GSA Webinar Series

Leveraging Small Grants to Build Your Research Program

SUPPORTED BY THE GSA INNOVATION FUND: THE GENERATIVITY EFFECT

Webinar Speakers

Jamie Justice, PhD
Assistant Professor
Gerontology and Geriatric Medicine
Wake Forest School of Medicine

Amy Jude Hoffman, PhD, RN
Professor and Assistant Dean
College of Nursing – Omaha Division
University of Nebraska Medical Center
Webinar Agenda

*Jamie Justice, PhD
  - Jamie's story
  - How, why, when, and where can you turn small grants turn into good science

*Amy Jude Hoffman, PhD, RN
  - Amy's story
  - The importance of approach, feasibility, and mentorship in grant funding

*Questions & Answers

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Make Stone Soup!

Strategically ask for a few essential soup ingredients* from many groups to make one BIG soup!

*Soup ingredients: funds to support small incremental research projects or advancement of training.
Jamie Justice, PhD

Leveraging Small Grants to Build Your Research Program

My Experience
- My personal history seeking small research grants

Why
- Why you should consider applying for small research grants

Where
- A few ways to identify small or unusual grant opportunities

How
- Tips, advice, and cautions: application and research conduct

Resources
- Final thoughts and specific resources

1. Institutional Training Grants
2. External Fellowships and Career Development Awards
3. Competitive Pilot Research Grants (institutional and external)
4. Travel and Training Experience Grants
My Experience

1. Institutional Training Grants (stipend support)

- **T32** Predoctoral NIA Training Grant
  - University of Colorado Boulder
  - 2009 – 2011
  - $ stipend

- **T32** Postdoctoral NIA Training Grant
  - University of Colorado Boulder
  - 2013 – 2015
  - $ stipend

- **T32** Postdoctoral NIA Training Grant
  - Wake Forest School of Medicine
  - 2015 – 2016
  - $ stipend

My Experience

2. External Fellowships and Career Development Awards

- **ΦΒΚ** Phi Beta Kappa Predoctoral Fellowship
  - University of Colorado Boulder
  - 2007 – 2008
  - $10K

- **AFAR** Glenn Foundation / American Federation for Aging Research
  - Postdoctoral Fellowship
  - 2016 – 2017
  - $ stipend + $15K research / travel

- **OAIC** NIA P30 Claude D. Pepper OAIC; REC Scholar (Jr Faculty)
  - Wake Forest School of Medicine
  - 2017 – 2018
  - $ stipend (+ pilot award, next)

- **NIA K01** NIA K01 Career Development Award (Jr Faculty)
  - National Institute on Aging
  - 2018 – 2023
  - $ stipend +$25K / yr
### My Experience

#### 3. Competitive Pilot Research Grants

<table>
<thead>
<tr>
<th>Grant</th>
<th>Institution</th>
<th>Years</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wake Forest Translational Primate Research Program</td>
<td>Wake Forest School of Medicine</td>
<td>2016 – 2017</td>
<td>$5K</td>
</tr>
<tr>
<td>NIA P30 Claude D. Pepper OAIC; Pilot Studies Award(s)</td>
<td>Wake Forest School of Medicine</td>
<td>2017 – 2018</td>
<td>$25K</td>
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<tr>
<td></td>
<td></td>
<td>2019 – 2020</td>
<td>$25K</td>
</tr>
<tr>
<td>National Center for Advancing Translational Sciences (NCATS)</td>
<td>Wake Forest Translational Primate Research Program</td>
<td>(pending) 2020 – 2021</td>
<td>$40K</td>
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#### 4. Travel and Training Experience Grants

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<th>Grant</th>
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<tr>
<td>NIA Butler-Williams Scholars Program</td>
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<td>2016</td>
<td>travel</td>
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<tr>
<td>American Federation for Aging Research Grantee Conference</td>
<td>AFAR</td>
<td>2017</td>
<td>travel</td>
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<tr>
<td>NIA Summer Training Course</td>
<td>NIA</td>
<td>2017</td>
<td>travel</td>
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<tr>
<td>NIA Division of Aging Biology, New Investigator Forum</td>
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My Experience
How small funds turned into good science

Geroscience. Target biological aging to delay or prevent functional decline and prevent chronic diseases collectively.

Cellular senescence. Following cell stressors and damage signals, cells can enter an “anti-cancer” state of essentially irreversible growth arrest called cellular senescence. While this may limit cancer development initially, senescent cells can cause problems too.

Evidence in rodents indicates that:
- Diet and exercise may alleviate senescent cell burden
- Drugs in development may be able to clear senescent cells and improve healthy lifespan
## Small Proof-of-Concept Studies Using Funds from Small Research Grants

<table>
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<th>Study Type</th>
<th>Resources</th>
<th>Funding Source</th>
<th>Amount</th>
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<tr>
<td>Biobank / Biomarker Study</td>
<td>Use data and specimens from clinical trials and primate studies to measure senescence biomarker</td>
<td>Glenn/AFAR Fellowship</td>
<td>$10K</td>
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<tr>
<td></td>
<td></td>
<td>WF Translational NHP Grant</td>
<td>$5K</td>
</tr>
<tr>
<td>Clinical Trial Ancillary Study</td>
<td>Project to accompany an ongoing clinical trial at Wake Forest to validate senescence biomarker</td>
<td>WF OAIC Pilot Award</td>
<td>$25K</td>
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<tr>
<td></td>
<td></td>
<td>NIA K01</td>
<td>$50K</td>
</tr>
<tr>
<td>Artificial Intelligence</td>
<td>Computer-aided analysis of biomarkers obtained in the K01 ancillary clinical trial</td>
<td>WF CTSA</td>
<td>$40K</td>
</tr>
<tr>
<td>Clinical Pilot Trial</td>
<td>Small proof-of-concept clinical study of drugs targeting senescent cells in older patient population</td>
<td>OAIC: WF and UTHSCSA</td>
<td>$40K</td>
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<tr>
<td></td>
<td></td>
<td>Translational Geroscience Network</td>
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### Make Stone Soup!

Strategically ask for a few essential ingredients from many small groups to make one BIG soup!
Jamie Justice, PhD

Leveraging Small Grants to Build Your Research Program

My Experience • My personal history seeking small research grants

Why • Why you should consider applying for small research grants

Where • A few ways to identify small or unusual grant opportunities

How • Tips, advice, and cautions: application and research conduct

Resources • Final thoughts and specific resources

Research Requires Money!

Why you should consider applying for small research grants

Not enough data to make a compelling full proposal for a major funding agency

• Evidence from funded pilot studies and clinical trials can de-risk larger research project proposals

Provide valuable experience in grant writing and pre-review research ideas

• Small grants provide opportunity for critical review of research proposal before applying for larger grants

Bolster your CV or add new professional training before applying for a promotion

• Small grants can support travel, new training, or skill development important for promotion or job hunt
Jamie Justice, PhD

Leveraging Small Grants to Build Your Research Program

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You Will Not Find What You Do Not Seek
Where to look for small or unusual grant opportunities

- Institution and Mentors or Advisors
- Network and Professional Organizations (GSA!)
- NIA Supported Research Centers
- Aging or Disease Research Foundations
- Federal Granting Agents (e.g. NIA)
- Online Resources and Journals
Jamie Justice, PhD

Leveraging Small Grants to Build Your Research Program

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Tips and Advice
How I found and received small grants for research and training

Cast a wide net
• Apply for many grants, engage your network and professional organization, seek opportunities for additional training and mentoring

Keep it simple
• Small funds require focused simple studies
• Make sure your small project is feasible

Pay attention to details (but don’t lose sight of the big picture)
• Use small grants as a chance to work through details necessary to conduct the immediate project but consider how these details can serve the next study
Tips and Advice
How I found and received small grants for research and training

Persistence pays off

• There will be more rejected applications than successful ones
• Up to 5x more grant money is applied for than is granted

Learn from mistakes and “bad” reviews

• Reviews and “failed” pilot studies may provide greater lessons than success

Timeline

• Often takes 6 months to 1 year (or more) between proposal submission and start of funded research even for small grants

Federal:
National Institutes of Health: www.grants.nih.gov
National Science Foundation: www.nsf.gov/funding/
Department of Defense and Veterans Affairs: www.grants.gov

NIA-Supported Centers:
Research Centers Collaborative Networks (RCCN)
Alzheimer’s Disease Research Centers (ADRC)
Centers on the Demography and Economics of Aging
Claude D. Pepper Older Americans Independence Centers (OAICs)
Nathan Shock Centers of Excellence in the Basic Biology of Aging
Resource Centers for Minority Aging Research (RCMAR)
Roybal Centers for Translational Research on Aging

Foundations:
American Federation for Aging Research: www.afar.org
John A. Hartford Foundation: www.johnahartford.org
Retirement Research Foundation: www.rff.org
Sens Research Foundation: www.sens.org/education-opportunities/
Glenn Foundation for Medical Research: glennfoundation.org
Alfred P. Sloan Foundation: sloan.org/grants/apply/
MacArthur Foundation: www.macfound.org/
Wellcome Trust: welcome.ac.uk
Howard Hughes Medical Institute: www.hhmi.org
Society for Women’s Health Research: swhr.org

Disease Specific Foundations
(examples only – too many to list them all!):
American Heart Association
The Alzheimer’s Association
Susan G. Komen Foundation
Arthritis National Research Foundation

Databases:
www.guidestar.org
candid.org/find-funding
www.grantscoop.com
Journey to Funding

Amy Jude Hoffman, PhD, RN

- Select a Topic
- Find a Mentor
- Program Officer
- Choose Tools
- Build a Team
- Feasibility Study
- Disseminate Science
- Grant Writing
- Pilot Study
- RCT Study
- Grant
Select a Topic

- Have a Passion to Persist
- A Population in Need
- Significant Problem in the Science to Be Solved
- Impact on Health Outcomes
- Write a Concept Paper

Find Positive Mentors
Program Officer (PO)

- Find and develop a relationship with your PO.
- How to contact a PO:
  - Due diligence 1st
  - Contact -- request appointment
  - Crystal clear in requests
  - Be prepared
- Reasons to contact a PO:
  - Discuss application topics
  - Help decide which grant type is appropriate for you
  - Advice on preparing an application
  - Questions on a Summary Statement
  - Check on funding status

Choose the Right Tools and Approach

What is it that you need to answer your research question?

There are two critical steps that researchers must get right:
Define the question you are trying to answer and apply the right tools and approach to find the answer.

- Select state-of-the-science measures for:
  - Fatigue
  - Fatigue Self-Efficacy
  - Fatigability
  - Other Symptoms
  - Functional Status
- Use short simple tools with great psychometrics
- Theory to design and test interventions and guide the team’s approach
Build a Team

Shared Vision: Team Goals

• Successfully Execute Feasibility Study
• Obtain NIH-NCI R21 Funding
• Leverage R21 Results for R01 Funding
• Publish Results in Peer-Reviewed Journals and National Presentations
Shared Vision: Individual Goals

- Contributing to the Science by Filling a Gap
- Author on Publications/Presentations
- Hospital Accreditation and Recognition
- Mentorship for Professional Advancement
- Provides Nursing Care During Transition From Hospital to Home

The Feasibility Study

We aimed to LEARN from our participants if...

- Recruit and retain
- Adhere to the exercise intervention
- Ensure a safe and a highly acceptable intervention
- Produce trends in health outcomes from the intervention
Feasibility Study Planning

• When does the study begin?
  • Pre-surgery?
  • During hospital stay?
  • Post-surgery?
• Screening and recruitment in surgeon’s office?
• Any special measures needed upon enrollment, during the study, or upon conclusion of the study?

The Feasibility Study

A NEW OFFICE:
Learning, Studying in the Field,
Not the Office
The Feasibility Study

Concerns for Safety:
- Spotter at All Times
- Balance Board Height
- Help Alert Call Button

“Bubble Wrap” comment gave us approval

Feasibility Study – Revising Eligibility Criteria

Revised Eligibility – Initially Could Not Recruit
- Removed exclusion of those > Stage II
- Removed exclusion with a previous history of cancer
- Removed exclusion of those with non-lobectomy procedures
- Included minimally invasive/robotic procedures
- Increased body weight from 300 to up to 330 pounds
- Removed the requirement to have an exercise spotter at all times
- Increased geographic location
Disseminate Science

Grant Writing

• Attend one or more grant writing workshops
• Address every grant section and write out everything you want to say not worrying about page limits
• Begin editing/prioritizing what is most important allocating designated space for each section
• Identify multiple experienced internal and external reviewers early on in the process
• Identify and schedule an experienced grant editor
• Don’t be afraid to ignore some comments
• Make sure you include your findings from your feasibility study
Pilot Study

- Feasibility study will not expose everything in your study so expect the unexpected and be flexible
- Watch for trends in recruiting – Are recruitment rates differing between sites or recruiters?
  • Additional training required?
  • Do you need a new recruiter?
- Periodically record data collectors:
  • How are they engaging participants?
  • Are they sensitive to participants’ issues?
  • Are they asking the questions consistently as they are written?
- Monitor results for anything that doesn’t make sense

Randomized Controlled Trial

- Publish some results from your Pilot study prior to submitting your proposed RCT
- Leverage all of your feasibility study results in your larger RCT proposal
- Emphasize how having accomplished the Pilot study removes the risk from executing your proposed RCT
- Propose additional specific aims that you will achieve with your RCT
- Incorporate any lessons learned from your Pilot study into your RCT proposal:
  • Re-evaluate tools used, training techniques
  • Update technology as necessary
Resource – GSA Connect

- GSA Members and Staff Share Funding Opportunities on GSA Connect
  - Open Forum
  - Interest Group Communities

- Examples of Posts In 2020
  - NIA IMPACT Collaboratory Pilot Grant Award RFA - Due 5/29/2020
  - Funding Opportunity: Pet Shelter and Housing Assistance Grant Program
  - Emory Center for Dementia Caregiving Mastery Pilot Grants – LOI Due February 1

Clarifying Questions?

- We will not be using the “raise hand” feature today
- Please use the “questions” feature accessible on the right side of your screen
- If we do not get to all of the questions today, we will email responses after the webinar
Thank You

- Thank you for joining us today! 😊
- Please contact us with any questions:
  - injustic@wakehealth.edu
  - amyj.hoffman@unmc.edu
- Archived recording of webinar on GSA’s YouTube channel

Webinar Evaluation

In an effort for continual improvement, we would like to hear your thoughts. Please provide feedback by clicking the survey link at the end of the webinar.

Thank you again and we hope you enjoyed the program!
Thank You

GSA: Advancing Innovation in Aging

• The nation’s oldest and largest interdisciplinary organization devoted to research, education, and practice in the field of aging
  • 5,500+ interdisciplinary members around the world touching all facets of aging

• Mission
  • Promote multi- and interdisciplinary research in aging
  • Translate and disseminate research findings
  • Promote/advocate for education/awareness on aging across disciplines
  • Foster application of research into policy development

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