Southwest Interdisciplinary Research Center

ARIZONA STATE UNIVERSITY

SIRC Health Disparities Pilot Research Projects

APPLICATION GUIDE

Background: SIRC Health Disparities Pilot Research Project Program

- Purpose: to expand the size and capacity of the scientific workforce for conducting rigorous research on minority health and the reduction or elimination of health disparities.
- Goal: generate knowledge with the potential to impact minority health and health disparities.
- Desired: a minority health disparities focus that is multi-level (e.g., individual, family, school, neighborhood, community, culture) or multi-domain (e.g., biological, behavioral, interpersonal, environmental, historical place).
- Funded through SIRC's center grant from the National Institute on Minority Health and Health Disparities (2U54MD002316)

Format Requirements

- Set all page margins to ½ inch or larger
- Font size should be 11 pt. or larger
- Use a single, consistent citation and reference style, which can be APA, AMA, Chicago, MLA, or IEEE
- Place all required sections in the order given in the next slide
- Save and submit the entire application as a single PDF document
- Submit application online: sirc.asu.edu/idc
- Application deadline: January 8, 5:00PM MST

Required Application Sections

1. Title page
2. Abstract
3. Specific Aims
4. Research Strategy: Significance, Innovation, and Approach
5. Quarterly Timeline
6. Bibliography & References Cited
7. Biographical Sketch
8. Human subjects protections narrative
9. Budget
10. Budget Justifications

1. Title Page (one page)

The title page should include the following information:

- Title of the project
- Name of PI
- Department / School at ASU
- Email address
- The following statement:
  - *"I meet the eligibility requirements for the SIRC Pilot Project Program. I am an Early Stage Investigator and have a full-time appointment as a non-tenured faculty member or postdoctoral fellow at ASU. I am within 10 years of completing my terminal research degree. I have not previously competed successfully as a Project Director or Principal Investigator (PD/PI) for a substantial NIH independent research award."*

2. Abstract (separate page)

- The abstract describes succinctly the major aspects of the proposed project.
- The abstract must be no longer than 30 lines of text.
- Write in plain language, so even a non-scientist can understand the importance of the project.

Goals of the Abstract:

1. Invite and encourage the reviewer to read the application
2. Excite the reviewer's interest
3. Inspire confidence in the PI
4. Establish basic terminology that links to the Aims

2. Abstract

The abstract should include:

- **Brief background of the project**: What is the statement of theory? What is known? What is unknown? What is the problem?
- **Specific aims, objectives, or hypotheses – in brief:** What are the clear goal(s) of the planned research?
- **Methodology to be used:** Is the approach to address the objectives, briefly described?
- **Significance of the proposed research**: What is the impact on the research field? How will the study advance knowledge and/or impact health? How is this study innovative? What are the unique features of the project?

2. Abstract Examples

To find examples of the abstracts for funded NIH projects in your general area, search at

https://projectreporter.nih.gov/

3. Specific Aims (one page)

- The purpose of the Specific Aims is to describe concisely and realistically the goals of the proposed research and summarize the expected outcome(s), including the impact the proposed research will exert on the research fields involved.

- The Specific Aims must be no longer than 1 page of text.

Goals of the Specific Aims:

1. Excite the reviewer
2. Inspire confidence in the PI
3. Set the framework for the rest of the application
4. Convince the reviewer that this research is significant and that you have a feasible approach

3. Specific Aims

The Specific Aims should cover:

- **Broad, long-term goals:** What is the problem and why should it be studied?
- **Theory/Rationale**: The why of the application
- **Approach:** What is the approach/method?
- **Specific Objectives/Hypotheses:** What are the specific goals that will be addressed in the study?
- **Significance of the proposed research**: What is the impact on the research field? How will the study advance knowledge and/or impact health? How is this study innovative? What are the unique features of the project?

3. Specific Aims

Suggestions

1. This section should begin with a brief narrative describing the long-term goals or objectives of the research project and the hypothesis(es) to be tested. This is followed by a numbered list of the Aims.
2. List succinctly the specific objectives of the research proposed, e.g., to test a stated hypothesis, create a novel design, solve a specific problem, challenge an existing paradigm or clinical practice, address a critical barrier to progress in the field, or develop new technology.
3. Make sure your specific objectives or hypothesis are clearly stated, are testable, and adequately supported by citations.
4. Be as brief and specific as possible. For clarity, each aim should consist of only one sentence. Use a brief paragraph under each aim if detail is needed. Most successful applications have 2-4 specific aims.
5. Don't be overly ambitious. A small, focused project is generally better received than a diffuse, multifaceted project.
6. Be certain that all aims are related. Have someone read them for clarity and cohesiveness.
7. Remember, the goal is science – not service provision, program evaluation, or advocacy.
8. Avoid generic or non-specific statements: “The findings will have implications for treatment.”
9. Try to avoid jargon.

Abstract & Specific Aims - Additional Resources

Grant Section Analysis: Abstract and Specific Aims

Common Challenges and Problems in Constructing Specific Aims

4. Research Strategy
(6 pages maximum)

- The research strategy has three clearly labeled subsections:
  - **Significance**
  - **Innovation**
  - **Approach**

4. Research Strategy: Significance

- Explain the importance of the problem or describe the critical barrier to progress in the field that is being addressed.
- Explain how the proposed research project will improve scientific knowledge, technical capability, and/or clinical practice in one or more broad fields.
- Describe how the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field will be changed if the proposed aims are achieved.
- Recommended Length: 1- 1½ pages
- **To increase the impact of the Significance section:**
  - Have a clear vision of the significance of your research
  - Convey it clearly, enthusiastically, and concisely to the reviewers
  - Engage the reader

4. Research Strategy: Significance

The Significance section should cover:

- The state of existing knowledge, including literature citations, and highlights of relevant data
- Conceptual / Theoretical framework
- Rationale of the proposed research
- An explanation of the gaps that the project is intended to fill
- Potential contribution of this research to the scientific field(s) and public health

4. Research Strategy: Significance

Suggestions

1. Integrate your story into the literature review – What is the story that you want to tell about the problem? How are you going to solve the problem?
2. Make a compelling case for your proposed research project. Why is the topic important? Why are the specific research questions important? How are you qualified to address these?
3. Establish significance through a careful review of published data in the field, including your own. Avoid outdated research. Use citations not only as support for specific statements but also to establish familiarity with all of the relevant publications and points of view.
4. Highlight why research findings are important beyond the confines of a specific project i.e., how can the results be applied to further research in this field or related areas.
5. Clearly state public health implications.
6. Stress any innovations in experimental methods (e.g., new strategies, research methods used, interventions proposed).
7. Don't be tentative (e.g. using words like "may," "might," "possibly")
8. Use words with 'positive valence' (e.g., use words like "improved," "original," "exciting")
9. Don't be vague (e.g., "The findings will have implications for treatment.")

4. Research Strategy: Innovation

- The Innovation section should explain how the application challenges and seeks to shift current research or clinical practice paradigms. Describe any novel theoretical concepts, approaches or methodologies, instrumentation or interventions to be developed or used, and any advantage over existing methodologies, instrumentation, or interventions. Explain any refinements, improvements, or new applications of theoretical concepts, approaches or methodologies, instrumentation, or interventions.

- Recommended Length: ½ page

- **Goals of the Innovation section:**
  - Show how your proposed research is new and unique
  - Show evidence that you can do the work

4. Research Strategy: Innovation

The Innovation section should include:

- Why concepts and methods are novel to the research field.
- A focus on innovation in study design and outcomes.
- A summary of any novel findings to be presented as preliminary data in the Approach section.

4. Research Strategy: Innovation

Things that are innovative:

- New theory or model
- Different application of an existing theory
- Theory/model from a different field applied to your field
- New and better methodology
- New and better instrumentation
- New and better approaches to analysis

Suggestions

1. Describe how the application differs from current research or clinical practice paradigms.
2. Provide a careful review of the current literature to support the innovative methodologies, approaches, or concepts of your research.
3. Demonstrate familiarity with novel methodologies by citing your publications or your collaborator's publications.
4. Summarize novel findings to be presented as preliminary data in the Approach section.
5. Be specific, not long-winded.

Significance & Innovation- Additional Resources

Grant Section Analysis: Significance and Innovation

Research Plan: Make the Most of your Significance, Innovation, Approach and Overall Impact

4. Research Strategy: Approach

- The purpose of the approach section is to describe how the research will be carried out. Explain the conceptual or clinical framework, research design, methods, and analyses.

- Recommended Length: 3 pages

- **The goals of the Approach section:**

- Demonstrate that the overall strategy, methodology, and analyses are well-reasoned and appropriate to accomplish the specific aims of the project.

4. Research Strategy: Approach

The Approach section should cover:

- PI's preliminary studies, data, and experience relevant to the project – if applicable (preliminary study data is not required);
- The overview of the research design (e.g., experimental);
- A description of methods and analyses to be used to accomplish the specific aims of the project;
- A discussion of potential difficulties and limitations and how these will be overcome or mitigated;
- Expected results, and alternative approaches that will be used if unexpected results are found;
- A detailed discussion of the way in which the results will be collected, analyzed, and interpreted.

4. Research Strategy: Approach

Possible Relevant Subsections

- Connect aims to specific research questions and hypotheses
- Synopsis of research design
- Population, sample, and sampling procedures
- Measures
- Data analysis plan
- Specific hypothesis tests
- Limitations, potential problems, and how to address them

4. Research Strategy: Approach

Suggestions

- If employing a new methodology or analysis, demonstrate familiarity with the details and potential pitfalls. Add a co-investigator or consultant experienced with the technique, if necessary.
- Explain how the data will be collected, analyzed, and interpreted.
- Make sure each of the Specific Aims results in a hypothesis(es) or research question(s) to be examined.
- Demonstrate how the data will address the Specific Aims.
- As a new investigator, include enough detail to convince reviewers that you understand and can handle a proposed method.
- State what you do well and what unique skills you bring to the research.

Approach – Additional Resources

Grant Section Analysis: Approach and Preliminary Studies*

Research Plan: Make the Most of your Significance, Innovation, Approach and Overall Impact

**Note: Preliminary studies by the PI are not required for the SIRC Pilot Application.*

5. Quarterly Timeline

The purpose of the Quarterly Timeline is to specify all key phases and activities and benchmarks for progress toward the aims.

- The timeline needs to be a realistic assessment of the time needed to meet your goals.

The activities listed in the timeline need to be discrete and well-defined.

- What key activities need to be carried out to implement the grant successfully?
- Can each task realistically begin and end in the proposed time frame?

Pilot timelines can be extend for 4 to 8 quarters (12 to 24 months)

Recommended page length for timeline: ½ - 1 page

The timeline will be used by SIRC to provide oversight and evaluation of funded pilot projects.

5. Quarterly Timeline

A Very Simple Example:

Activity	Q1	Q2	Q3	Q4
Obtain IRB approval				
Recruit and train field team				
Conduct baseline surveys				
Conduct post-test surveys				
Data entry				
Data cleaning				
Data analysis and interpretation				
Dissemination				

Quarterly Timeline– Additional Resources

Developing Timelines and Milestone Charts for Your Proposal

6. Bibliography & References Cited

- Use a single, consistent citation and reference style (do not mix)
- Use any generally recognized style: APA, AMA, Chicago, MLA, or IEEE
- No page limit—this does not count toward the 6 page research strategy limit

7. Biographical Sketch

The Biographical Sketch serves to answer the following questions:

- Is the investigator(s) appropriately trained and well suited to carry out this work?
- Is the work proposed appropriate to the experience level of the principal investigator and any other researchers included in the project?
- Does the investigative team bring complementary and integrated expertise to the project (if applicable)?

Each Biosketch must be no longer than 5 pages and must use the Biographical Sketch Form required in NIH applications.

You can also try SciENcv to help you develop your Biosketch and automatically format it according to NIH requirements.

7. Biographical Sketch

Instructions

eRA Commons User Name is not required for the SIRC Pilot Project Application. Leave blank if you do not have an eRA Commons Name.

Personal Statement: Briefly describe why you are well-suited for your role(s) in this project. Relevant factors may include: aspects of your training; your previous experimental work on this specific topic or related topics; your technical expertise; your collaborators or scientific environment; and/or your past performance in this or related fields. You may cite up to four publications or research products that highlight your experience and qualifications for this project.

Positions and Honors: List in chronological order the positions you've held that are relevant to this application, concluding with your present position.

Contributions to Science: Briefly describe up to five of your most significant contributions to science. The description of each contribution should be no longer than one half page, including citations. For each contribution, indicate the following: the historical background that frames the scientific problem; the central finding(s); the influence of the finding(s) on the progress of science or the application of those finding(s) to health or technology; and your specific role in the described work. For each contribution, you may cite up to four publications or research products that are relevant to the contribution.

Research Support: List ongoing and completed research projects from the past three years that you want to draw attention to. Briefly indicate the overall goals of the projects and your responsibilities.

7. NIH Biosketch Example

OMB No. 0925-0001/0002 (Rev. 08/12 Approved Through 8/31/2015)

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES**.

NAME: Hunt, Morgan Casey

eRA COMMONS USER NAME (credential, e.g., agency login): huntmc

POSITION TITLE: Associate Professor of Psychology

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion Date MM/YYYY	FIELD OF STUDY
University of California, Berkeley	B.S.	05/1990	Psychology
University of Vermont	Ph.D.	05/1996	Experimental Psychology
University of California, Berkeley	Postdoctoral	08/1998	Epidemiology

A. Personal Statement

I have the expertise, leadership, training, expertise and motivation necessary to successfully carry out the proposed research project. I have a broad background in psychology, with specific training and expertise in ethnographic and survey research and secondary data analysis on psychological aspects of drug addiction. My research includes neuropsychological changes associated with addiction. As PI or co-Investigator on several university- and NIH-funded grants, I laid the groundwork for the proposed research by developing effective measures of disability, depression, and other psychosocial factors relevant to the aging substance abuser, and by establishing strong ties with community providers that will make it possible to recruit and track participants over time as documented in the following publications. In addition, I successfully administered the projects (e.g. staffing, research protections, budget), collaborated with other researchers, and produced several peer-reviewed publications from each project. As a result of these previous experiences, I am aware of the importance of frequent communication among project members and of constructing a realistic research plan, timeline, and budget. The current application builds logically on my prior work. During 2005-2006 my career was disrupted due to family obligations. However, upon returning to the field I immediately resumed my research projects and collaborations and successfully competed for NIH support.

1. Merryle, R.J. & Hunt, M.C. (2004). Independent living, physical disability and substance abuse among the elderly. Psychology and Aging, 23(4), 10-22.
2. Hunt, M.C., Jensen, J.L. & Crenshaw, W. (2007). Substance abuse and mental health among community-dwelling elderly. International Journal of Geriatric Psychiatry, 24(9), 1124-1135.
3. Hunt, M.C., Wiechelt, S.A. & Merryle, R. (2008). Predicting the substance-abuse treatment needs of an aging population. American Journal of Public Health, 45(2), 236-245. PMCID: PMC9162292 Hunt, M.C., Newlin, D.B. & Fishbein, D. (2009). Brain imaging in methamphetamine abusers across the life-span. Gerontology, 46(3), 122-145.

B. Positions and Honors

Positions and Employment

1998-2000 Fellow, Division of Intramural Research, National Institute of Drug Abuse, Bethesda, MD
2000-2002 Lecturer, Department of Psychology, Middlebury College, Middlebury, VT
2002-2005 Assistant Professor, Department of Psychology, Washington University, St. Louis, MO
2007- Associate Professor, Department of Psychology, Washington University, St. Louis, MO

Other Experience and Professional Memberships

1995- Member, American Psychological Association
2000- Associate Editor, Psychology and Aging
2007-11 NIH Risk, Adult Addictions Study Section, members

Honors

2009 Award for Best in Interdisciplinary Ethnography, International Ethnographic Society

C. Contribution to Science

1. My early publications directly addressed the fact that substance abuse is often overlooked in older adults. However, because many older adults were raised during an era of increased drug and alcohol use, there are reasons to believe that this will become an increasing issue as the population ages. These publications found that older adults appear in a variety of primary care settings or seek mental health providers to deal with emerging addiction problems. These publications document this emerging problem but guide primary care providers and geriatric mental health providers to recognize symptoms, assess the nature of the problem and apply the necessary interventions. By providing evidence and simple clinical approaches, this body of work has changed the standards of care for addicted older adults and will continue to provide assistance in relevant medical settings well into the future. I served as the primary investigator or co-investigator in all of these studies.
    a. Gryczynski, J., Shaft, B.M., Merryle, R., & Hunt, M.C. (2002). Community based participatory research with late-life addicts. American Journal of Alcohol and Drug Abuse, 15(3), 222-238.
    b. Shaft, B.M., Hunt, M.C., Merryle, R., & Venturi, R. (2003). Policy implications of genetic transmission of alcohol and drug abuse in female nonusers. International Journal of Drug Policy, 30(5), 46-58.
    c. Hunt, M.C., Marks, A.E., Shaft, B.M., Merryle, R., & Jensen, J.L. (2004). Early-life family and community characteristics and late-life substance abuse. Journal of Applied Gerontology, 28(2),26-37.
    d. Hunt, M.C., Marks, A.E., Venturi, R., Crenshaw, W. & Ratonian, A. (2007). Community-based intervention strategies for reducing alcohol and drug abuse in the elderly. Addiction, 104(9), 1436-1606. PMCID: PMC9000292

Complete List of Published Work in MyBibliography:
http://www.ncbi.nlm.nih.gov/sites/myncbi/collections/public/1PqT7lEFlAJBtGMRDdWFmjWAO/?sort=date&direction=ascending

D. Research Support

Ongoing Research Support

R01 MH922731 Merryle (PI) 12/15/07-11/30/15
Physical disability, depression and substance abuse in the elderly
The goal of this study is to identify disability and depression trajectories and demographic factors associated with substance abuse in an independently-living elderly population.
Role: Co-Investigator

Completed Research Support

R21 AA998075 Hunt (PI) 01/01/11-12/31/13
Community-based intervention for alcohol abuse
The goal of this project was to assess a community-based strategy for reducing alcohol abuse among older individuals.

7. Biosketch– Additional Resources

Grantsmanship: NIH Biosketch

NIH Biosketch Format Pages, Instructions, and Samples

8. Human Subjects Protections

The purpose of this section describing the involvement of human subjects is to ensure the protection of the rights and welfare of people who participate in research projects.

Recommended Length: There is no specified length, but be succinct.

8. Human Subjects Protections

The Human Subjects section should cover:

1. Participants
   - Who will be the participants in the study (e.g., adults, children)?
   - What will the participants do in the study (e.g., complete surveys, engage in focus groups)?
2. Potential Risks
   - What are the potential risks to participants (e.g., confidentiality may be breached, feeling embarrassed by the data collection, getting injured)?
3. Protections against Risks
   - What protections will you put in place to garner against the potential risks (e.g., all data will be secured in double-locked storage; only project staff will have access to the data; only project staff will be involved in data collection)?
4. Potential Benefits of the Research to the Subjects and Others
   - What are the potential benefits participants may receive from participating in the study (e.g., a reduction in risk factors, improved functioning)?

8. Human Subjects Protections– Additional Resources

ASU Office of Research Integrity and Assurance

Checklist for Planning and Writing a Human Subjects Grant Application

9. Budget

The maximum total budget for the SIRC Pilot Projects cannot exceed $50,000 in direct costs.

There are no indirect costs associated with this grant.

The purpose of this section is to outline all expenses required to achieve project aims and objectives. The budget should parallel the research plan and project aims. Be realistic about your costs, and don't deliberately overstate or understate your budget.

There are no page limits in this section.

A budget form can be provided by SIRC to assist in the development of the budget.

9. Budget

The Budget section can include:

- Personnel
  - A senior Co-Investigator may be included as Key Personnel on the application. This person is expected to contribute to the scientific development or execution of the project. This senior Co-Investigator should have clearly defined roles outlined in the budget justifications.
- Consultants
- Equipment
- Supplies
- Travel
- Participant incentives
- Other expenses

10. Budget Justifications

The purpose of the budget and justification is to justify all expenses allocated in the budget.

Briefly describe the duties of each member of the research team listed in the budget. Identify specific individuals for each position requested.

The budget and justification should cover personnel, consultants, equipment, supplies, travel, participant incentives, and other expenses.

There are no page limits in this section.

10. Budget Justification Example

PERSONNEL - Jane Doe, Ph.D., Principal Investigator (effort = 2.5 calendar months). Dr. Doe will be responsible for the overall coordination and supervision of all aspects of the study. This includes hiring, training, and supervising staff/students; recruiting study participants; coordinating treatment and assessment components; scheduling and staff assignments; and data management. In addition, she will conduct the orientation sessions, assist with statistical analyses, and be responsible for reporting the study's findings.

OTHER PERSONNEL - TBA Post Doctoral Associate (effort = 12 Calendar Months effort). This individual will coordinate the day-to-day management of the study, assist in assessments, be responsible for data entry of all treatment-related data (i.e., scheduling and conducting weights, attendance, self-monitoring), and serve as an interventionist.

EQUIPMENT- Funds are requested to purchase three Biologs ($7,150 each). These are ambulatory physiological data recorders with multiple channels that will be used to record mothers' heart rate (RSA), activity level, and electrodermal activity (e.g., skin conductance). Recorded data is compactly stored on a removable memory card.

TRAVEL - $2500 in Year 01 is requested for travel to professional conferences (e.g., CDC, SRA) to present findings associated with the investigation.

MATERIALS AND SUPPLIES - General research supplies - Research supplies are calculated at approximately $30,000 per year, and include blank DVD's for data storage as well as all testing materials.

10. Budget & Budget Justifications– Additional Resources

Identifying Time and Budgetary Commitments for your Research Project

See “Budget Building Information” in: ASU Research Administration

Optional supplements: Letters of Support

- Scan and attach as an appendix at the end of the application any appropriate letters of support from:
  - Collaborating agencies, government entities, and community partners
  - Co-investigators or consultants
- Include only if this support is key to accomplishing the project's stated aims

Avoid Common criticisms

- Rationale for hypothesis or methods not sound
- Diffuse, unfocused or superficial examination of the research area
- Unexciting science - an incremental advance for the field
- Investigator(s) lack of experience in required methodologies
- Unrealistic amount of work
- Lack of sufficient detail
- Too many irrelevant details
- Lack of knowledge of published work
- Hard to read - poorly constructed, dense, or filled with typographical/ grammatical errors

Additional Resources

Common Strengths and Weaknesses in Grant Applications

The Ins and Outs of NIH R Grants

NIH – Office of Intramural Training & Education

Additional Videos available at CREd Library

Questions

Contact Dr. Stephanie Ayers, Associate Director of Research

Stephanie.L.Ayers@asu.edu