Department of Health and Human Services

Part 1. Overview Information

Participating Organization(s)

National Institutes of Health (NIH (http://www.nih.gov))

Components of Participating Organizations

National Institute of General Medical Sciences (NIGMS (http://www.nigms.nih.gov))

Funding Opportunity Title

NIH Science Education Partnership Award (SEPA)(R25)

Activity Code

R25 (//grants.nih.gov/grants/funding/ac_search_results.htm?text_curr=r25&Search.x=0&Search.y=0&Search_Type=Activity) Education Projects

Announcement Type

Reissue of PAR-14-228 (https://grants.nih.gov/grants/guide/pa-files/PAR-14-228.html)

Related Notices

- October 11, 2017 (//grants.nih.gov/grants/guide/notice-files/NOT-GM-18-001.html) - Notice of Correction to Educational Activities Supported by PAR-17-339. See Notice NOT-GM-18-001 (//grants.nih.gov/grants/guide/notice-files/NOT-GM-18-001.html).

Funding Opportunity Announcement (FOA) Number

PAR-17-339

Companion Funding Opportunity

None

Number of Applications

Only one application per institution is allowed. Institutions are also limited to a single SEPA award. Therefore, an institutoin with an active SEPA project is not eligible to submit an application to this FOA. An institution is normally identified by having a unique DUNS number or NIH IPF number. See Section III. 3. Additional Information on Eligibility.

Catalog of Federal Domestic Assistance (CFDA) Number(s)

93.859

Funding Opportunity Purpose

The NIH Research Education Program (R25) supports research education activities in the mission areas of the NIH. The over-arching goal of this NIGMS R25 program is to support educational activities that complement and/or enhance the training of a workforce to meet the nation's biomedical, behavioral and clinical research needs.

To this end, this funding opportunity announcement (FOA) encourages the development of innovative educational activities for pre-kindergarten to grade 12 (P-12), pre-service and in-service teachers (Teachers) and students from underserved communities with a focus on Courses for Skills Development, Research Experiences, Mentoring Activities, Curriculum or Methods Development and Outreach.

Information on current SEPA projects can be found at: https://www.nigms.nih.gov/Research/crcb/sepa/Pages/default.aspx (https://www.nigms.nih.gov/Research/crcb/sepa/Pages/default.aspx)

and http://nihsepa.org (http://nihsepa.org).

Applicants are strongly encouraged to consult with the SEPA Scientific/Research Contact to be advised on the appropriateness of the intended P-12 STEM or ISE project for SEPA program objectives and the priorities of the NIGMS.

Key Dates

Posted Date

September 18, 2017

Open Date (Earliest Submission Date)

October 20, 2017

Letter of Intent Due Date(s)

30 days prior to the application due date

Application Due Date(s)

November 20, 2017; July 9, 2018; July 9, 2019 , by 5:00 PM local time of applicant organization. All types of applications allowed for this funding opportunity announcement are due on these dates.

Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

AIDS Application Due Date(s)

Not Applicable

Scientific Merit Review

January/February 2018, October/November 2018, October/November 2019

Advisory Council Review

May 2018, January 2019, January 2020

Earliest Start Date

July 2018, April 2019, April 2020

Expiration Date

July 10, 2019

Due Dates for E.O. 12372

Not Applicable

Required Application Instructions

It is critical that applicants follow the Research (R) Instructions in the SF424 (R&R) Application Guide (//grants.nih.gov/grants/guide/url_redirect.htm?id=12000) except where instructed to do otherwise (in this FOA or in a Notice from the *NIH Guide for Grants and Contracts* (//grants.nih.gov/grants/guide/)). Conformance to all requirements (both in the Application Guide and the FOA) is required and strictly enforced. Applicants must read and follow all application instructions in the Application Guide as well as any program-specific instructions noted in Section IV. When the program-specific instructions deviate from those in the Application Guide, follow the program-specific instructions.

Applications that do not comply with these instructions will not be reviewed

There are several options available to submit your application through Grants.gov to NIH and Department of Health and Human Services partners. You **must** use one of these submission options to access the application forms for this opportunity.

1. Use the NIH ASSIST system to prepare, submit and track your application online.

   Apply Online Using ASSIST

2. Use an institutional system-to-system (S2S) solution to prepare and submit your application to Grants.gov and eRA Commons to track your application. Check with your institutional officials regarding availability.

3. Go to Grants.gov to download an application package to complete the application forms offline or create a Workspace to complete the forms online; submit your application to Grants.gov; and track your application in eRA Commons.

Learn more about the various submission options (http://grants.nih.gov/grants/ElectronicReceipt/preparing.htm#2).

Table of Contents

Part 2. Full Text of Announcement

Section I. Funding Opportunity Description

The NIH Research Education Program (R25) supports research educational activities that complement other formal training programs in the mission areas of the NIH Institutes and Centers. The over-arching goals of the NIH R25 program are to: (1) complement and/or enhance the training of a workforce to meet the nation's biomedical, behavioral and clinical research needs; (2) enhance the diversity of the biomedical, behavioral and clinical research workforce; (3) help recruit individuals with specific specialty or disciplinary backgrounds to research careers in biomedical, behavioral and clinical sciences; and (4) foster a better understanding of biomedical, behavioral and clinical research and its implications.

The over-arching goal of this NIGMS R25 program is to support educational activities that complement and/or enhance the training of a workforce to meet the nation's biomedical, behavioral and clinical research needs. To assure the vitality and continued productivity of the research enterprise, the NIGMS provides leadership in training the next generation of scientists, in enhancing the diversity of the scientific workforce and in developing research capacities throughout the country. The SEPA program supports P-12 and informal science education (ISE) activities that: (1) enhance the diversity of the biomedical, behavioral and clinical research workforce and (2) foster a better understanding of NIH-funded biomedical, behavioral and clinical research and its public health implications. Applications that target P-12 or ISE topics that may not be addressed by existing school, community or ISE-based activities are encouraged. Proposed projects may focus on any area of NIH-funded research.

To accomplish the stated over-arching goal, this FOA will support creative educational activities with a primary focus on:

- ***Courses for Skills Development:*** For example, advanced courses in a specific discipline or research area, clinical procedures for research, or specialized research techniques.
- ***Research Experiences:*** For example, for undergraduate students: to provide hands-on exposure to research, to reinforce their intent to graduate with a science degree, and/or to prepare them for graduate school admissions and/or careers in research; for graduate and medical, dental, nursing and other health professional students: to provide research experiences and related training not available through formal NIH training mechanisms; for postdoctorates, medical residents and faculty: to extend their skills, experiences, and knowledge base; for high school and college science teachers: to enhance their science teaching.
- ***Mentoring Activities:*** For example, dedicated efforts at providing not only technical expertise, but advice, insight, and professional career skills to college students, graduate students, postdoctorates and/or early-career faculty.
- ***Curriculum or Methods Development:***
    - Innovative and inquiry-based P-12 curricula that will increase student interest in Science, Technology, Engineering and Mathematics (STEM) topics, understanding of the scientific research process and motivation to pursue careers in basic and medical research. example, to improve biomedical, behavioral or clinical science education, or develop novel instructional approaches or

computer-based educational tools.

- Citizen or Crowd-Sourced projects where non-scientists participate in scientific research either alone or in collaboration with scientists.
- Maker Movement projects where students and teachers learn by "doing" or "making" in or outside the classroom.
- Veterinarian-based P-12 projects or ISE exhibits that will encourage students to consider careers in veterinary medicine or projects designed to educate students, Teachers, and the community on the need for, and the ethical use of, animals in research.
- Curriculum or Methods Development activities for P-12 Teachers that provide instruction in novel approaches to STEM curriculum that challenge the current knowledge base of pedagogy and problem based learning
- Interactive digital media (IDM)-based projects where scientists partner with educators and developers to create learning resources for P-12 students, Teachers and the public. IDM applications may include, but are not limited to: interactive curricula; attitude changes towards learning; new skills development; teamwork and group activities; public participation in scientific research (citizen science) projects and behavioral changes in lifestyle and health Community-Based Participatory Research
- (CBPR) projects on important health prevention issues such as obesity, diabetes and cardiovascular disease.
- Public service announcements, documentaries, films, radio, TV and other media-based community health literacy resources.
- Science center and museum-based exhibits, traveling exhibits and public outreach activities e.g., Science Cafes and Community Health Fairs, that will educate students, Teachers and the community on health-related topics.

- ***Outreach:*** Collaborations and leveraging with the following programs and other educational organizations are encouraged:
  - NIGMS capacity building, and research infrastructure programs within the Center for Research Capacity Building, e.g., Institutional Development Awards (https://www.nigms.nih.gov/Research/CRCB/IDeA/Pages/default.aspx) (IDeA), Native American Research Centers for Health (https://www.nigms.nih.gov/Research/CRCB/NARCH/Pages/default.aspx) (NARCH) and workforce diversity in the Division of Training, Workforce Development, and Diversity, e.g., MARC Undergraduate Student Training in Academic Research (U-STAR), (https://www.nigms.nih.gov/Training/MARC/Pages/USTARAwards.aspx) Research Initiative for Scientific Enhancement (RISE) (https://www.nigms.nih.gov/Training/RISE/Pages/default.aspx) or Bridges to the Baccalaureate. (https://www.nigms.nih.gov/Research/Mechanisms/Pages/BridgesBaccalaureate.aspx)
  - Clinical and Translational Science Awards (https://ncats.nih.gov/ctsa)
  - Research Centers in Minority Institutions (https://www.nimhd.nih.gov/programs/extramural/coe/rcmi.html)
  - P-12 STEM programs at other government agencies, e.g., Department of Education, Department of Defense, National Science Foundation, National Aeronautics and Space Administration or National Oceanic and Atmospheric Agency
  - Community-Based Participatory Research (CBPR) projects on important health prevention issues such as obesity, diabetes and cardiovascular disease
  - Public service announcements, documentaries, films, radio, TV and other media-based community health literacy resources.
  - Science center and museum-based exhibits, traveling exhibits and public outreach activities e.g., Science Cafes and Community Health Fairs, that will educate students, Teachers and the community on health-related topics

SEPA funding does not support large scale STEM or ISE projects where the total cost of the project will exceed the

total amount of the requested SEPA award.

Research education programs may complement ongoing research training and education occurring at the applicant institution, but the proposed educational experiences must be distinct from those training and education programs currently receiving Federal support. R25 programs may augment institutional research training programs (e.g., T32, T90) but cannot be used to replace or circumvent Ruth L. Kirschstein National Research Service Award (NRSA) programs.

See Section VIII. Other Information for award authorities and regulations.

Section II. Award Information

Funding Instrument

Grant: A support mechanism providing money, property, or both to an eligible entity to carry out an approved project or activity.

Application Types Allowed

New
Resubmission

The OER Glossary (//grants.nih.gov/grants/guide/url_redirect.htm?id=11116) and the SF424 (R&R) Application Guide provide details on these application types.

Clinical Trial?

Not Allowed: Only accepting applications that do not propose clinical trials

Need help determining whether you are doing a clinical trial? (https://grants.nih.gov/grants/guide/url_redirect.htm?id=82370)

Funds Available and Anticipated Number of Awards

The number of awards is contingent upon NIH appropriations and the submission of a sufficient number of meritorious applications.

NIGMS intends to commit an estimated total of $2,000,000.

Award Budget

Direct costs are limited to $250,000 annually.

Award Project Period

The SEPA project period is 5 years.

Other Award Budget Information

Personnel Costs

Individuals designing, directing, and implementing the research education program may request salary and fringe

benefits appropriate for the person months devoted to the program. Salaries requested may not exceed the levels commensurate with the institution's policy for similar positions and may not exceed the congressionally mandated cap. (If mentoring interactions and other activities with participants are considered a regular part of an individual's academic duties, then any costs associated with the mentoring and other interactions with participants are not allowable costs from grant funds).

Participant Costs

Not Applicable

Other Program-Related Expenses

Consultant costs, equipment, supplies, travel for key persons, and other program-related expenses may be included in the proposed budget. These expenses must be justified as specifically required by the proposed program and must not duplicate items generally available at the applicant institution.

There is an Annual SEPA PD/PI Conference, usually in the Washington, DC area. It is required that the PD/PI(s) attend this meeting. PD/PI(s) are encouraged to bring key personnel, e.g., the project evaluator to the annual conference. Funds to support travel to the annual conference must be requested in the budget. If not used, these funds may not be rebudgeted.

A minimum of ten percent (10%) of the direct costs must be devoted to project evaluation.

Indirect Costs

Indirect Costs (also known as Facilities & Administrative [F&A] Costs) are reimbursed at 8% of modified total direct costs (exclusive of tuition and fees and expenditures for equipment), rather than on the basis of a negotiated rate agreement.

NIH grants policies as described in the *NIH Grants Policy Statement* (//grants.nih.gov/grants/guide/url_redirect.htm?id=11120) will apply to the applications submitted and awards made in response to this FOA.

Section III. Eligibility Information

1. Eligible Applicants

Eligible Organizations

Higher Education Institutions

- Public/State Controlled Institutions of Higher Education
- Private Institutions of Higher Education

The following types of Higher Education Institutions are always encouraged to apply for NIH support as Public or Private Institutions of Higher Education:

- Hispanic-Serving Institutions
- Historically Black Colleges and Universities (HBCUs)
- Tribally Controlled Colleges and Universities (TCCUs)
- Alaska Native and Native Hawaiian Serving Institutions
- Asian American Native American Pacific Islander Serving Institutions (AANAPISIs)

Nonprofits Other Than Institutions of Higher Education

- Nonprofits with 501(c)(3) IRS Status (Other than Institutions of Higher Education)
- Nonprofits without 501(c)(3) IRS Status (Other than Institutions of Higher Education)

For-Profit Organizations

- Small Businesses
- For-Profit Organizations (Other than Small Businesses)

Governments

- State Governments
- County Governments
- City or Township Governments
- Special District Governments
- Indian/Native American Tribal Governments (Federally Recognized)
- Indian/Native American Tribal Governments (Other than Federally Recognized)
- U.S. Protectorates
- Eligible Agencies of the Federal Government
- U.S. Territory or Possession

Other

- Independent School Districts
- Public Housing Authorities/Indian Housing Authorities
- Native American Tribal Organizations (other than Federally recognized tribal governments)
- Faith-based or Community-based Organizations
- Regional Organizations
- Charter Schools

The sponsoring institution must assure support for the proposed program. Appropriate institutional commitment to the program includes the provision of adequate staff, facilities, and educational resources that can contribute to the planned program.

Institutions with existing Ruth L. Kirschstein National Research Service Award (NRSA) institutional training grants (e.g., T32) or other Federally funded training programs may apply for a research education grant provided that the proposed educational experiences are distinct from those training programs receiving federal support. In many cases, it is anticipated that the proposed research education program will complement ongoing research training occurring at the applicant institution.

Foreign Institutions

Non-domestic (non-U.S.) Entities (Foreign Institutions) **are not** eligible to apply.
Non-domestic (non-U.S.) components of U.S. Organizations **are not** eligible to apply.
Foreign components, as defined in the *NIH Grants Policy Statement* (//grants.nih.gov/grants/guide/url_redirect.htm?id=11118), **are not** allowed.

Required Registrations

Applicant Organizations

Applicant organizations must complete and maintain the following registrations as described in the SF 424 (R&R) Application Guide to be eligible to apply for or receive an award. All registrations must be completed prior to the application being submitted. Registration can take 6 weeks or more, so applicants should begin the registration process as soon as possible. The NIH Policy on Late Submission of Grant Applications (//grants.nih.gov/grants/guide/notice-files/NOT-OD-15-039.html) states that failure to complete registrations in advance of a due date is not a valid reason for a late submission.

- Dun and Bradstreet Universal Numbering System (DUNS) (http://fedgov.dnb.com/webform) - All registrations require that applicants be issued a DUNS number. After obtaining a DUNS number, applicants can begin both SAM and eRA Commons registrations. The same DUNS number must be used for all registrations, as well as on the grant application.
- System for Award Management (SAM) (https://www.sam.gov/portal/public/SAM/) (formerly CCR) – Applicants must complete and maintain an active registration, **which requires renewal at least annually**. The renewal process may require as much time as the initial registration. SAM registration includes the assignment of a Commercial and Government Entity (CAGE) Code for domestic organizations which have not already been assigned a CAGE Code.
    - NATO Commercial and Government Entity (NCAGE) Code (//grants.nih.gov/grants/guide/url_redirect.htm?id=11176) – Foreign organizations must obtain an NCAGE code (in lieu of a CAGE code) in order to register in SAM.
- eRA Commons (//grants.nih.gov/grants/guide/url_redirect.htm?id=11123) - Applicants must have an active DUNS number and SAM registration in order to complete the eRA Commons registration. Organizations can register with the eRA Commons as they are working through their SAM or Grants.gov registration. eRA Commons requires organizations to identify at least one Signing Official (SO) and at least one Program Director/Principal Investigator (PD/PI) account in order to submit an application.
- Grants.gov (//grants.nih.gov/grants/guide/url_redirect.htm?id=82300) – Applicants must have an active DUNS number and SAM registration in order to complete the Grants.gov registration.

Program Directors/Principal Investigators (PD(s)/PI(s))

All PD(s)/PI(s) must have an eRA Commons account. PD(s)/PI(s) should work with their organizational officials to either create a new account or to affiliate their existing account with the applicant organization in eRA Commons. If the PD/PI is also the organizational Signing Official, they must have two distinct eRA Commons accounts, one for each role. Obtaining an eRA Commons account can take up to 2 weeks.

Eligible Individuals (Program Director/Principal Investigator)

Any individual(s) with the skills, knowledge, and resources necessary to carry out the proposed research as the Program Director(s)/Principal Investigator(s) (PD(s)/PI(s)) is invited to work with his/her organization to develop an application for support. Individuals from diverse backgrounds, including underrepresented racial and ethnic groups, individuals with disabilities, and women are always encouraged to apply for NIH support.

For institutions/organizations proposing multiple PDs/PIs, visit the Multiple Program Director/Principal Investigator Policy and submission details in the Senior/Key Person Profile (Expanded) Component of the SF424 (R&R) Application Guide.

The PD/PI should be an established investigator in the scientific area in which the application is targeted and capable of providing both administrative and scientific leadership to the development and implementation of the proposed program. The PD/PI will be expected to monitor and assess the program and submit all documents and reports as required.
Add additional eligibility requirements above for individuals.

2. Cost Sharing

This FOA does not require cost sharing as defined in the *NIH Grants Policy Statement*. (//grants.nih.gov/grants/guide/url_redirect.htm?id=11126)

3. Additional Information on Eligibility

Number of Applications

The NIH will not accept duplicate or highly overlapping applications under review at the same time. This means

that the NIH will not accept:

- A new (A0) application that is submitted before issuance of the summary statement from the review of an overlapping new (A0) or resubmission (A1) application.
- A resubmission (A1) application that is submitted before issuance of the summary statement from the review of the previous new (A0) application.
- An application that has substantial overlap with another application pending appeal of initial peer review (see NOT-OD-11-101 (//grants.nih.gov/grants/guide/notice-files/NOT-OD-11-101.html)).

Only one application per institution, normally identified by having a unique DUNS number or NIH IPF number, is allowed.Organizations are also limited to a single SEPA award. An organization with an active SEPA award is not eligible to submit a SEPA application. However, an organization with an active SEPA award may partner with another organization planning on submitting a new SEPA application as long as its subcontract does not exceed 20% of the Direct Costs requested.

Organizations with a contractual fee for service or consortium partnership with an active SEPA award may submit a SEPA application if the proposed new project is independent of the existing SEPA contractual, fee for service or consortium partnership.

An organization with an active SEPA award is eligible to submit an application for a new SEPA project as long as there will not be significant overlap between the end of the current SEPA award and the start date for a new SEPA award.

It is appropriate for applicants to use an existing P-12 or ISE project strategy and infrastructure as the platform for a new SEPA application. The proposed new SEPA project may complement, but cannot overlap, the ongoing P-12 or ISE project at the applicant organization.

Special Note: SEPA projects ending their SEPA grant period are strongly encouraged to utilize their SEPA-generated infrastructure, partnerships, and evaluation tools to develop a new SEPA project. The proposed project must have a new scope of activity or target audience.

Program Faculty

Researchers from diverse backgrounds, including racial and ethnic minorities, persons with disabilities, and women are encouraged to participate as preceptors/mentors. Mentors should have research expertise and experience relevant to the proposed program. Mentors must be committed to continue their involvement throughout the total period of the mentee's participation in this award.

Participants

Unless strongly justified on the basis of exceptional relevance to NIH, research education programs should be used primarily for the education of U.S. citizens and permanent residents.

Section IV. Application and Submission Information

1. Requesting an Application Package

Buttons to access the online ASSIST system or to download application forms are available in Part 1 of this FOA. See your administrative office for instructions if you plan to use an institutional system-to-system solution.

2. Content and Form of Application Submission

It is critical that applicants follow the Research (R) Instructions in the SF424 (R&R) Application Guide (//grants.nih.gov/grants/guide/url_redirect.htm?id=12000), including Supplemental Grant Application Instructions (https://grants.nih.gov/grants/funding/424/SupplementalInstructions.pdf) except where instructed in this funding opportunity announcement to do otherwise. Conformance to the requirements in the Application Guide is required and strictly enforced. Applications that are out of compliance with these instructions will not be reviewed.

For information on Application Submission and Receipt, visit Frequently Asked Questions – Application Guide, Electronic Submission of Grant Applications (//grants.nih.gov/grants/guide/url_redirect.htm?id=41137).

Letter of Intent

Although a letter of intent is not required, is not binding, and does not enter into the review of a subsequent application, the information that it contains allows IC staff to estimate the potential review workload and plan the review.

By the date listed in Part 1. Overview Information, prospective applicants are asked to submit a letter of intent that includes the following information:

- Descriptive title of proposed activity
- Name(s), address(es), and telephone number(s) of the PD(s)/PI(s)
- Names of other key personnel
- Participating institution(s)
- Number and title of this funding opportunity

The letter of intent should be sent to:

Tony Beck, Ph.D.
Telephone: 301-480-4623
Email: beckl@mail.nih.gov (mailto:beckl@mail.nih.gov)

Page Limitations

All page limitations described in the SF424 (R&R) Application Guide and the Table of Page Limits (//grants.nih.gov/grants/guide/url_redirect.htm?id=61134) must be followed.

Instructions for Application Submission

The following section supplements the instructions found in the SF424 (R&R) Application Guide and should be used for preparing an application to this FOA.

SF424(R&R) Cover

Follow all instructions provided in the SF424 (R&R) Application Guide.

SF424(R&R) Project/Performance Site Locations

Follow all instructions provided in the SF424 (R&R) Application Guide.

SF424 (R&R) Other Project Information Component

Follow all instructions provided in the SF424 (R&R) Application Guide with the following additional modifications:

Facilities & Other Resources. Describe the educational environment, including the facilities, laboratories, participating departments, computer services, and any other resources to be used in the development and implementation of the proposed program. List all thematically related sources of support for research training and education following the format for Current and Pending Support.

Other Attachments. An Advisory Committee is not a required component of a Research Education program. However, if an Advisory Committee is intended, provide a plan for the appointment of an Advisory Committee to monitor progress of the research education program. The composition, roles, responsibilities, and desired expertise of committee members, frequency of committee meetings, and other relevant information should be included. Describe how the Advisory Committee will evaluate the overall effectiveness of the program. Proposed Advisory Committee members should be named in the application if they have been invited to participate at the time the application is submitted. Please name your file "Advisory_Committee.pdf"

The filename provided for each "Other Attachment" will be the name used for the bookmark in the electronic

application in eRA Commons.

SF424(R&R) Senior/Key Person Profile Expanded

Follow all instructions provided in the SF424 (R&R) Application Guide.

The evaluator must have formal training and experience in P-12 STEM or ISE evaluation methodology and statistics as demonstrated by relevant publications or reports. Evaluator qualifications must be documented in the Biosketch of relevant personnel.

R&R Budget

Follow all instructions provided in the SF424 (R&R) Application Guide with the following additional modifications:

- Include all personnel other than the PD(s)/PI(s) in the Other Personnel section, including clerical and administrative staff.
- The PD/PI must devote a minimum of 1.2 person months (10% of a 12-month calendar appointment) to the proposed project. In the case of multiple PD/PI (MPI) projects, the Contact PD/PI must devote a minimum of 1.2 person months effort to the project. Non-contact PD/PI(s) must each devote a minimum of 0.6 person months effort to the project.

PHS 398 Cover Page Supplement

Follow all instructions provided in the SF424 (R&R) Application Guide.

PHS 398 Research Plan Component

All instructions in the SF424 (R&R) Application Guide must be followed, with the following additional instructions:

Research Strategy

The **Research Strategy** section must be used to upload the **Research Education Program Plan**, which must include the following components described below:

- Proposed Research Education Program
- Program Director/Principal Investigator
- Program Faculty
- Program Participants
- Institutional Environment and Commitment
- Diversity Recruitment Plan
- Plan for Instruction in the Responsible Conduct of Research
- Evaluation Plan
- Dissemination Plan

Research Education Program Plan

Proposed Research Education Program. While the proposed research education program may complement ongoing research training and education occurring at the applicant institution, the proposed educational experiences must be distinct from those research training and research education programs currently receiving federal support. When research training programs are on-going in the same department, the applicant organization should clearly distinguish between the activities in the proposed research education program and the research training supported by the training program. The description should include the educational and/or career level(s) of the planned participants. The proposed research education plan should target underserved communities and build upon evidence-based practices from the STEM education field and include:

- Clear goals and anticipated outcomes;
- Development of critical thinking and communication skills;
- Cultural relevance to the target audience;

- Input from the teachers, community and other stakeholders;
- Potential to build a sustainable STEM education capacity for the community;
- Potential for replication.

Content of the proposed SEPA project must align with the Practices, Crosscutting Concepts and Core Ideas of Next Generation Science Standards (http://www.nextgenscience.org/next-generation-science-standards) (NGSS). The NGSS are pre-college science standards created through a collaborative, state-led process and identifies what students need to know and be able to do to be a functional citizen, which includes being scientifically literate and an effective member of the U.S. workforce

Program Director/Principal Investigator. Describe arrangements for administration of the program. Provide evidence that the Program Director/Principal Investigator is actively engaged in research and/or teaching in an area related to the mission of NIH, and can organize, administer, monitor, and evaluate the research education program. For programs proposing multiple PDs/PIs, describe the complementary and integrated expertise of the PDs/PIs; their leadership approach, and governance appropriate for the planned project.

Program Faculty. Researchers from diverse backgrounds, including racial and ethnic minorities, persons with disabilities, and women are encouraged to participate as program faculty. Faculty should have research expertise and experience relevant to the proposed program and demonstrate a history of, or the potential for, their intended roles. The description should include the educational and/or career level(s) of the planned participants. The proposed research education plan should target underserved communities and build upon evidence-based practices from the STEM education field and include:

- Clear goals and anticipated outcomes;
- Development of critical thinking and communication skills;
- Cultural relevance to the target audience;
- Input from the teachers, community and other stakeholders;
- Potential to build a sustainable STEM education capacity for the community;
- Potential for replication.

Classroom-based P-12 SEPA projects must have a rigorous evaluation plan, either Randomized Controlled Trial (RCT) or Well-Matched Case Comparison Study. Therefore, it is essential that at least one of the PD/PIs or Senior/Key Personnel have demonstrated expertise in evaluation of P-12 STEM or ISE projects. These individual(s) must work with the independent evaluator in the development and implementation of the evaluation plan.

SEPA encourages the inclusion of Key Personnel or project faculty who can serve as role models and mentors for Teacher and student participants.

Program Participants. Applications must describe the intended participants, and the eligibility criteria and/or specific educational background characteristics that are essential for participation in the proposed research education program. Identify the career levels for which the proposed program is planned. SEPA applicants are also encouraged to ensure that their programs can effectively include and engage students with learning and physical disabilities.

Students:

- Intended participants and rationale for the target audience(s) selection.
- Eligibility and/or specific educational background characteristics essential for participation.
- Grade level(s) for participation.
- Potential for the proposed STEM research education project to stimulate student interest in health and medicine career opportunities.

Teachers

- Intended participants and rationale for the target audience(s) selection.
- Eligibility and/or specific educational background characteristics essential for participation.
- Grade level(s) for participation
- Potential for the proposed research education project to increase applicant's pedagogical skills and STEM content knowledge.

Institutional Environment and Commitment. Describe the institutional environment, reiterating the availability of facilities and educational resources (described separately under "Facilities & Other Resources"), that can contribute to the planned Research Education Program. Evidence of institutional commitment to the research educational program is required. A letter of institutional commitment must be attached as part of Letters of Support (see below). Appropriate institutional commitment should include the provision of adequate staff, facilities, and educational resources that can contribute to the planned research education program.

Recruitment Plan to Enhance Diversity: Fostering diversity in the scientific research workforce is a key component of the NIH strategy to identify, develop, support and maintain the quality of our scientific human capital (NOT-OD-15-053 (//grants.nih.gov/grants/guide/notice-files/NOT-OD-15-053.html)). Every facet of the United States scientific research enterprise—from basic laboratory research to clinical and translational research to policy formation–requires superior intellect, creativity and a wide range of skill sets and viewpoints. NIH's ability to help ensure that the nation remains a global leader in scientific discovery and innovation is dependent upon a pool of highly talented scientists from diverse backgrounds who will help to further NIH's mission.

Research shows that diverse teams working together and capitalizing on innovative ideas and distinct perspectives outperform homogenous teams. Scientists and trainees from diverse backgrounds and life experiences bring different perspectives, creativity, and individual enterprise to address complex scientific problems. There are many benefits that flow from a diverse NIH-supported scientific workforce, including: fostering scientific innovation, enhancing global competitiveness, contributing to robust learning environments, improving the quality of the researchers, advancing the likelihood that underserved or health disparity populations participate in, and benefit from health research, and enhancing public trust.

In spite of tremendous advancements in scientific research, information, educational and research opportunities are not equally available to all. NIH encourages institutions to diversify their student and faculty populations to enhance the participation of individuals from groups identified as underrepresented in the biomedical, clinical, behavioral and social sciences, such as:

A. Individuals from racial and ethnic groups that have been shown by the National Science Foundation to be underrepresented in health-related sciences on a national basis (see data at http://www.nsf.gov/statistics/showpub.cfm?TopID=2&SubID=27 (http://www.nsf.gov/statistics/showpub.cfm?TopID=2&SubID=27)) and the report Women, Minorities, and Persons with Disabilities in Science and Engineering (http://www.nsf.gov/statistics/women/)). The following racial and ethnic groups have been shown to be underrepresented in biomedical research: Blacks or African Americans, Hispanics or Latinos, American Indians or Alaska Natives, and Native Hawaiians and other Pacific Islanders.

B. Individuals with disabilities, who are defined as those with a physical or mental impairment that substantially limits one or more major life activities, as described in the Americans with Disabilities Act of 1990, as amended (http://www.ada.gov/pubs/adastatute08.htm). See NSF data at, http://www.nsf.gov/statistics/wmpd/2013/pdf/tab7-5_updated_2014_10.pdf (http://www.nsf.gov/statistics/wmpd/2013/pdf/tab7-5_updated_2014_10.pdf).

C. Individuals from disadvantaged backgrounds, defined as:

1. Individuals who come from a family with an annual income below established low-income thresholds. These thresholds are based on family size, published by the U.S. Bureau of the Census; adjusted annually for changes in the Consumer Price Index; and adjusted by the Secretary for use in all health professions programs. The Secretary

periodically publishes these income levels at http://aspe.hhs.gov/poverty/index.shtml (http://aspe.hhs.gov/poverty/index.shtml).

2. Individuals who come from an educational environment such as that found in certain rural or inner-city environments that has demonstrably and directly inhibited the individual from obtaining the knowledge, skills, and abilities necessary to develop and participate in a research career.

The disadvantaged background category (C1 and C2) is applicable to programs focused on high school and undergraduate candidates.

Literature shows that women from the above backgrounds (categories A, B, and C) face particular challenges at the graduate level and beyond in scientific fields. (See, e.g., Inside the Double

Bind, A Synthesis of Empirical Research on Undergraduate and Graduate Women of Color in Science, Technology, Engineering, and mathematics http://her.hepg.org/content/t022245n7x4752v2/fulltext.pdf (http://her.hepg.org/content/t022245n7x4752v2/fulltext.pdf)).

New applications must include a description of plans to enhance recruitment, including the strategies that will be used to enhance the recruitment of trainees from underrepresented backgrounds and may wish to include data in support of past accomplishments.

- For those individuals who participated in the research education program, the report should include information about the duration of education and aggregate information on the number of individuals who finished the program in good standing. Additional information on the required Recruitment Plan to Enhance Diversity is available at Frequently Asked Questions: Recruitment Plan to Enhance Diversity (Diversity FAQs (//grants.nih.gov/grants/guide/url_redirect.htm?id=61171)).

Applications lacking a diversity recruitment plan will not be reviewed.

Plan for Instruction in the Responsible Conduct of Research. All applications must include a plan to fulfill NIH requirements for instruction in the Responsible Conduct of Research (RCR). The plan must address the five, required instructional components outlined in the NIH policy: 1) Format - the required format of instruction, i.e., face-to-face lectures, coursework, and/or real-time discussion groups (a plan with only on-line instruction is not acceptable); 2) Subject Matter - the breadth of subject matter, e.g., conflict of interest, authorship, data management, human subjects and animal use, laboratory safety, research misconduct, research ethics; 3) Faculty Participation - the role of the program faculty in the instruction; 4) Duration of Instruction - the number of contact hours of instruction, taking into consideration the duration of the program; and 5) Frequency of Instruction –instruction must occur during each career stage and at least once every four years. See also NOT-OD-10-019. The plan should be appropriate and reasonable for the nature and duration of the proposed program. Renewal (Type 2) applications must, in addition, describe any changes in formal instruction over the past project period and plans to address any weaknesses in the current instruction plan. All participating faculty who served as course directors, speakers, lecturers, and/or discussion leaders during the past project period must be named in the application.

Applications lacking a plan for instruction in responsible conduct of research will not be reviewed.

Evaluation Plan. Applications must include a plan for evaluating the activities supported by the award. The application must specify baseline metrics (e.g., numbers, educational levels, and demographic characteristics of participants), as well as measures to gauge the short or long-term success of the research education award in achieving its objectives. Wherever appropriate, applicants are encouraged to obtain feedback from participants to help identify weaknesses and to provide suggestions for improvements. The evaluation plan should build upon current knowledge in the field, provide quantitative assessment of project impact and advance our understanding of STEM learning.

SEPA classroom-based P-12 projects must utilize either a Randomized Controlled Trial (RCT) or a Well-Matched Comparison study evaluation design to evaluate project effectiveness.

SEPA out-of-classroom or ISE projects must have a rigorous evaluation plan to measure impact. When appropriate, proposed out-of-classroom or ISE projects are encouraged to employ RCT or Well-Matched Case Comparison evaluation design

The proposed Research Education Program Plan must include either a Logic Model (http://www.informalscience.org/news-views/start-developing-logic-model) or STEM Pathways Model (https://c.ymcdn.com/sites/stem.sfaz.org/resource/resmgr/Brochure_-_STEM_Pathway_Prog.pdf).

Evaluator. The use of an external evaluator is not mandated in this FOA. However, the evaluator must be free of real or perceived conflict of interest. The evaluator must have formal training and experience in P-12 STEM evaluation methodology and statistics as demonstrated by relevant publications or reports. As indicated in the instructions for the SF424(R&R) Senior/Key Person Profile Expanded form, evaluator expertise in STEM education must be documented in the Biosketch section of the application. The evaluator should provide training and technical assistance, as necessary, to key staff and project partners to ensure integrity and adequacy of data capture, analysis and reporting.

Dissemination Plan. A specific plan must be provided to disseminate nationally any findings resulting from or materials developed under the auspices of the research education program, e.g., sharing course curricula and related materials via web postings, presentations at scientific meetings, workshops.

The dissemination plan must include diverse underrepresented groups in science, including underrepresented racial and ethnic groups, individuals from disadvantaged backgrounds and individuals with disabilities. The dissemination must include both genders and take reasonable steps to ensure access by Limited English Proficient Persons (LEP) persons. Proposed projects are encouraged to have plan to share resources with other SEPA projects, NIH-funded programs, or other federal agency-supported P-12 projects.

All SEPA applications must include a project website development plan for dissemination of resources developed as the result of SEPA funding. The website may be a new website or a SEPA-specific component added to an existing website. The SEPA website must be launched within 6 months from the initial award date. Credit text for NIH, NIGMS and SEPA must be displayed on the website Home Page.

Letters of Support

A letter of institutional commitment must be attached as part of Letters of Support (see section above: **"Institutional Environment and Commitment."**

Resource Sharing Plans

Individuals are required to comply with the instructions for the Resource Sharing Plans as provided in the SF424 (R&R) Application Guide, with the following Guide, with the following modification:

When relevant, applications are expected to include a software dissemination plan if support for development, maintenance, or enhancement of software is requested in the application. There is no prescribed single license for software produced. However, the software dissemination plan should address, as appropriate, the following goals:

- Software source code should be freely available to biomedical researchers and educators in the non-profit sector, such as institutions of education, research institutions, and government laboratories. Users should be permitted to modify the code and share their modifications with others.
- The terms of software availability should permit the commercialization of enhanced or customized versions of the software, or incorporation of the software or pieces of it into other software packages.
- To preserve utility to the community, the software should be transferable such that another individual or team

can continue development in the event that the original investigators are unwilling or unable to do so.

Appendix

Do not use the Appendix to circumvent page limits. Follow all instructions for the Appendix as described in the SF424 (R&R) Application Guide .

PHS Inclusion Enrollment Report

While this form will be provided for applications with due dates on or before January 24, 2018, it is not applicable.

PHS Human Subjects and Clinical Trials Information

While this form will be provided to applications with due dates on or after January 25, 2018, it is not applicable.

PHS Assignment Request Form

All instructions in the SF424 (R&R) Application Guide must be followed.

3. Unique Entity Identifier and System for Award Management (SAM)

See Part 1. Section III.1 for information regarding the requirement for obtaining a unique entity identifier and for completing and maintaining active registrations in System for Award Management (SAM), NATO Commercial and Government Entity (NCAGE) Code (if applicable), eRA Commons, and Grants.gov

4. Submission Dates and Times

Part I. Overview Information contains information about Key Dates and times. Applicants are encouraged to submit applications before the due date to ensure they have time to make any application corrections that might be necessary for successful submission. When a submission date falls on a weekend or Federal holiday (https://grants.nih.gov/grants/guide/url_redirect.htm?id=82380), the application deadline is automatically extended to the next business day.

Organizations must submit applications to Grants.gov (//grants.nih.gov/grants/guide/url_redirect.htm?id=11128) (the online portal to find and apply for grants across all Federal agencies). Applicants must then complete the submission process by tracking the status of the application in the eRA Commons (//grants.nih.gov/grants/guide/url_redirect.htm?id=11123), NIH's electronic system for grants administration. NIH and Grants.gov systems check the application against many of the application instructions upon submission. Errors must be corrected and a changed/corrected application must be submitted to Grants.gov on or before the application due date and time. If a Changed/Corrected application is submitted after the deadline, the application will be considered late. Add Applications that miss the due date and time are subjected to the NIH Policy on Late Application Submission.

Applicants are responsible for viewing their application before the due date in the eRA Commons to ensure accurate and successful submission.

Information on the submission process and a definition of on-time submission are provided in the SF424 (R&R) Application Guide.

5. Intergovernmental Review (E.O. 12372)

This initiative is not subject to intergovernmental review. (//grants.nih.gov/grants/guide/url_redirect.htm?id=11142)

6. Funding Restrictions

All NIH awards are subject to the terms and conditions, cost principles, and other considerations described in the *NIH Grants Policy Statement* (//grants.nih.gov/grants/guide/url_redirect.htm?id=11120).

Pre-award costs are allowable only as described in the *NIH Grants Policy Statement* (//grants.nih.gov/grants/guide

/url_redirect.htm?id=11143).

7. Other Submission Requirements and Information

Applications must be submitted electronically following the instructions described in the SF424 (R&R) Application Guide. Paper applications will not be accepted.

Applicants must complete all required registrations before the application due date. Section III. Eligibility Information contains information about registration.

For assistance with your electronic application or for more information on the electronic submission process, visit Applying Electronically (//grants.nih.gov/grants/guide/url_redirect.htm?id=11144). If you encounter a system issue beyond your control that threatens your ability to complete the submission process on-time, you must follow the Guidelines for Applicants Experiencing System Issues (//grants.nih.gov/grants/ElectronicReceipt/support.htm#guidelines). For assistance with application submission, contact the Application Submission Contacts in Section VII.

Important reminders:
All PD(s)/PI(s) must include their eRA Commons ID in the Credential field of the Senior/Key Person Profile Component of the SF424(R&R) Application Package**.** Failure to register in the Commons and to include a valid PD/PI Commons ID in the credential field will prevent the successful submission of an electronic application to NIH.

The applicant organization must ensure that the DUNS number it provides on the application is the same number used in the organization's profile in the eRA Commons and for the System for Award Management (SAM). Additional information may be found in the SF424 (R&R) Application Guide.

See more tips (//grants.nih.gov/grants/guide/url_redirect.htm?id=11146) for avoiding common errors.

Upon receipt, applications will be evaluated for completeness and compliance with application instructions by the Center for Scientific Review, NIH. Applications that are incomplete or non-compliant will not be reviewed.

Post Submission Materials

Applicants are required to follow the instructions for post-submission materials, as described in the policy (//grants.nih.gov/grants/guide/url_redirect.htm?id=82299).

Section V. Application Review Information

1. Criteria

Only the review criteria described below will be considered in the review process. As part of the NIH mission (//grants.nih.gov/grants/guide/url_redirect.htm?id=11149), all applications submitted to the NIH in support of biomedical, behavioral, and clinical research are evaluated for scientific and technical merit through the NIH peer review system.

For this announcement, note the following: The goal of this R25 program is to support educational activities that: (1) provide P-12 STEM resources that will increase Teacher STEM content and teaching skills, (2) stimulate the interest of students from underserved communities in careers in basic and clinical medical research and (3) educate the community on the correlation between lifestyle and health.

Overall Impact

Reviewers will provide an overall impact score to reflect their assessment of the likelihood for the project to strongly advance research education by fulfilling the goal of this R25 Education Program, in consideration of the following review criteria and additional review criteria, as applicable for the project proposed.

Scored Review Criteria

Reviewers will consider each of the review criteria below in the determination of scientific merit, and give a separate score for each. An application does not need to be strong in all categories to be judged likely to have major scientific impact.

Significance

Does the proposed program address a key audience and an important aspect or important need in research education? Is there convincing evidence in the application that the proposed program will significantly advance the stated goal of the program?

Does the proposed research education program address an important problem or critical question in research education or other key STEM issues? How will implementation of the proposed program encourage students from underserved communities to consider careers in health and medicine? How will implementation of the proposed program advance NIH workforce development objectives? Does the proposed project incorporate what is known about effective STEM education practices? Will this project generate resources that will increase career opportunities for underrepresented minorities and women, groups traditionally underrepresented in STEM fields, improve Teacher effectiveness through professional development and advance the field of evidence-based STEM education practices?

Investigator(s)

Is the PD/PI capable of providing both administrative and scientific leadership to the development and implementation of the proposed program? Is there evidence that an appropriate level of effort will be devoted by the program leadership to ensure the program's intended goal is accomplished? If applicable, is there evidence that the participating faculty have experience in mentoring students and teaching science? If applicable, are the faculty good role models for the participants by nature of their scientific accomplishments? If the project is collaborative or multi-PD/PI, do the investigators have complementary and integrated expertise; are their leadership approach, governance and organizational structure appropriate for the project?

Will there be an appropriate level of effort by the program leadership to ensure the program's success? Do the PD(s)/PI(s) or key personnel have expertise in evaluation that is relevant to the proposed project? If it is appropriate for the proposed project, does the key personnel include role models or near-peer mentors of age, gender, race or ethnicity similar to the target audience(s)?

Innovation

Taking into consideration the nature of the proposed research education program, does the applicant make a strong case for this program effectively reaching an audience in need of the program's offerings? Where appropriate, is the proposed program developing or utilizing innovative approaches and latest best practices to improve the knowledge and/or skills of the intended audience?

Is the proposed research education program characterized by innovation and scholarship? Does the proposed program challenge current research education paradigms or address an innovative hypothesis and critical barrier to progress in the STEM field? Are the proposed concepts, approaches, methodologies, tools, or technologies novel? Does the research plan maintain a balance between innovation and novel application of established STEM curriculum, pedagogy and evaluation metrics? Is a clear case made for the proposed innovation? Is a clear case made for using current, well-tested techniques to develop and implement the proposed project?

Approach

Does the proposed program clearly state its goals and objectives, including the educational level of the

audience to be reached, the content to be conveyed, and the intended outcome? Is there evidence that the program is based on a sound rationale, as well as sound educational concepts and principles? Is the plan for evaluation sound and likely to provide information on the effectiveness of the program? If the proposed program will recruit participants, are the planned recruitment, retention, and follow-up (if applicable) activities adequate to ensure a highly qualified participant pool?

Is the project design culturally relevant to the target audience? Is there input from the Teachers, parents, community and other stakeholders that will generate buy-in and ownership? If appropriate for the proposed project, is the plan for Teacher professional development in science content and pedagogical skills, both pre-service and as a continuing education process for in-service Teachers, well described? Does the content of the proposed project align with the Next Generation Science Standards? If appropriate is there a plan for a public outreach component?

Evaluation Plan: Does the evaluation staff have the appropriate training and experience in evaluation methodology to conduct the proposed evaluation plan? Is the percent effort of the external evaluator and project personnel sufficient? Is the evaluation plan based on appropriate literature and best practices in the STEM field? Does the Logic Model clearly link the proposed inputs and activities with short-, mid- and long-term outcomes? Are the evaluation benchmarks, timeline and metrics sufficient to capture, analyze and report outcome measures that would determine the success of the project in achieving its objectives? Does the evaluation plan have the flexibility to allow for shifting goals and program changes? Is there a discussion of the selection and appropriateness of control groups? If applicable, are the plans for obtaining feedback from participants adequate to measure the quality and effectiveness of the proposed preK-12 STEM project?

Dissemination Plan: Is the dissemination plan well-designed and appropriate for the materials that will be created? Is the proposed dissemination material(s) relevant to the target audience and are the target audiences likely to be aware of these resources? Does the dissemination plan include diverse underrepresented groups in science, including underrepresented racial and ethnic groups, individuals from disadvantaged backgrounds and individuals with disabilities? Does the dissemination plan include both genders? Does the dissemination plan take reasonable steps to ensure meaningful access to their programs and activities by Limited English Proficient Persons (LEP) persons? Will the dissemination leverage and/or support collaborations with other SEPA projects, NIH-funded programs, or other agency-supported P-12 projects? Do the PD(s)/PI(s) discuss plans for posters, presentations, workshops and other dissemination practices at local, regional and national conferences? Are there plans to utilize cutting-edge social media venues such as Wikis, YouTube, Facebook, etc.?

Website: Is the plan and timeline for the proposed SEPA project website development satisfactory?

Environment

Will the scientific and educational environment of the proposed program contribute to its intended goals? Is there a plan to take advantage of this environment to enhance the educational value of the program? Is there tangible evidence of institutional commitment? Is there evidence that the faculty have sufficient institutional support to create a sound educational environment for the participants? Where appropriate, is there evidence of collaboration and buy-in among participating programs, departments, and institutions?

Additional Review Criteria

As applicable for the project proposed, reviewers will evaluate the following additional items while determining scientific and technical merit, and in providing an overall impact score, but will not give separate scores for these items.

Protections for Human Subjects

For research that involves human subjects but does not involve one of the six categories of research that are

exempt under 45 CFR Part 46, the committee will evaluate the justification for involvement of human subjects and the proposed protections from research risk relating to their participation according to the following five review criteria: (1) risk to subjects, (2) adequacy of protection against risks, (3) potential benefits to the subjects and others, (4) importance of the knowledge to be gained, and (5) data and safety monitoring for clinical trials.

For research that involves human subjects and meets the criteria for one or more of the six categories of research that are exempt under 45 CFR Part 46, the committee will evaluate: (1) the justification for the exemption, (2) human subjects involvement and characteristics, and (3) sources of materials. For additional information on review of the Human Subjects section, please refer to the Guidelines for the Review of Human Subjects (//grants.nih.gov/grants/guide/url_redirect.htm?id=11175).

Inclusion of Women, Minorities, and Children

When the proposed project involves human subjects and/or NIH-defined clinical research, the committee will evaluate the proposed plans for the inclusion (or exclusion) of individuals since sex/gender, race, and ethnicity, as well as the inclusion (or exclusion) of children to determine if it is justified in terms of the scientific goals and research strategy proposed. For additional information on review of the Inclusion section, please refer to the Guidelines for the Review of Inclusion in Clinical Research (//grants.nih.gov/grants/guide/url_redirect.htm?id=11174).

Vertebrate Animals

The committee will evaluate the involvement of live vertebrate animals as part of the scientific assessment according to the following criteria: (1) description of proposed procedures involving animals, including species, strains, ages, sex, and total number to be used; (2) justifications for the use of animals versus alternative models and for the appropriateness of the species proposed; (3) interventions to minimize discomfort, distress, pain and injury; and (4) justification for euthanasia method if NOT consistent with the AVMA Guidelines for the Euthanasia of Animals. Reviewers will assess the use of chimpanzees as they would any other application proposing the use of vertebrate animals. For additional information on review of the Vertebrate Animals section, please refer to the Worksheet for Review of the Vertebrate Animal Section. (//grants.nih.gov/grants/guide/url_redirect.htm?id=11150)

Biohazards

Reviewers will assess whether materials or procedures proposed are potentially hazardous to research personnel and/or the environment, and if needed, determine whether adequate protection is proposed.

Resubmissions

For Resubmissions, the committee will evaluate the application as now presented, taking into consideration the responses to comments from the previous scientific review group and changes made to the project.

Renewals

Not Applicable

Revisions

Not Applicable

Additional Review Considerations

As applicable for the project proposed, reviewers will consider each of the following items, but will not give scores for these items, and should not consider them in providing an overall impact score.

Recruitment Plan to Enhance Diversity

Peer reviewers will separately evaluate the recruitment plan to enhance diversity after the overall score has been determined. Reviewers will examine the strategies to be used in the recruitment of individuals from underrepresented groups. The review panel's evaluation will be included in the summary statement. Plans will be rated as **acceptable** or **unacceptable**, and the summary statement will provide the consensus of the review committee.

Training in the Responsible Conduct of Research

Applications from Foreign Organizations

Not Applicable

Select Agent Research

Generally not applicable. Reviewers should bring any concerns to the attention of the Scientific Review Officer.

Resource Sharing Plans

Reviewers will comment on whether the following Resource Sharing Plans, or the rationale for not sharing the following types of resources, are reasonable (//grants.nih.gov/grants/guide/url_redirect.htm?id=11153): 1) Data Sharing Plan (//grants.nih.gov/grants/guide/url_redirect.htm?id=11151); 2) Sharing Model Organisms (//grants.nih.gov/grants/guide/url_redirect.htm?id=11152); and 3) Genomic Data Sharing Plan (//grants.nih.gov/grants/guide/url_redirect.htm?id=11153). If support for development, maintenance, or enhancement of software is requested in the application, the reviewers will comment on the proposed software dissemination plan

Budget and Period of Support

Reviewers will consider whether the budget and the requested period of support are fully justified and reasonable in relation to the proposed research.

2. Review and Selection Process

Applications will be evaluated for scientific and technical merit by (an) appropriate Scientific Review Group(s) convened by the Center for Scientific Review (CSR), in accordance with NIH peer review policy and procedures (//grants.nih.gov/grants/guide/url_redirect.htm?id=11154), using the stated review criteria. Assignment to a Scientific Review Group will be shown in the eRA Commons.

As part of the scientific peer review, all applications:

- May undergo a selection process in which only those applications deemed to have the highest scientific and technical merit (generally the top half of applications under review) will be discussed and assigned an overall impact score.
- Will receive a written critique.

Applications will be assigned on the basis of established PHS referral guidelines to the appropriate NIH Institute or Center. Applications will compete for available funds with all other recommended applications submitted in response to this FOA. Following initial peer review, recommended applications will receive a second level of review by the appropriate national Advisory Council or Board. The following will be considered in making funding decisions:

- Scientific and technical merit of the proposed project as determined by scientific peer review.
- Availability of funds.

- Relevance of the proposed project to program priorities.
- Geographic distribution of the awards.

3. Anticipated Announcement and Award Dates

After the peer review of the application is completed, the PD/PI will be able to access his or her Summary Statement (written critique) via the eRA Commons (//grants.nih.gov/grants/guide/url_redirect.htm?id=11123). Refer to Part 1 for dates for peer review, advisory council review, and earliest start date.

Information regarding the disposition of applications is available in the *NIH Grants Policy Statement* (//grants.nih.gov/grants/guide/url_redirect.htm?id=11156).

Section VI. Award Administration Information

1. Award Notices

If the application is under consideration for funding, NIH will request "just-in-time" information from the applicant as described in the *NIH Grants Policy Statement* (//grants.nih.gov/grants/guide/url_redirect.htm?id=11157).

A formal notification in the form of a Notice of Award (NoA) will be provided to the applicant organization for successful applications. The NoA signed by the grants management officer is the authorizing document and will be sent via email to the grantee's business official.

Awardees must comply with any funding restrictions described in Section IV.5. Funding Restrictions. Selection of an application for award is not an authorization to begin performance. Any costs incurred before receipt of the NoA are at the recipient's risk. These costs may be reimbursed only to the extent considered allowable pre-award costs.

Any application awarded in response to this FOA will be subject to terms and conditions found on the Award Conditions and Information for NIH Grants (//grants.nih.gov/grants/guide/url_redirect.htm?id=11158) website. This includes any recent legislation and policy applicable to awards that is highlighted on this website.

2. Administrative and National Policy Requirements

All NIH grant and cooperative agreement awards include the *NIH Grants Policy Statement* (//grants.nih.gov/grants/guide/url_redirect.htm?id=11120) as part of the NoA. For these terms of award, see the *NIH Grants Policy Statement* Part II: Terms and Conditions of NIH Grant Awards, Subpart A: General (//grants.nih.gov/grants/guide/url_redirect.htm?id=11157) and Part II: Terms and Conditions of NIH Grant Awards, Subpart B: Terms and Conditions for Specific Types of Grants, Grantees, and Activities (//grants.nih.gov/grants/guide/url_redirect.htm?id=11159). More information is provided at Award Conditions and Information for NIH Grants (//grants.nih.gov/grants/guide/url_redirect.htm?id=11158).

Recipients of federal financial assistance (FFA) from HHS must administer their programs in compliance with federal civil rights law. This means that recipients of HHS funds must ensure equal access to their programs without regard to a person's race, color, national origin, disability, age and, in some circumstances, sex and religion. This includes ensuring your programs are accessible to persons with limited English proficiency. HHS recognizes that research projects are often limited in scope for many reasons that are nondiscriminatory, such as the principal investigator's scientific interest, funding limitations, recruitment requirements, and other considerations. Thus, criteria in research protocols that target or exclude certain populations are warranted where nondiscriminatory justifications establish that such criteria are appropriate with respect to the health or safety of the subjects, the scientific study design, or the purpose of the research.

For additional guidance regarding how the provisions apply to NIH grant programs, please contact the

Scientific/Research Contact that is identified in Section VII under Agency Contacts of this FOA. HHS provides general guidance to recipients of FFA on meeting their legal obligation to take reasonable steps to provide meaningful access to their programs by persons with limited English proficiency. Please see http://www.hhs.gov /ocr/civilrights/resources/laws/revisedlep.html. The HHS Office for Civil Rights also provides guidance on complying with civil rights laws enforced by HHS. Please see http://www.hhs.gov/ocr/civilrights/understanding/section1557 /index.html (http://www.hhs.gov/ocr/civilrights/understanding/section1557/index.html); and http://www.hhs.gov /ocr/civilrights/understanding/index.html (http://www.hhs.gov/ocr/civilrights/understanding/index.html). Recipients of FFA also have specific legal obligations for serving qualified individuals with disabilities. Please see http://www.hhs.gov/ocr/civilrights/understanding/disability/index.html (http://www.hhs.gov/ocr/civilrights /understanding/disability/index.html). Please contact the HHS Office for Civil Rights for more information about obligations and prohibitions under federal civil rights laws at http://www.hhs.gov/ocr/office/about/rgn-hqaddresses.html (http://www.hhs.gov/ocr/office/about/rgn-hqaddresses.html) or call 1-800-368-1019 or TDD 1-800-537-7697. Also note it is an HHS Departmental goal to ensure access to quality, culturally competent care, including long-term services and supports, for vulnerable populations. For further guidance on providing culturally and linguistically appropriate services, recipients should review the National Standards for Culturally and Linguistically Appropriate Services in Health and Health Care at http://minorityhealth.hhs.gov /omh/browse.aspx?lvl=2&lvlid=53 (http://minorityhealth.hhs.gov/omh/browse.aspx?lvl=2&lvlid=53).

In accordance with the statutory provisions contained in Section 872 of the Duncan Hunter National Defense Authorization Act of Fiscal Year 2009 (Public Law 110-417), NIH awards will be subject to the Federal Awardee Performance and Integrity Information System (FAPIIS) requirements. FAPIIS requires Federal award making officials to review and consider information about an applicant in the designated integrity and performance system (currently FAPIIS) prior to making an award. An applicant, at its option, may review information in the designated integrity and performance systems accessible through FAPIIS and comment on any information about itself that a Federal agency previously entered and is currently in FAPIIS. The Federal awarding agency will consider any comments by the applicant, in addition to other information in FAPIIS, in making a judgement about the applicant's integrity, business ethics, and record of performance under Federal awards when completing the review of risk posed by applicants as described in 45 CFR Part 75.205 "Federal awarding agency review of risk posed by applicants." This provision will apply to all NIH grants and cooperative agreements except fellowships.

SEPA project websites must contain clearly visible SEPA funding credit text consistent with the following text:

This project/exhibit was made possible by a Science Education Partnership Award (SEPA), Grant Number _____, from the National Institute of General Medical Sciences (NIGMS), National Institutes of Health (NIH). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the NIGMS or NIH.

or

The project/exhibit described is funded by a Science Education Partnership Award (SEPA) grant, Grant Number _____ from the National Institutes of General Medical Sciences (NIGMS), National Institutes of Health (NIH). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the NIGMS or NIH.

SEPA science center and museum projects must be clearly identifiable as an independent exhibit. If the proposed SEPA exhibit is to be a component of a large-scale exhibit, it must be identified as a SEPA-funded component within the larger exhibit.

SEPA funding credit text for science center and museum exhibits should be clearly displayed and consistent with the following text:

This exhibit was made possible by a Science Education Partnership Award (SEPA), Grant Number _____, from the National Institutes of General Medical Sciences (NIGMS), National Institutes of Health (NIH).

or

"The exhibit described is funded by a Science Education Partnership Award (SEPA) grant, Grant Number _____ from the National Institutes of General Medical Sciences (NIGMS), National Institutes of Health (NIH).

Post-award monetary support from foundations, biotechnology companies or other entities for SEPA-funded projects is welcome and should be listed in website and media credit text or exhibit credit signage as being "additional funding from" or "follow-on funding from".

3. Reporting

When multiple years are involved, awardees will be required to submit the Research Performance Progress Report (RPPR) (//grants.nih.gov/grants/rppr/index.htm) annually. Continuation support will not be provided until the required forms are submitted and accepted. Programs that involve participants should report on education in the responsible conduct of research and complete a Training Diversity Report (//grants.nih.gov/grants/guide/url_redirect.htm?id=61198), in accordance with the RPPR Instruction Guide (//grants.nih.gov/grants/rppr/rppr_instruction_guide.pdf).

The Federal Funding Accountability and Transparency Act of 2006 (Transparency Act), includes a requirement for awardees of Federal grants to report information about first-tier subawards and executive compensation under Federal assistance awards issued in FY2011 or later. All awardees of applicable NIH grants and cooperative agreements are required to report to the Federal Subaward Reporting System (FSRS) available at www.fsrs.gov (//grants.nih.gov/grants/guide/url_redirect.htm?id=11170) on all subawards over $25,000. See the *NIH Grants Policy Statement* (//grants.nih.gov/grants/guide/url_redirect.htm?id=11171) for additional information on this reporting requirement.

Failure by the grantee institution to submit required forms in a timely, complete, and accurate manner may result in an expenditure disallowance or a delay in any continuation funding for the award.

In accordance with the regulatory requirements provided at 45 CFR 75.113 and Appendix XII to 45 CFR Part 75, recipients that have currently active Federal grants, cooperative agreements, and procurement contracts from all Federal awarding agencies with a cumulative total value greater than $10,000,000 for any period of time during the period of performance of a Federal award, must report and maintain the currency of information reported in the System for Award Management (SAM) about civil, criminal, and administrative proceedings in connection with the award or performance of a Federal award that reached final disposition within the most recent five-year period. The recipient must also make semiannual disclosures regarding such proceedings. Proceedings information will be made publicly available in the designated integrity and performance system (currently FAPIIS). This is a statutory requirement under section 872 of Public Law 110-417, as amended (41 U.S.C. 2313). As required by section 3010 of Public Law 111-212, all information posted in the designated integrity and performance system on or after April 15, 2011, except past performance reviews required for Federal procurement contracts, will be publicly available. Full reporting requirements and procedures are found in Appendix XII to 45 CFR Part 75 – Award Term and Conditions for Recipient Integrity and Performance Matters.

Other Reporting Requirements

A final RPPR and the expenditure data portion of the Federal Financial Report are required for closeout of an award as described in the *NIH Grants Policy Statement* (//grants.nih.gov/grants/guide/url_redirect.htm?id=11161).

4. Evaluation

In carrying out its stewardship of human resource-related programs, the NIH or its Institutes and Centers will periodically evaluate their R25 research education programs, employing the measures identified below. In assessing the effectiveness of its research education investments, NIH may request information from databases, PD/PIs, and from participants themselves. Where necessary, PD/PIs and participants may be contacted after the completion of a research education experience for periodic updates on participants'

subsequent educational or employment history and professional activities.

Upon the completion of a program evaluation, NIH and its ICs will determine whether to (a) continue a program as currently configured, (b) continue a program with modifications, or (c) discontinue a program.

In evaluating this research education program NIGMS expects to use the following evaluation measures:

For Courses for Skills Development:

- Aggregate number and demographic characteristics of participants
- Educational level of participants
- Content
- Participants' feedback on the program
- New knowledge or skills acquired

For Programs Focusing on Curriculum or Methods Development:

- Aggregate number and demographic characteristics of participants exposed to the new curricula or methods
- General educational level of participants
- Effectiveness of the new curricula or methods assessed by skills/competencies gained compared to existing curricula or methods
- Dissemination and/or adoption of the new curricula or methods

For Outreach Programs:

- Aggregate number and demographic characteristics of individuals reached
- Educational levels of participants
- Assessment of increased awareness, knowledge, or understanding of science- or research-related concepts, processes, or careers

Section VII. Agency Contacts

We encourage inquiries concerning this funding opportunity and welcome the opportunity to answer questions from potential applicants.

Application Submission Contacts

eRA Service Desk (Questions regarding ASSIST, eRA Commons registration, submitting and tracking an application, documenting system problems that threaten submission by the due date, post submission issues)
Finding Help Online: http://grants.nih.gov/support/ (//grants.nih.gov/support/) (preferred method of contact)
Telephone: 301-402-7469 or 866-504-9552 (Toll Free)

Grants.gov Customer Support (//grants.nih.gov/grants/guide/url_redirect.htm?id=82301) (Questions regarding Grants.gov registration and submission, downloading forms and application packages)
Contact Center Telephone: 800-518-4726
Email: support@grants.gov (mailto:support@grants.gov)

GrantsInfo (Questions regarding application instructions and process, finding NIH grant resources)
Email: GrantsInfo@nih.gov (mailto:GrantsInfo@nih.gov) (preferred method of contact)
Telephone: 301-945-7573

Scientific/Research Contact(s)

Tony Beck, Ph.D.
National Institute of General Medical Sciences (NIGMS)
Telephone: 301-480-4623
Email: beckl@mail.nih.gov (mailto:beckl@mail.nih.gov)

Peer Review Contact(s)

Jonathan Arias, Ph.D.
Center for Scientific Review (CSR)
Telephone: 301-435-2406
Email: *ariasj@csr.nih.gov (mailto:ariasj@csr.nih.gov)*

Financial/Grants Management Contact(s)

Christy Leake
National Institute of General Medical Sciences (NIGMS)
Telephone: 301-594-7706
Email: Christy.leake@nih.gov (mailto:Christy.leake@nih.gov)

Section VIII. Other Information

Recently issued trans-NIH policy notices (//grants.nih.gov/grants/guide/url_redirect.htm?id=11163) may affect your application submission. A full list of policy notices published by NIH is provided in the *NIH Guide for Grants and Contracts* (//grants.nih.gov/grants/guide/url_redirect.htm?id=11164). All awards are subject to the terms and conditions, cost principles, and other considerations described in the *NIH Grants Policy Statement* (//grants.nih.gov/grants/guide/url_redirect.htm?id=11120).

Authority and Regulations

Awards are made under the authorization of Sections 301 and 405 of the Public Health Service Act as amended (42 USC 241 and 284) and under Federal Regulations 42 CFR Part 52 and 45 CFR Part 75.

Weekly TOC for this Announcement (/grants/guide/WeeklyIndex.cfm?09-22-17)
NIH Funding Opportunities and Notices (/grants/guide/index.html)

Note: For help accessing PDF, RTF, MS Word, Excel, PowerPoint, Audio or Video files, see Help Downloading Files (/grants/edocs.htm).