CIRA-YIGH Early-Career Scientists Panel: "Crafting the NIH Specific Aims Page"

Panel Summary - September 11, 2025

The Specific Aims page is arguably the most vital component in an NIH grant proposal. The aims page describes the scope of a problem and/or knowledge gap, a proposed innovative solution, and expected outcomes and impact. It serves as a standalone page from which a reviewer can gain a reasonable understanding of the research hypothesis and objective without reading other parts of the application. This virtual panel provided an opportunity for early-career scientists to learn from established investigators about approaches to developing, crafting, and writing an NIH specific aims page.



Key Takeaways

- Know your audience: Tailor the aims page to the grant mechanism; the mission, cultures, and priorities of the NIH institute or center; and potential reviewers assigned to review the application.
- Your aims page must answer 3 questions:
 - What is the problem or knowledge gap?
 - 2. What will you do?
 - 3. Why you/why now?



Nicola Hawley
Yale School of Public Health

- Structure matters: Aims should be standalone; interrelated but not interdependent. Each aim maps to the central hypothesis or question, all data collection contributes to an aim, analyses match the stated aims.
- Craft your aims: Use concise language, perfect grammar and spelling, strong action verbs, bolding, white space for readability, 2-3 short paragraphs, numbered aims.
- Common pitfalls to avoid: Aim dependency, too many aims, vague endpoints, overuse of jargon and acronyms, inflated innovation claims.
- **Find a balance:** For career development awards (e.g., K01), aims should both achieve scientific goals and enhance your education and training on relevant skills and competencies.
- Get to know the NIH review process and criteria: Talk to scientific review officers; read the peer review guidance and framework; consider serving in a study section; meet with colleagues and mentors who have successfully received awards and served on study sections.



Jeffrey Wickersham Yale School of Medicine Moderator

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Resources

Specific Aims Page Checklist

- Does the first paragraph make a non-expert care?
- Is the knowledge gap explicit?
- Can a reviewer describe the hypothesis or research objective in one sentence?
- Do the aims use strong action verbs and name endpoints?
- Are the aims non-dependent?
- Is the impact claim concrete and credible?
- Are there cues for rigor, reproducibility, and feasibility?
- Would a policymaker or a clinician understand the benefit?

Presentation Slides and Recording

- Dr. Amy Justice's slides
- Dr. Nicola Hawley's slides
- Recording (YouTube)

Yale University (*available to Yale community only)

- Yale School of Medicine: Grant Library*
- CIRA Early-Career Scientists Panel Summary: "NIH K01 Awards" (October 18, 2023)

Public

- BioScience Writers: The Anatomy of a Specific Aims Page
- UAB CFAR: Specific Aims Workshop Slides (May 10, 2024)
- Monte AA, Libby AM. <u>Introduction to the specific aims page of a grant proposal</u>. Acad Emerg Med. 2018;25(9):1042-1047. doi:10.1111/acem.13419
- Inouye SK, Fiellin DA. An evidence-based guide to writing grant proposals for clinical research. Ann Intern Med. 2005;142(4):274-282. doi:10.7326/0003-4819-142-4-200502150-00009

National Institutes of Health

- Planning and Writing
- Sample Applications and Documents
- Early Career Reviewer (ECR) Program
- NIH Grants Process: A Brief Walk-Through for Beginners Video and Slides (May 15, 2024)
- Find Funded Projects and More Using NIH Databases
- Office of AIDS Research: Early Career Investigator Resources
- Simplified Peer Review Framework (for due dates on/after Jan 25, 2025)