Perspectives from Federal Funding Agencies:

USDA National Institute of Food and Agriculture

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About the National Institute of Food and Agriculture (NIFA)

• Nation’s primary agency for extramural funding in Food and Agricultural Sciences

• >30 competitive grant programs totaling >$750 million/year
  – Research, Education, or Extension
  – Integrated Research, Education, and/or Extension
About the National Institute of Food and Agriculture (NIFA)

- USDA’s flagship competitive grant program
  - Agriculture and Food Research Initiative (AFRI)
  - $415 million in fiscal year 2019
  - Organized into 3 Requests for Applications (RFA) addressing 6 broad funding priorities
Funding Priorities for AFRI

- Plant health and production, plant products
- Animal health and production, animal products
- Food safety, nutrition, and health
- Bioenergy, natural resources, environment
- Agriculture systems and technology
- Agriculture economics and rural communities
What’s New at NIFA

• Microbiome initiative – including antimicrobial resistance

• AFRI Sustainable Agricultural Systems – funds large ($10 million/grant) integrated (research, education, and extension) projects
What’s New at NIFA

- Food and Agriculture Cyberinformatics and Tools (FACT) initiative to address
  - Big data
  - Artificial intelligence
  - Precision Agriculture
What’s New at NIFA

- Education and Workforce Development in Food and Agricultural Sciences
  - Junior Colleges
  - Community Colleges
  - Technical Schools
What’s New at NIFA

• 2018 Farm Bill
  – Eliminated matching requirement of 2018 Farm Bill, also eliminate waivers for match
  – Caps Indirect Cost Rate at 30% of Total Federal Funds Awarded – cumulative for prime + subawardees + match
Issues Impacting Proposal Quality

- Overly ambitious – especially new investigators
  - Too much work in time allotted
  - Insufficient budget to perform work proposed
  - Insufficient personnel to perform the work
  - Project team lacks relevant experience
Issues Impacting Proposal Quality

• Inadequate time in preparation of proposal
  – Lacked careful editing and proofreading
  – Didn’t follow formatting guidelines and instructions
  – Omitted important information – e.g., pitfalls
  – Didn’t obtain critical feedback from experienced and successful colleagues
Issues Impacting Proposal Quality

• Hypothesis or goals not stated clearly or lacking

• Objectives or specific aims
  – Don’t address the hypothesis or goals
  – Subsequent aims depend on outcome of previous aims
Things to Know

• Three Cs of proposal preparation – proposals must be:
  – Complete
  – Compliant
  – Compelling
Things to Know

• Read the Request for Proposals, Request for Applications or Program Announcement
  – Eligibility restrictions
  – Program priorities
  – Application preparation guidelines – format, budget limits, submission deadlines
  – Review criteria
Things to Know

• Start early and develop a timeline
• Write for expert and non-expert
• Get critical feedback from experienced and successful colleagues
• Learn the review process – understand how to prepare proposal
• Develop a thick skin!
What To Do If You Have Questions?

Contact the Program Staff!!!
How Do We Build a Field Rapidly?

National Institute on Aging
Robin A. Barr, Director, Division of Extramural Activities
BarrR@mail.nih.gov
National Institute on Aging

• Director: Richard Hodes
• Deputy Director: Marie Bernard

• FY 2019 Appropriation: Not official yet but is around $3.1 billion
• NIA is part of NIH which is an agency of DHHS
Division of Extramural Activities

- Scientific Review
- Grants Management
- Office of Small Business Research
- Training (Fellowships, career awards, training grants)
- National Advisory Council on Aging
- Program coordination
- Special projects – e.g., the Beeson program

The Division Director is: Robin Barr
Division of Neuroscience

• Division of Neuroscience https://www.nia.nih.gov/research/dn
• NIA’s largest program division
• 90% of its research funding is now on Alzheimer’s disease and its Related dementias
• Offers many resources to help advance research on Alzheimer’s
• Its Division Director is: Dr. Eliezer Masliah
Division of Aging Biology

- DAB’s website: https://www.nia.nih.gov/research/dab
- The program is promoting the concept of geroscience from the premise that aging is the single largest risk factor for most major diseases.
- The Division Director is: Dr. Felipe Sierra
Division of Behavioral and Social Research

• BSR website: https://www.nia.nih.gov/research/dbsr
• Offers a range of resources that are available for secondary analysis
• The best known resource is the Health and Retirement Study
• The Division Director is: Dr. John Haaga
Division of Geriatrics and Clinical Gerontology

• GCG’s website: https://www.nia.nih.gov/research/dgcg
• Its best known program is the Pepper Centers (Older Americans Independence Centers)
• It also coordinates NIA’s GEMSSTAR program
• The Division Director is: Dr. Evan Hadley.
National Institute on Aging

- Director: Richard Hodes
- Deputy Director: Marie Bernard

- FY 2019 Appropriation: Not official yet but is around $3.1 billion
- NIA is part of NIH which is an agency of DHHS
NIA appropriation (billions)

- 2015: 1.00 billion
- 2019: 3.00 billion
## CSR-Reviewed Applications

<table>
<thead>
<tr>
<th>Category</th>
<th>General pay line, &lt;$500k</th>
<th>General pay line, ≥ $500K</th>
<th>ADRD pay line, &lt;$500k</th>
<th>ADRD pay line, ≥ $500K</th>
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<tbody>
<tr>
<td>All (except below)</td>
<td>15%</td>
<td>12%</td>
<td>28%</td>
<td>25%</td>
</tr>
<tr>
<td>New Investigator R01s</td>
<td>18%</td>
<td>15%</td>
<td>31%</td>
<td>28%</td>
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<tr>
<td>Early Stage Investigator R01s</td>
<td>20%</td>
<td>17%</td>
<td>33%</td>
<td>30%</td>
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</table>
Competing Awards

- AD/ADRD
- NIA other
- NIH

Fiscal Year:
- 2011
- 2016
- 2017
- 2018
NIA and the National Plan to Address Alzheimer’s Disease

- Prevent and effectively treat Alzheimer’s disease by 2025
- Optimize care quality and efficiency
- Expand supports for people with Alzheimer’s disease and their families.
- Enhance public awareness and engagement
- Track progress and drive improvement

https://www.nia.nih.gov/about/nia-and-national-plan-address-alzheimers-disease
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How do we build a field rapidly?
Our early efforts

• 100 Funding Opportunity Announcements
  - nearly all for R01s
• Administrative supplement program for NIA grants not currently focused on Alzheimer’s
• Outreach - blog, press efforts
Our Later Efforts

- Expand beyond the aging community
  - administrative supplement program for grants across NIH
- Recognizing the need for preliminary data
AD/ADRD Supplements by Institute/Center

<table>
<thead>
<tr>
<th>Institute/Center</th>
<th>Count of Supplements</th>
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<tbody>
<tr>
<td>NINDS</td>
<td>26</td>
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<tr>
<td>NHLBI</td>
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Need for preliminary data

• Administrative supplement programs
• Small grant (R03) RFAs
• “R56” awards to collect preliminary data
• Parent R21 award in Alzheimer’s
Recruitment to a Growing AD/ADRD Workforce

\(\approx \frac{1}{4}\) of NIA’s Alzheimer’s and related dementias awardees from Fiscal Year 2015-2018 were either *new or early stage* investigators.

\(\approx \frac{1}{3}\) of NIA’s Alzheimer’s and related dementias awardees were *new to the field*.
Alzheimer’s Research: NIA Priorities

Approved concepts for new funding opportunities are posted here after each National Advisory Council on Aging Meeting:
https://www.nia.nih.gov/approved-concepts

Current AD/ADRD funding opportunities are listed here:
https://www.nia.nih.gov/ad-foas
Predoctoral Students

- Fellowships (F30, F31)
- Training grants (T32, T35)
- Supplements to increase diversity
- Dissertation awards to increase diversity
- MERIT add-on awards
- NIH Director’s Early Independence Award (DP5)
Postdocs

- Training Grants (T32)
- Fellowships (F32)
- L30 (clinical loan repayment contract)
- Pathway to Independence (K99/R00)
  - (two phase, accelerator award)
- NIH Director’s Early Independence Award (DP5)
Junior faculty

• Most funding mechanisms available but some are more normative.
• L30 continues
• Mentored Ks (K01, K08, K23, K25)
• When do I apply for an(R03, R21)?
• When do I apply for an R01?
• AREA awards (Smaller schools)
• DP2 (New Innovator)
Early middle to middle

- R01, R01, R01 contd.
- R03, R21
- K02 – independent scientist award (accelerator)
- K24 (patient-oriented, combined purpose, mentoring, advancing own research career)
- STTR (R41 & R42) and SBIR (R43 & R44)
Mature

- R01, R01, R01...
- P01 (program project)
- P30, P50 (Center grants)
- K07 – academic leadership
- T32 – as director of a training grant