Specific Aims Workshop

May 10, 2024

CFAR Developmental Core Director

Paul Goepfert, MD

CFAR Developmental Core Co-Director

Mirjam-Colette Kempf, PhD, MPH

CFAR Developmental Core Associate Director

Lynn Matthews, MD, MPH

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Agenda

9:00 - 9:15 am	Welcome and Grantsmanship Tips	Mirjam-Colette Kempf, PhD, MPH
9:15 – 9:20 am	Information on the CFAR EMERGE Group	Lynn Matthews, MD, MPH
Participant presentations (12 min) followed by Q/A (8 min) *Facilitators will complete comment forms for feedback on presentations.*		
9:20 – 9:40 am	*"Exploration of the Impact that Environmental, Behavioral, Psychological, and Biological Factors Have on Health Outcomes of Women Living With or Without HIV"*	Katie Hall, PhD, RN
9:40 – 10:00 am	*"Adapting and evaluating a personalized serious game AI intervention to enhance HIV and STIs risk perception and personalization among high-risk individuals in Eswatini"*	Bhekumusa Lukhele, DrPH
10:00 – 10:10 am	**Break / Move to Zoom Rooms** *Laken will move participants to breakout rooms*	
10:10 – 11:00 am	Participant consultations with Facilitators	

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Participants

Katie Hall, PhD, RN

Bhekumusa Lukhele, DrPH

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Facilitators

- **David Vance,** PhD: School of Nursing
- **Pariya Wheeler,** PhD: School of Nursing
- **Lynn Matthews,** MD, MPH: School of Medicine - ID
- **Rena Patel,** MD: School of Medicine - ID

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Grantsmanship Tips

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Specific Aims Key Tips*

- Write this section of your grant *first*.
- Get lots of feedback on this section from your colleagues, mentors, and representatives of the funding agency
- Revise again and again!
- Note: This is different than the briefer "abstract" that is more of a summary of the proposal and is often written *last*.

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* Several slides in this presentation are adapted from the Longitudinal Grant Writing Workshop, Kisumu, Kenya, 2015.

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Specific Aims for NIH Applications

- Length: 1 page
- Style: Non-technical. Write this section for all reviewers / study section members, since they will all read it.
- This section must include everything that is important and exciting about your project – *but without a lot of detail*.

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Specific Aims for NIH Applications

- The flow of logic must be so clear and compelling that reviewers at the study section meeting will be able to follow it. Tell a compelling story!

- Together with the Significance and Innovation subsections, it is one of the most important parts of the application in terms of generating enthusiasm for your project among reviewers.

- Most of the reviewers will only read this part of the application!

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Suggested Template (Russell & Morrison)

- Introductory paragraph
  - compelling opening sentence, important knowns, needs/gaps in knowledge
- “What is going to be done by whom” paragraph
  - Long-term goal, overall objective of the proposal and/or central hypothesis, rationale, best team and environment to carry this out
- Specific aims and activities paragraph
  - Each aim and how you plan to achieve it
- Payoff paragraph
  - Expected outcomes, innovation, impact

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Introductory Paragraphs

- Develop a compelling argument for funding.
  - The secret to creating a compelling flow of logic in this section is to appropriately link its components, one to another.
  - Begin with an interest-grabbing sentence that immediately establishes the relevance of your proposal to human health.
    - Describe *the scope of the problem* (such as number of people affected, morbidity/mortality, costs to society).
    - Describe *the gap in knowledge* that your project will address (i.e., from a research perspective, what we don't know but need to know to move forward; provides rationale for specific aims).

Introductory Paragraphs

- Develop a compelling argument for funding (continued).
  - State your *long-term goal*.
    - It should be relevant to public health and be broad enough to give the impression that this study is part of a larger research plan that will continue beyond the bounds defined in the Specific Aims.
    - It should reflect your "niche" area of research/programs (i.e., the area in which you will be the acknowledged expert).
    - It must be realistic (i.e., something that is clearly achievable over a finite period of time).
      - For example, if you are a cancer researcher, it would not be credible to write that your long-term goal is to cure cancer.

Introductory Paragraphs

- Develop a compelling argument for funding (continued).
  - State the *objective* of this application
    - This component defines *the purpose of your application*, which is to fill the gap in knowledge identified in the 1st paragraph.
    - This must also link to your long-term goal as the next logical step along a continuum of research.
    - Emphasize the “product” of the research, not the “ process ” that produced it.
      - For example, “to study” something would not be an appropriate goal; what you want is what the study will produce.

Introductory Paragraphs

- If your project is *hypothesis-driven*, state your central hypothesis.
  - Your central hypothesis must link to the objective, because the objective will be accomplished by testing your hypothesis.
    - The purpose of the hypothesis is to provide focus for your research project and, therefore, your grant application.
  - Tell reviewers how your hypothesis was formulated – either based on your own preliminary data or on the published work of others.

Introductory Paragraphs

- Include a *rationale* that tells reviewers what will become possible after the research or project is completed that is not possible now.
  - The gap in knowledge discussed above will need to be addressed for the research in this field to advance.
  - Once the proposed research/project has been completed, you will be able to address this gap in knowledge – that is *why* you want to do the work.
  - This is where you can excite reviewers: the rationale can truly be exciting because it conveys that the expected outcomes will clearly advance your field.

Specific Aims

- Each aim should consist of one sentence: be concise and concrete; *clarity* is the goal.
- Emphasize “product” over “ process. ”
- Keep the number of aims to a minimum (2-4).
- Aims should be able to “stand alone”: they can be related but must be independent (i.e., they do not depend on a particular outcome of a previous aim).
- Include rationales and methods to be used, when needed.

Good Verbs to Use in Specific Aims:

- Examine
- Explore (if qualitative)
- Elucidate
- Evaluate
- Identify
- Compare
- Assess
- Refine

How to Write this Section

- Russell and Morrison Grant Writing Handbook http://www.grantcentral.com/workbooks/national-institutes-of-health/
- See Chapter on Specific Aims, for a step-by-step guide to writing this section of your grant.
- Also includes examples of well written specific aims pages

Notable Outcomes from Past Specific Aims Workshops

CFAR Investigator	Funded Awards
Pariya Wheeler, PhD	R01MH131177 Mechanisms of immune activation on neurocognitive impairments
	R21AG076377 Resilience building intervention in people aging with HIV
Crystal Chapman-Lambert, PhD, CRNP FNP-BC, ACRN (URM)	K23AT010567 Adherence to care among Black women with HIV
Saurabh Aggarwal, MD, PhD	R01DA049657 Exploring novel mechanisms in chronic pain in PWH

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CFAR Investigator	Funded Awards
Kaylee Crockett, PhD	K23HL156758 Adaptation and Pilot Testing a Behavioral Physical Activity Intervention with Peer Support for Women with HIV and Co-Occurring Hypertension
Samantha Hill, MD,MPH	K23MH128128 Integration of Trusted Adult Supports into the HealthMpowerment App to Improve Black Adolescent and Young Adult PrEP Use

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Notable Outcomes from Past Specific Aims Workshops

CFAR Investigator	Funded Awards
Bulent Turan, PhD	R03DA052180 Substance use, intersectional stigma, and health outcomes for women living with HIV
Michael Vinikoor, MD	R34MH122265 Re-engagement at Discharge (Re-Charge): Improving post-hospital outcomes for HIV-infected adults in Zambia

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Lynn T. Matthews
“Emerging Scientific Investigators Group”: EMERGE

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Program Overview

- Monthly workshop series for a small, in-person cohort of HIV/AIDS early and emerging investigators
- Provides group-directed, facilitated sessions on becoming a successful researcher
- 8 -12 members selected per cohort

- Goals
  - Create a space for peer support and mentorship
  - Support development into independently-funded HIV investigators

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2nd Cohort (March 2024 – December 2024)

- 9 members
  - Peer Presentations
- Workshop Topics
  - Manuscript writing best practices (authorship conversations)
  - Mentor-mentee relationships – sponsorship vs. mentorship
  - Team Science / Large cohorts
    - Presentations from CNICS and MACS/WIHS
  - Conferences in the HIV landscape
  - NIH biosketch management
  - How to write NIH style grant proposal – different mechanisms of NIH grants
  - Speaking skills / Presentation skills / Elevator Pitch
- Institutions Represented
  - UAB Heersink SOM
  - UAB CAS
  - UAB SON
  - UAB SOPH
  - UA
- Areas of Research
  - Community engagement
  - Implementation
  - HIV prevention/treatment
  - HepC and linkage to care
  - PrEP usage and adherence
  - Pediatric and Women's HIV care
  - Women's care in criminal justice systems
    - HIV/ STI prevention &treatment

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