



Tony Beck, Ph.D.
National Institute of
General Medical
Sciences

SEPA Pre-Submission Webinar

Thursday, June 15, 2023

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Presenters

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Agenda

Overview of the SEPA program

Grant Review Process

Human Subjects

Budget

Inside a SEPA Review

Q&A

Science Education Partnership Awards (SEPA)

- Support science, technology, engineering, and mathematics (STEM) projects
- Increased workforce diversity
- Pre-college students (pre-kindergarten to grade 12)
 - Diverse backgrounds
 - Groups underrepresented in the biomedical and behavioral sciences, to pursue further studies in science, technology, engineering, and mathematics (STEM).
- Science Center and Museum projects

Activities - Science Education Partnership Awards (SEPA)

A SEPA project may focus on one or more of the following activities

- Courses for Skills Development
- Mentoring Activities
- Curriculum or Methods Development
- Outreach

SEPA supports two types of projects

- (1) Classroom-based projects for pre-college) students and teachers
- (2) Informal science education (ISE) projects conducted in outside-the-classroom venues such as science centers, museums and libraries

Projects that support quantitative and computational skills development are strongly encouraged.

Learn more about SEPA - Part 1

SEPA website: <https://nihsepa.org/>

- Search by:
 - Programs by state
 - Topic
 - Resources
 - Videos
 - News
 - Annual PI Conference
 - Evaluation

Learn more about SEPA - Part 2

SEPA website

[https://nigms.nih.gov/capacity-building/division-for-research-capacity-building/science-education-partnership-awards-\(sepa\)](https://nigms.nih.gov/capacity-building/division-for-research-capacity-building/science-education-partnership-awards-(sepa))

SEPA Interactive Portfolio Dashboard

<https://nigms.nih.gov/Research/DRCB/Pages/DRCB-SEPA-Interactive-Portfolio-Dashboard.aspx>

Notification of Funding Opportunity (NOFO) PAR-23-137

- R25 Research Education funding mechanism
- Award
 - Length of award = 5 years
 - Maximum allowed per year:
 - \$250,000 in Direct Costs
 - 8% Facilities and Administrative Costs
- Application receipt date is July 14, 2023
- Future application receipt dates: June 07, 2024, June 6, 2025
- Awards will be issued April to August 2024

Expansion of Science Education Partnership Awards (SEPA) Program

- PAR-23-137
- 21 NIH ICOs signed on to be able to fund SEPA grants
- All applications will be submitted to NIGMS. Participating ICs may select applications they are interested in funding after review
- SEPA awardees funded by all ICs will participate in program-wide activities
- Goal is to fund more SEPA grants
- We want to see **MORE** SEPA applications!

Changes in SEPA PAR-23-137 – Part 1

PI Effort (single PI management plan)

- OLD minimum of 1.2 person months
- NEW minimum of 2.0 person months per year.
maximum of 4.8 person months PD/PI effort per year

PI Effort (Multi-PI (MPI) management plan)

- OLD Contact-PI: minimum of 1.2 person months
- NEW Contact-PI: minimum of 2.0 person months per year.
4.8 person months for combined MPI effort

Changes in SEPA PAR-23-137 – Part 2

Letters of Intent

- OLD optional
 - NEW no longer allowed
-
- **Number of Applications**
 - OLD 1 per organization
 - NEW More than 1 per organization

Evaluation

- OLD minimum of ten percent (10%) of the direct costs requested
- NEW maximum of ten percent (10%) of the direct costs requested

Changes in SEPA PAR-23-137

Gantt Chart

- OLD not mentioned
- NEW required

Resource Sharing Plan

- OLD required
- NEW no longer required

Recruitment Plan to Enhance Diversity

Training in the Responsible Conduct of Research

- OLD no impact on priority score
- NEW does impact on priority score

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Getting started with your SEPA grant proposal

PREPARATION – PART 1

Create an eRA Commons Account

<https://www.era.nih.gov/register-accounts/create-and-edit-an-account.htm>

- Understanding eRA Commons Account
- Register in eRA Commons
- Manage Institution Profile
- Access eRA Modules via login.gov
- Create and Edit an Account
- Account Roles

PREPARATION – PART 2

1. Study SEPA NOFO
2. Visit SEPA website, <https://nihsepa.org/>
 - Search by
 - Topic
 - Target Audience
 - Applicant Organization
 - SEPA Projects by Funding Year
 - Annual SEPA PI Conference Reports

PREPARATION – PART 3

- Assemble team
- Identify partners
- Define target audience
- Draft research plan
- Email to schedule a call

Thomas Cho, Ph.D.
Center for Scientific
Review (CSR)

Grant Submission and Review-related issues

Grant Submission and Review-related issues

National Institutes of Health (NIH)

- 27 separate institutes and centers (ICs) that conduct and coordinate research across different disciplines of biomedical science.
- 6 NIH Centers including Center for Scientific Review (CSR)
- Center for Scientific Review (CSR) mission
 - Ensure that NIH grant applications receive fair, independent, expert, and timely scientific reviews
 - Free from inappropriate influences
 - Review process outcome: NIH can fund the most promising research

Grant Submission and Review-related issues

Scoring Range

- | | |
|-------|--|
| 1 – 3 | High program importance, few or no weaknesses |
| 4 – 6 | High program importance with weaknesses
Moderate importance with few or no weaknesses |
| 7 – 9 | Moderate or High importance with significant weaknesses
Low or No importance with some or no weaknesses |

Grant Submission and Review-related issues

Panel Discussion and a Summary Statement

Scores 1 – 3 High importance, few or no weakness

Scores 4 – 6 High importance with weaknesses

Moderate importance with few or no weaknesses

Not Discussed (ND) and a Summary Statement

Scores 7 – 9 Moderate or High importance with significant weaknesses

Low or No importance with some or no weaknesses

Grant Submission and Review-related issues

SCORED REVIEW CRITERIA

PAR-23-137

Section V. Application Review Information

Five review criteria considered in an overall impact score:

- ✓ Significance
- ✓ Investigator(s)
- ✓ Innovation
- ✓ Approach
- ✓ Environment

Grant Submission and Review-related issues

ADDITIONAL REVIEW CRITERIA (considered in an overall impact score):

- Protections for Human Subjects
- Inclusion of Women, Minorities, and Children
- Vertebrate Animals
- Recruitment Plan to Enhance Diversity*
- Training in the Responsible Conduct of Research – Including Laboratory Safety
- Biohazards

ADDITIONAL REVIEW CONSIDERATIONS (Not considered in overall impact score)

- Budget and Period of Support

Grant Submission and Review-related issues

NOTE: Application will be withdrawn prior to peer review if improper Appendix or Hyperlinks are used

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

Hyperlinks and URLs

- Are not permitted in the Research Plan/Approach
- They may be used in citing relevant publications in biosketches and publication lists.
- NIH policy on the use of hyperlinks is articulated in the NIH SF424 (R&R) Application Guide reads: Hyperlinks and URLs may not be used to provide information necessary to application review.

Grant Submission and Review-related issues

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

- 1. 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.
- 2. Current and Pending Support:** Related sources of support for research training and education.
- 3. Letters of Support:**
 1. Institutional commitment
 2. Commitment of partners and/or collaborators

Grant Submission and Review-related issues

4. Project Narrative. The Project Narrative should discuss the broader impact potential for the proposed SEPA project to benefit society and contribute to the achievement of specific, desired workforce diversity, societal and health literacy outcomes

5. Advisory Committee

- If proposed, discuss the composition, roles and responsibilities of the committee, desired expertise of committee members, and frequency of committee meetings.
- Advisory committee members should not be identified or contacted prior to receiving an award.

Grant Submission and Review-related issues

Post-Submission Materials

- General guidelines for preparing post-submission materials
<https://grants.nih.gov/grants/guide/notice-files/NOT-OD-19-083.html>
- Guidance for Videos Submitted as NIH Application Materials:
 - Application must discuss video content and relevance.
 - Cover letter must state intent to submit a video;
<http://grants.nih.gov/grants/guide/notice-files/not-od-12-141.html>

Grant Submission and Review-related issues

Peer Review Integrity

- Do not contact any reviewers listed on the roster regarding any aspects of the review of your application.
- This is violating the NIH confidentiality and conflict of interest rules and can lead to a deferral of your application.



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Human Subjects Inclusion

Human Subjects Research

Research involving a living individual about whom:

- Data are obtained/used/studied/analyzed through interaction/intervention
- Interaction with subjects for the collection of biospecimens or data (including health or clinical data, surveys, focus groups or observation of behavior)
- Examples:
 - Testing a new educational technique
 - Conducting a focus group
 - Conducting a survey
 - Interviewing

<https://grants.nih.gov/sites/default/files/human-subjects-research-infographic.pdf>

Human Subjects Exemptions

- Exemption E1 (X1)
 - Effectiveness of on-line training as supplement to regular instructional approach.
 - Effectiveness of activities to increase awareness of oral health delivered at a community science museum
- Exemption E2 (X2)
 - Focus group of adult community members to discuss access to dental care
 - Questionnaire about outdoor exercise, including collection of participants' age and zip code

https://grants.nih.gov/sites/default/files/exemption_infographic_v8_508c_1-15-2020.pdf

Human Subjects Research – Decision Tree

Decision Tree for NIH Clinical Trial Definition

1. Human participants = Yes
2. Prospective assignment to an intervention = Yes
3. Study designed to evaluate effect of intervention on participant = Yes
4. Is the effect a health-related biomedical or behavioral outcome = No

This study is NOT a clinical trial

<https://grants.nih.gov/policy/clinical-trials/ct-decision-tree.pdf>

Human Subjects Research - Inclusion

INCLUSION:

- Ensure that women and minorities are included in all clinical research as appropriate to the scientific question under study.

INCLUSION ENROLLMENT REPORT (IER)

- This form is used to report:
 - planned and cumulative (or actual) enrollment
 - describes the sex/gender, race, and ethnicity of the study participants

Human Subjects Research - Helpful Hints

- Check with your institutional review board (IRB) and Human Research Protection Program (HRPP) Resources prior to submission
- Study NIH websites – valuable resources:
 - Frequently Asked Questions (FAQs), <https://grants.nih.gov/faqs#/>
 - eRA Training - Human Subjects System (HSS), [eRA Training - Human Subjects System \(HSS\) | eRA \(nih.gov\)](#)
- Program evaluations that use Randomized Control Trial (RCT) methodology are NOT clinical trials.



National Institute of
General Medical Sciences



Christy Leake

National Institute of
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Grants Management Basics

Grants Management Basics - General Guidance Part 1

- Annual Award Budget: \$250,000 direct costs
- Award Project Period: Up to 5 years
- Indirect Costs are reimbursed at 8% of Modified Total Direct Costs (MTDC)
- More than one SEPA application is now allowed per institution as per NOT-GM-22-037, <https://grants.nih.gov/grants/guide/notice-files/NOT-GM-22-037.html>
- Organizations may be a subcontract on another SEPA award as long as the subcontract does not exceed 20% of the direct costs requested.

Grants Management Basics –General Guidance Part 2

- Competing applications with a detailed budget can continue to request cost-of-living/inflationary increases in accordance with institutional policy.
- Requests associated solely with inflationary increases will be eliminated from the awarded budget for competing awards.
- Requests associated with special needs (e.g., equipment, added personnel or increased effort) will continue to be considered.
- Useful link: [http://grants.nih.gov/grants/financial/fiscal_policy_faq .htm](http://grants.nih.gov/grants/financial/fiscal_policy_faq.htm)

Grants Management Basics - 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 are considered a regular part of an individual's academic duties, then any costs associated with the mentoring are not allowable costs from grant funds)

Grants Management Basics - Participant Costs

- Participants are those individuals who are involved in the proposed research education activity.
- Participants may be paid if specifically required for the proposed research education program and sufficiently justified.
- Participant costs must be itemized in the proposed budget.

Grants Management Basics - Meals

- Allowable for subjects and patients under study, or where specifically approved as part of the project activity
- Meal charges cannot be not duplicated in participants' per diem or subsistence allowances
- When certain meals are an integral and necessary part of a meeting or conference i.e., a working meal where business is transacted, grant funds may be used
- Recurring business meetings, such as staff meetings, cannot use grant funds for meals
- Please see section [7.9.1 of the NIH Grants Policy Statement](#)

Grants Management Basics - Best Practices

- Ensure costs are reasonable, allocable, necessary and consistently treated
- Provide adequate budget justifications to explain the relevance of costs to the proposed SEPA project
- Research proposed costs in advance – check with your Office of Sponsored Programs, or equivalent office for institutional cost policies

Grants Management Basics - 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 and must not duplicate items generally available at the applicant institution.
- Funds to support travel to the annual SEPA PI conference should be requested in the budget.

Grants Management Basics – Allowable and Unallowable Costs

Allowable Costs:

- Teachers and students participating in a SEPA project can be compensated for their participation in the project
- Incentive payments to volunteers or participants in a grant-supported project are allowable

Unallowable Costs:

- Stipends are not allowable on R25 awards.
- Entertainment is not allowable on NIH awards
- Gifts are unallowable on all NIH awards.
- Promotional Items are not allowable on NIH awards

Grants Management Basics - Questionable Costs

- Honorarium – not allowable when it is used to confer distinction on a speaker
- General Supplies – only costs directly related to the grant and/or project are allowable as direct costs

All costs must be allowable, reasonable, allocable, necessary and be accorded consistent treatment.



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Inside a SEPA Review Panel

Inside a SEPA Review Panel - Scoring Range

- 1 – 3 High importance, few or no weaknesses
- 4 – 6 High importance with weaknesses
Moderate importance with few or no weaknesses
- 7 – 9 Moderate or High importance with significant weaknesses
Low or No importance with some or no weaknesses

Inside a SEPA Review Panel – Scoring Criteria Part 1

Scoring Criteria using the 1 – 9 scale

- Significance
- Investigators
- Innovation
- Research Plan/Approach
- Environment

Inside a SEPA Review Panel – Scoring Criteria Part 2

Scoring Criteria using the 1 – 9 scale

- Significance
 - Current state of the field
 - Hypothesis driven innovation
 - Short & long-term impact
- Investigators
 - Prior work/track record
 - Publications
 - Evaluation data and outcomes from prior work
- Innovation
 - Move the field forward

Inside a SEPA Review Panel – Scoring Criteria Part 3

Scoring Criteria

Approach/Research Plan

- 3 Specific Aims
- Potential problems & solutions
- Evaluator input – early and sustained
- Teacher input – early and sustained
- Logic Model
- Gantt Chart
- Literature documentation

Inside a SEPA Review Panel – Scoring Criteria Part 4

Scoring Criteria

Approach/Research Plan

- Control group(s)
- NGSS alignment
- Tables, figures, charts
- Images
- Letters of Support
- Literature documentation

Inside a SEPA Review Panel – Scoring Criteria Part 5

Scoring Criteria

Environment

- Evidence of institutional commitment
- A sound educational environment for the participants
- Evidence of collaboration and buy-in among participating programs, departments, and institutions?

Inside a SEPA Review Panel – Scoring Criteria Part 6

Scoring Criteria – Universal Strengths and Weaknesses

Significance:

Strengths

- A well-organized proposal
- Scientific premise is sound.
- Proposed pedagogical plan for student learning is well supported by research
- Past team and key personnel successes

Inside a SEPA Review Panel – Scoring Criteria Part 7

Scoring Criteria – Universal Strengths and Weaknesses

Significance:

Weaknesses

- No discussion or literature references to the existing STEM resources
- No evidence, data or literature, for impact and effectiveness
- No link to Next Generation Science Standards (NGSS) or state science standards
- Gender differences do not appear to be considered.

Inside a SEPA Review Panel – Scoring Criteria Part 8

Scoring Criteria – Universal Strengths and Weaknesses

Innovation:

Strengths

- The game as presented draws on previous successes of the team members.
- Using real world examples and scientific data to engage students in STEM learning.
- While specific elements of application are not innovative, the entire package is an innovative way to teach

Inside a SEPA Review Panel – Scoring Criteria Part 9

Scoring Criteria – Universal Strengths and Weaknesses

Innovation:

Weaknesses

- It is not clear what differentiates this STEM resource from other similar STEM resources
- Insufficient flexibility for use by many teachers and/or district curricula

Inside a SEPA Review Panel – Scoring Criteria Part 10

Scoring Criteria – Universal Strengths and Weaknesses

Approach:

- Strengths
 - The application is clearly written.
 - The specific aims are clearly articulated
 - NGSS or state science standards will be incorporated.
 - Teacher feedback is planned.
 - Comparisons between groups will include the biological (sex and age) and social (poverty and learning skills).

Inside a SEPA Review Panel – Scoring Criteria Part 11

Scoring Criteria – Universal Strengths and Weaknesses

Approach:

- Weaknesses
 - The approach seems overly ambitious
 - Educational goals are not articulated in a measurable way
 - Assessment tools are not validated
 - No control group is discussed
 - The user group that is informing the development of the STEM resource lacks diversity

Goal for any application is this reviewer comment

“The application is clearly written and the specific aims are clearly articulated”

Use plain, simple language, short words and brief sentences. Don't let fluff and flowers and verbosity creep in.

Mark Twain