generations of researchers will be drawn from the entire pool of potential contributors and seeks to expand opportunities to support individuals from a variety of backgrounds at multiple training and career stages in a variety of organizations and educational settings across the country.

The Overarching Objective of the NIGMS Basic Biomedical Sciences Predoctoral Research Training Grant (T32) program is to develop a diverse pool of well-trained scientists who have the following:

- A broad understanding across biomedical disciplines.

- The skills to independently acquire the knowledge needed to advance their chosen fields and careers.
- The ability to think critically and identify important biomedical research questions and approaches that push forward the boundaries of their areas of study.
- A strong foundation in scientific reasoning, rigorous research design, experimental methods, quantitative and computational approaches, and data analysis and interpretation.
- The skills to conduct research in the safest manner possible, and a commitment to approaching and conducting biomedical research responsibly, ethically, and with integrity.
- Experience initiating, conducting, interpreting, and presenting rigorous and reproducible biomedical research with increasing self-direction.
- The ability to work effectively in teams with colleagues from a variety of cultural and scientific backgrounds, and to promote inclusive and supportive scientific research environments.
- The skills to teach and communicate scientific methodologies and findings to a wide variety of audiences (for example, discipline-specific, across disciplines, and for the public).
- The knowledge, professional skills and experiences required to identify and transition into careers in the biomedical research workforce (for example, the breadth of careers that sustain biomedical research in areas that are relevant to the NIH mission).

NIGMS intends to fund applications that propose feasible, rigorous, well-designed research training programs that will build on the most effective elements of successful programs, while encouraging creative and transformational approaches to biomedical research training - ranging from curricular reform to changes in the research training environment. Funded programs are expected to:

- Be well integrated within one or more graduate department(s)/program(s) and should exert a strong, positive influence at the organizational level on research training and mentoring practices.
- Have clearly defined training objectives and show evidence of meeting the objectives in progress reports and in renewal applications.
- Implement evidence-informed training and mentoring activities (for example, approaches that are grounded in the literature and evaluations of existing relevant research training programs). Programs are expected to be responsive to evaluations, particularly with respect to trainee feedback.
- Provide rigorous, well-designed mentored research experiences, and additional opportunities that will build a strong cohort of research-oriented individuals. Training grant funds may not be used solely as a vehicle to provide financial aid for trainees to conduct research.
- Demonstrate effective oversight of trainee development and promote retention for the entire time the trainee is in the graduate program. Retention efforts are activities designed to sustain the scientific interests and participation of trainees from all backgrounds. Retention and oversight activities might include monitoring academic and research progress, building strong trainee cohorts, as well as increasing science identity, self-efficacy, and a sense of belonging within research training environments. Programs are expected to make efforts to identify individuals who may need additional academic and social supports to successfully complete the program, and ensure they receive the needed support.
- Promote inclusive, safe, accessible, and supportive research training environments to maximize success for all individuals in the training program. Specifically, funded programs should have organizational and departmental environments where individuals from all backgrounds are welcomed, feel integrated into, and supported by the biomedical research community. Safety in research training should encompass (1) environments free from harassment, discrimination, and intimidation, in which all are treated in a respectful and supportive manner, (2) laboratory and clinical settings where individuals exercise the highest standards of practice for chemical, biological and physical safety, and (3) practices at the organizational leadership and research community levels that demonstrate core values and behaviors to emphasize safety over competing goals.

Trainee Support. The training grant defrays the cost of stipends, tuition and fees, and training related expenses, including health insurance, for the appointed trainees in accordance with the approved NIH NRSA support levels. Students are typically provided full-time support for 1-2 years of graduate studies. Use of training grant support in the first two years of

graduate research training is strongly encouraged to provide maximum benefits in the participation in courses, laboratory rotations, and professional development activities.

Applicants are strongly encouraged to read information about NIGMS predoctoral training grant programs found on the NIGMS website and to contact program staff before preparing or submitting an application to verify that the proposed program is eligible and in alignment with NIGMS funding priorities.

Link to Additional Information: <https://grants.nih.gov/grants/guide/pa-files/PAR-23-228.html>

13. Limited Competition: Development and Renovation of Facilities for Expanding the Breeding Capacity of Specific Pathogen Free Non-Human Primates to Support HIV/AIDS-related Research (C06 Clinical Trial Not Allowed), NIH

Application Deadline:

- **Letter of Intent: December 7, 2023**
- **Full Proposal: January 7, 2024**

Award Information: budgets are not limited but need to reflect the actual needs of the proposed project

This Notice of Funding Opportunity (NOFO) invites applications from eligible institutions to seek support for the development of modern facilities that will expand the breeding capacity of active NIH-supported specific pathogen free (SPF) non-human primate (NHP) facilities to enable and enhance the conduct of cutting-edge biomedical and behavioral research on HIV/AIDS. NIH recognizes NHPs serve as critical animal models for broad biomedical research including several HIV/AIDS research areas and the COVID-19 pandemic exacerbated the shortage of SPF NHPs. Despite NIH efforts to improve the NHP availability, limited biomedical research resources still hamper the safe and effective production of these models. Therefore, through this NOFO, NIH intends to expand the support of NHP breeding resources to increase the output of NHP models substantively and cost-effectively and address the ongoing needs for HIV/AIDS research. Any facility supported by this NOFO must serve a broad basic, translational, clinical, and social and behavioral science HIV/AIDS research community locally or regionally. Targeted are NHP resource or breeding facilities that currently house NIH-supported SPF NHP colonies.

NIH recognizes that modern physical infrastructure is necessary for the conduct of cutting-edge research or support specialized breeding operation. Dedicated space is required to house specialized equipment and to carry out experimental protocols. Equipment that enables automation and husbandry of the breeding facility, enhances modern operation, allows telemetry for field/corral monitoring, facilitates social behavioral interactions may be eligible under this NOFO. The scope of individual applications will vary and depend on the currently available infrastructure at the applicant institution, as well as the present and anticipated HIV/AIDS research needs. Requests must be justified by the needs for expanding the breeding capacity for support of HIV/AIDS research. The project, when completed, is expected to provide significant long-term cost-effective support for HIV/AIDS research, bringing the capacities and capabilities to a new level. Consequently, the applicant institution should demonstrate future-looking commitments towards the facility and HIV/AIDS research therein, by attaching a letter of support from a high-ranking institutional official.

Responses to this NOFO are restricted to SPF NHP colonies that are currently supported by NIH. Those facilities that were adversely affected by recent natural disasters such as Hurricane Maria and Fiona are highly encouraged to apply. Any request must be well justified by current and projected research needs.

For applications submitted to this NOFO, it is expected that each project will implement the best engineering solutions and modern technologies. Specific requested engineering solutions will be driven by research demands, such as the need to create shielded space to house certain equipment or to meet specific needs of social science and biobehavioral or biomedical research work.

Link to Additional Information: <https://grants.nih.gov/grants/guide/pa-files/PAR-24-033.html>

14. Exploratory studies to investigate mechanisms of HIV infection, replication, latency, and/or pathogenesis in the context of substance use disorders (R01 Clinical Trial Not Allowed), NIH

Application Due Date:

- **Letter of Intent: July 14, 2024**
- **Full Proposal: August 14, 2024**

Award Budget: up to \$700K direct costs for any single year for a maximum period of five years

The purpose of this notice of funding opportunity is to support milestone-driven preclinical research that will propose to test a novel or out-of-the-box hypothesis to advance the HIV/SUD research area. This initiative focuses on exploration and characterization of biological mechanisms and/or signaling processes that are involved in CNS HIV establishment and expansion.

To be considered responsive, all applications must include the components listed below. Applications deemed non-responsive to this RFA will be withdrawn without review:

- The major thrust of the project **MUST** propose compelling studies to investigate mechanisms of HIV infection, replication, latency, and/or pathogenesis or the effects of ART on these processes.
- At least one aim **MUST** also involve either (1) opioid, cannabinoid, nicotinic, dopaminergic, or other signaling pathways relevant to addictive substance use, or (2) exposure to addictive substances, or (3) analysis of samples from patients that have used addictive substances or have SUDs. Substances of interest include: nicotine, cocaine, methamphetamine, stimulants, opioids, addictive prescription drugs, cannabinoids, combinations of these drugs, or combinations of these drugs with alcohol. Applications proposed to study HIV but focused solely on alcohol exposure will be considered non-responsive to this NOFO. Studies proposing long term exposure to addictive substances are encouraged.
- The proposed project **MUST** focus on brain OR well-justified studies using blood, or lymphoid systems or on tissues or cells relevant to these systems. Proposed projects using tissues or cells relevant to cardiac, kidney, liver, or lung systems will be considered non-responsive.
- The proposed project **MUST** include one aim or sub-aim investigating humans or primates, animals with humanized immune systems and/or cells (including organoids) derived from human or primates.

Other application considerations

- Despite the use of the R01 activity code, this NOFO supports high-risk/high-payoff projects. Applicants may wish to propose high-risk/high-payoff projects with a more limited scope, in which case they should align the proposed budget and/or project period with the proposed scope.
- Pilot preliminary data in an HIV system may be included but are not required.
- It may be useful to provide a strong premise for testing a novel hypothesis based on the scientific literature.
- The research strategy should include proposed quantitative milestones that will be achieved yearly. Applicants should propose a timeline and yearly quantitative milestones for their projects. If selected for funding, applicants will work with NIH staff to develop more granular milestones which will be included in their Notice of Award. Progress towards completion of these milestones will be assessed yearly.
- Patient samples should be well-characterized for stage/trajectory of SUD, type(s) of drug used, co-occurring conditions, gender, and age.
- Newly formed collaborations or teams to foster sharing of expertise between the fields of HIV, SUDs, and other research areas are encouraged.
- Studies leveraging bio-specimens from other studies including National Institute on Drug Abuse (NIDA)-supported cohorts are encouraged.
- Applicants should plan for the PDs/PIs and essential team members to travel domestically for a yearly in person meeting with other NIDA researchers for the entire funding period.

The purpose of this NOFO is to solicit research applications that will advance the knowledge of the underlying molecular

mechanisms by which HIV infection is initiated, established, and maintained in the CNS and to determine how addictive substances modulate HIV infection, latency and the size and persistence of CNS HIV reservoirs. Some examples of research project appropriate for this NOFO include, but are not limited to, the development of tools or technologies or novel hypotheses that will significantly improve or enable our ability to:

- Identify genes, molecular pathways, cell types (including non-neuronal cell types), or circuits involved in aspects of HIV infection, replication, latency, and/or pathogenesis (including neuroHIV) in the context of SUD and/or SUD or HIV therapies.
- Explore and understand the roles of epigenomic or transcriptional regulation, 3D nuclear structure, nuclear bodies, brain biomolecular condensates (BMCs), transcriptomics, non-coding RNAs, epi-transcriptomics, extracellular vesicles or other molecular processes in HIV biology in the context of SUD.
- Monitor HIV infection or latency in the CNS and/or determine the size and nature of the viral reservoir under the influence of SUD.
- Understand the underlying molecular mechanisms by which HIV latency is initiated, established, and maintained in the CNS.
- Decipher the contributions of addictive substances and inflammatory stimuli on HIV infection, latency or pathogenesis.
- Identify HIV and SUD interactions and how they might be influenced by SARS-CoV2, sex differences, and/or sleep disturbance.
- Explore and develop potential biomarkers or therapeutic targets to prevent, treat, and/or eliminate CNS HIV reservoirs in the context of SUD.

Link to Additional Information: <https://grants.nih.gov/grants/guide/rfa-files/RFA-DA-25-011.html>

Non-Scientific Forecasted Opportunities

1. Climate Smart Humanities Organizations, NEH

Through the Climate Smart program, your humanities organization can undertake activities such as energy audits, risk assessments, and meetings with consultants. The resulting climate smart plan helps you establish goals and prioritize actions that reduce your organization's impacts on the environment through mitigation and vulnerability from extreme events through adaptation. Together, mitigation and adaptation can inform a robust road map that addresses climate challenges, protects assets, and facilitates collaboration between internal and external stakeholders. Strategic planning for climate change is an essential part of sustaining humanities organizations' operations and activities—becoming climate smart.

Link to Additional Information: <https://www.neh.gov/program/climate-smart-humanities-organizations-0>

2. Summer Stipends, NEH

The National Endowment for the Humanities' Summer Stipends program aims to stimulate new research in the humanities and its publication. The program works to accomplish this goal by:

- Providing small awards to individuals pursuing advanced research that is of value to humanities scholars, general audiences, or both.
- Supporting projects at any stage of development, but especially early-stage research and late-stage writing in which small awards are most effective.
- Funding a wide range of individuals, including independent scholars, community college faculty, and non-teaching staff at universities.

Link to Additional Information: <https://www.neh.gov/grants/research/summer-stipends>

Scientific Forecasted Opportunities

1. Network of Community Cohorts for Monitoring Changes in Respiratory Virus Epidemiology (Pandemic Preparedness Cohorts), DHHS/CDC

At the start of the COVID-19 pandemic, infrastructure for understanding the epidemiology of a rapidly evolving virus in real-time was limited. Given the long lead time required for the government to start new projects, the CDC harnessed a variety of studies and platforms designed for other purposes to begin collecting the specimen and survey data needed to understand COVID-19 risk, burden, severity, and immunity. While hospital-based platforms were key to understanding frequency and risk factors for severe disease, community-based platforms were important for understanding viral kinetics, risk factors for infection, transmission dynamics, long-term outcomes, and the impact of vaccination on each of these measures. This funding opportunity would build on the lessons learned during the COVID-19 pandemic and establish a network of community-based cohorts, including diverse age groups (target populations: younger than 5 years old, 5-17 years old, 18-64 years old, and older than 64 years old), demographic characteristics, and regions in the US, to allow ongoing monitoring of changes in respiratory virus epidemiology in the years following the COVID-19 pandemic. A consolidated network will be more efficient and cost savings than current disparate mechanism, strengthen communication/collaboration, and enhance CDC's preparedness to quickly obtain data on infection risk, transmission, and effectiveness of preventive measures in response to a novel virus or variant.

Link to Additional Information: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=350453>

Proposals Accepted Anytime

1. Division of Environmental Biology, NSF
<https://www.nsf.gov/pubs/2022/nsf22541/nsf22541.pdf>
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://www.nsf.gov/pubs/2023/nsf23548/nsf23548.htm>

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>

Announcing Previous Important Funding Opportunities

1. Precision HIV Health: Integrating Data and Implementation Science to Accelerate HIV Prevention and Treatment (R21/R33 Clinical Trial Not Allowed), NIH
Deadline: October 22, 2023
<https://grants.nih.gov/grants/guide/rfa-files/RFA-MH-24-100.html>
2. Academic Research Enhancement Award for Undergraduate-Focused Institutions (R15 Clinical Trial Required), NIH
Deadline: October 25, 2023
<https://grants.nih.gov/grants/guide/pa-files/PA-21-154.html>
3. Research Enhancement Award Program (REAP) for Health Professional Schools and Graduate Schools (R15 Clinical Trial Not Allowed), NIH
Deadline: October 25, 2023
<https://grants.nih.gov/grants/guide/pa-files/PA-22-060.html>
4. Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science (NSF INCLUDES), NSF
Deadline: October 30, 2023
<https://www.nsf.gov/pubs/2022/nsf22622/nsf22622.htm>
5. ADVANCE Predoctoral T32 Training Program to Promote Diversity in Health Disparities Research, Preventive Interventions, and Methodology (T32, Clinical Trial Not Allowed), NIH
Deadline: October 31, 2023
<https://grants.nih.gov/grants/guide/rfa-files/RFA-OD-23-018.html>
6. University Turbine Systems Research (UTSR), Department of Energy
Deadline: November 7, 2023
<https://www.grants.gov/web/grants/view-opportunity.html?oppId=350126>
7. Discovery Research PreK-12 (DRK-12), NSF
Deadline: November 8, 2023
<https://www.nsf.gov/pubs/2023/nsf23596/nsf23596.htm#elig>
8. NIDA REI: Racial Equity Visionary Award Program for Research at Minority Serving Institutions on Substance Use and Racial Equity (DP1 Clinical Trial Optional), NIH
Deadline: November 14, 2023
<https://grants.nih.gov/grants/guide/rfa-files/RFA-DA-23-031.html>
9. Inspire! Grants for Small Museums, IMLS
Deadline: November 15, 2023
<https://imls.gov/grants/available/inspire-grants-small-museums>

10. Major Research Instrumentation (MRI) Program: Instrument Acquisition or Development, NSF
Deadline: November 15, 2023
<https://www.nsf.gov/pubs/2023/nsf23519/nsf23519.htm>
11. Desalination and Water Purification Research Program: Research Projects, Department of the Interior
Deadline: November 15, 2023
<http://www.usbr.gov/research/dwpr>
12. Transformational Habitat Restoration and Coastal Resilience Grants Under the Bipartisan Infrastructure Law and Inflation Reduction Act, NOAA
Deadline: November 17, 2023
<https://www.grants.gov/web/grants/view-opportunity.html?oppId=349865>
13. Dynamics of Integrated Socio-Environmental Systems (DISES), NSF
Deadline: November 17, 2023
https://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf23609
14. EMpowering BRoader Academic Capacity and Education (EMBRACE), NSF
Deadline: November 20, 2023
<https://www.nsf.gov/pubs/2023/nsf23617/nsf23617.htm>
15. Division of Physics: Investigator-Initiated Research Projects (PHY), NSF
Deadlines: November 20 and 22, 2023; December 5 and 12, 2023
<https://www.nsf.gov/pubs/2023/nsf23615/nsf23615.htm>
16. Early-stage Biomedical Data Repositories and Knowledgebases (R24 Clinical Trial Not Allowed), NIH
Deadline: November 26, 2023
<https://grants.nih.gov/grants/guide/pa-files/PAR-23-236.html>
17. Collaborative Research, NEH
Deadline: November 29, 2023
<https://www.neh.gov/grants/research/collaborative-research-grants>
18. Centers of Research Excellence in Science and Technology (CREST Centers), NSF
Deadline: December 1, 2023
<https://www.nsf.gov/pubs/2023/nsf23595/nsf23595.htm>
19. Focused Research Groups in the Mathematical Sciences (FRGMS), NSF
Deadline: December 6, 2023
<https://www.nsf.gov/pubs/2023/nsf23621/nsf23621.htm>
20. Food and Agricultural Non-Formal Education (FANE)
Deadline: December 7, 2023
<https://www.nifa.usda.gov/grants/funding-opportunities/agriculture-food-research-initiative-education-workforce-development>
21. Organismal Response to Climate Change, NSF
Deadline: December 13, 2023
<https://www.nsf.gov/pubs/2023/nsf23622/nsf23622.htm>

22. NIDA REI: Academic Research Enhancement Award (AREA) Training a Diverse Data Science Workforce for Addiction Research (R15 Clinical Trial Not Allowed), NIH
Deadline: December 24, 2023
<https://grants.nih.gov/grants/guide/rfa-files/RFA-DA-24-026.html>
23. Digital Humanities Advancement Grants, NEH
Deadline: January 11, 2024
<https://www.neh.gov/grants/odh/digital-humanities-advancement-grants>
24. National Center for Education Research (NCER): Research Training Programs in The Education Sciences, Assistance Listing Number (ALN) 84.305B, D & N, Dept. of Education
Deadline: January 11, 2024
<https://www.grants.gov/web/grants/view-opportunity.html?oppId=350118>
25. Research and Mentoring for Postbaccalaureates in Biological Sciences (RaMP), NSF
Deadline: January 18, 2024
<https://www.nsf.gov/pubs/2023/nsf23514/nsf23514.htm>
26. Measures and Methods to Advance Research on Minority Health and Health Disparities-Related Constructs (R01 Clinical Trial Not Allowed), NIH
Deadline: February 5, 2024
<https://grants.nih.gov/grants/guide/pa-files/PAR-22-072.html>
27. Population Approaches to Reducing Alcohol-related Cancer Risk (R01 Clinical Trial Optional), NIH
Deadline: February 5, 2024
<https://grants.nih.gov/grants/guide/pa-files/PAR-23-244.html>
28. Blueprint and BRAIN Initiative Program for Enhancing Neuroscience Diversity through Undergraduate Research Education Experiences (BP BRAIN-ENDURE) (R25 Clinical Trial Not Allowed), NIH
Deadline: February 15, 2024
<https://grants.nih.gov/grants/guide/rfa-files/RFA-NS-24-014.html>
29. Summer Research Education Experience Program (R25 Clinical Trial Not Allowed), NIH
Deadline: February 18, 2024
<https://grants.nih.gov/grants/guide/pa-files/PAR-21-168.html#>
30. NLM Grants for Scholarly Works in Biomedicine and Health (G13 Clinical Trial Not Allowed), NIH
Deadline: February 26, 2024
<https://grants.nih.gov/grants/guide/pa-files/PAR-23-183.html>
31. Mathematical Sciences Research Institutes, NSF
Deadline: March 14, 2024
<https://www.nsf.gov/pubs/2023/nsf23606/nsf23606.htm>
32. Innovation Corps Pilot, NASA
Deadline: March 29, 2024
<https://nspires.nasaprs.com/external/solicitations/summary!init.do?solId=%7B214C3AE7-5428-D4C1-457A-E00CB2338777%7D&path=open>
33. STEM Program, Office of Naval Research
Deadline: April 2, 2024
<https://www.grants.gov/web/grants/view-opportunity.html?oppId=347274>

34. BRAIN Initiative: Development and Validation of Novel Tools to Probe Cell-Specific and Circuit-Specific Processes in the Brain (R01 Clinical Trial Not Allowed), NIH
Deadline: June 7, 2024
<https://grants.nih.gov/grants/guide/rfa-files/RFA-MH-24-280.html>
35. Environmental Education Local Grants Program for Region 2, EPA
Deadline: July 1, 2024
<https://www.grants.gov/web/grants/view-opportunity.html?oppId=350204>
36. University Research & Development (R&D) Projects & Capstone Projects, Naval Surface Warfare Center Dahlgren Division
Deadline: July 17, 2024
<https://www.grants.gov/view-opportunity.html?oppId=349325>
37. Measurement Science and Engineering (MSE) Research Grant Programs, National Institute of Standards & Technology (NIST)
Deadline: Applications will be accepted and considered on a rolling basis as they are received.
<https://www.grants.gov/web/grants/view-opportunity.html?oppId=347512>
38. Cancer Research Education Grants Program - Research Experiences (R25 Clinical Trial Not Allowed), NIH
Deadline: January 25, 2023
<https://grants.nih.gov/grants/guide/pa-files/PAR-23-277.html>



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