NIA Training and Career Development Opportunities

Maria Carranza, PhD
NIA Training Officer
4th Annual ADAR Summit
NIA Training Learning Objectives

• Raise awareness of:

- NIA-sponsored Training Opportunities
- Career Pathways in Aging Research
- NIA as a Resource and Community

@Alzheimers_NIH
Outline

• Introduction to NIA
• Overview of NIA Training and Career Development Programs
• How NIH/NIA can help you become a Research Scientist
• How NIH/NIA can help you become a Physician-Scientist
• How NIH/NIA can help you become a Dentist-Scientist
• Useful Resources
• Q&A
The U.S. Population is Aging

• Today, 46 million adults living in the U.S. are 65 or older.

• By 2050, the number of older adults is expected to grow to 90 million.

• Between 2020 to 2030, the number of older adults is expected to increase by 18 million.

• By 2030, 1 in 5 Americans is projected to be 65 or older.

https://www.ruralhealthinfo.org/rural-maps/mapfiles/population-over-age-65-county.jpg
The National Institute on Aging (NIA)

• NIA leads broad a scientific effort to understand the nature of aging and to extend the healthy, active years of life.

• Established in 1974.

• The primary federal agency for supporting and conducting Alzheimer’s disease research.

• Total Budget: $3.899 billion for FY 2021.
NIA’s Mission

• Support and conduct genetic, biological, clinical, behavioral, social, and economic research on aging.

• Foster the development of research and scientists (e.g., research scientists, clinician-scientists, public health scientists, etc.) in aging.

• Provide research resources.

• Disseminate information about aging and advances in research to the public, health care professionals, and the scientific community, among a variety of audiences.
**Office of Special Populations**
Promotes research on differences in life expectancy among populations and that identifies factors that lead to disparate health outcomes in older persons.

**Division of Aging Biology**
Molecular, cellular, and genetic research on the mechanisms of aging as well as resource facilities for aging research.

**Division of Social and Behavioral Research**
Social, behavioral, psychological, and economic research on the processes of aging at both the individual and societal level.

**Division of Geriatrics and Clinical Gerontology**
Clinical and translational research on health and disease in the aged and over the human life span.

**Division of Neuroscience**
Neural and behavioral processes associated with the aging brain. Alzheimer's disease and related dementias are one of the program's highest priorities.

**Office of Small Business Programs**
Manages the largest source of early-stage non-dilutive funding for healthy aging innovations.

**Intramural Research Program**
Multidisciplinary research in 10 scientific laboratories and specialized branches for clinical research in Baltimore and Bethesda.
NIA Priority

Train the Next Generation of Researchers in the field of Aging
Overview of NIA Training and Career Development Programs

Academic Career Path

Undegrad | Advanced degree student | Candidacy exam | Graduation | Postdoc. Fellow (4 yrs) | Junior Faculty | 10 years post-PhD | Senior Faculty
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R25 ADAR* | R36 | F30 | F31 | F31-D | F32-D AD | BRAIN F32 | K22 | K99/R00 | K99/R00-D AD | MOSAIC K99/R00 | BRAIN K99/R00 | F33 | K07 | K02 | K24
F31-D AD | F99/K00 | DSPAN F99/K00 | K22

Key:
- General
- Diversity
- Clinician-scientist
- International
- ESI
- NIA Training Program
- * Institutional

Mentored Mechanisms for Junior Faculty

- K01
- K08
- K25
- K23
- K76

Non-mentored Career Development Awards

- D43*
- K38
- Katz ESI-R01
- GEMSSTAR
- R01/R21/R03

T32/T35 NRSA Institutional Training Grants*

- Butler-Williams Scholars Program

Loan Repayment Program

Diversity Supplement

Re-entry supplement

Continuity and retention supp.
How NIH and NIA Can Help you Become a **Research Scientist**

**Nicholas Institute Awards**
- R25 ADAR*

**Graduate School**
- Explore Research
  - Summer research NIH-T35
  - Consider careers NIH BEST
  - Transition MS to PhD

- Engage in Research

**College**
- Explore Research
  - Summer internship at NIH
  - Summer research NIH-R25
  - Diversity related programs in science
  - Postbaccalaureate program NIH PREP, NIH IRTA

**NIA Individual Awards**
- F31
- F31-D
- F31-D AD
- R36
- F99/K00
- DSPAN F99/K00

**Science Policy**

**Science Communications**

**Science Administration & Management**

**Diversity Supplement**
How NIH and NIA Can Help you Become a **Research Scientist**

**NIA Institutional Awards**
- T32*

**Postdoctorate Research**
- Build Research
  - Postdoctoral training program NIH-T32
  - Individual fellowship NIH-F32
  - Career development program NIH-K99/R00
  - Research training career development NIH-IRACDA
  - Loan repayment program NIH-LRP

**A Career as a Research Scientist**
- Conduct research on biomedical mechanisms, diagnosis and therapy, population and outcome medicine, health policy or health services
- Work at Academic Health Centers, Hospitals, Federal laboratories, or Biotechnology/Pharmaceutical industry
- Collaborate with a team of researchers NIH-U01, R24
- Independent research projects grants NIH-R01, R21

**NIA Individual Awards**
- F32
- F32-D AD
- BRAIN F32
- K22
- K99/R00
- K99/R00-D AD
- MOSAIC K99/R00
- BRAIN K99/R00
- K01
- K25
- LRP

**Butler-Williams Scholars Program**

Visit [researchtraining.nih.gov/infographics/research-scientist](https://researchtraining.nih.gov/infographics/research-scientist)
How NIH and NIA Can Help you Become a Physician-Scientist

Career with MD/PhD

Definitely want research as a major part of a medical career

NIA Institutional Awards

- R25 ADAR*

College Explore Research

- Summer research NIH-R25
- One-two years after college NIH-IRTA

Medical School Engage in Research

- Complete a PhD
  - Integrated MD/PhD NIH-T32 MSTP
  - Graduate fellowship NIH-F30, NIH-F31

Explore research
- Summer research NIH-T35
- Full year research NIH-TL1
- Full year research NIH-MSRP

Career with MD

Interested in health and disease and a career with research

Diversity Supplement
How NIH and NIA Can Help you Become a Physician-Scientist

NIA Institutional Awards
- R38*
- K08
- K22
- K23
- K38
- K99/R00
- K01

NIA Individual Awards
- GEMSSTAR
- K76
- LRP

Butler-Williams Scholars Program

A Career as a Physician Scientist
- Conduct research on biomedical mechanisms, diagnosis and therapy, population and outcome medicine, health policy or health services
- Work at Academic Health Centers, Hospitals, Federal laboratories, or Biotech/Pharmaceutical industry
- Collaborate with a team of researchers
- Independent research project grants

* Supplement to Enhance Diversity is applicable at all career levels

https://researchtraining.nih.gov/infographics/physician-scientist
How NIH and NIA Can Help you Become a Dentist-Scientist

Career with DDS/DMD - PhD
Definitely want dental research as a major part of a medical career

NIA Institutional Awards

- R25 ADAR*

Dentist School Engage in Research
- Complete a PhD
  - Graduate fellowship NIH-F30, NIH-F31
  - Integrated DDS/DMD - PhD NIDCR institutional NIH-T32, T90

College Explore Research
- Summer research NIH-R25
- One-two years after college NIH-IRTA
- Summer Internship Program at NIH

Career with DDS/DMD
Interested in health and disease and a career with research

NIA Individual Awards

- F30
- F31

Diversity Supplement
How NIH and NIA Can Help you Become a **Dentist-Scientist**

**NIA Institutional Awards**

- R38*

**NIA Individual Awards**

- K22
- K99/R00
- K38
- K01
- K08
- K23
- GEMSSTAR
- K76
- LRP

**Butler-Williams Scholars Program**

**A Career as a Dentist Scientist**

Conduct research on biomedical mechanisms, diagnosis and therapy, population and outcome medicine, health policy or health services.

Work at Academic Health Centers, Hospitals, Federal Laboratories, or Biotech/Pharmaceutical industry.

- Opportunities in NIH Clinical Center
- Pursue a Master’s Program or PhD F32
- Postdoctoral Research NIDCR T32, T30R00
- Dental Clinical Research Fellowship at NIH
- Dental Public Health Residency
- Dentist Pathway to Independence K99/R00
- Loan Repayment Award NIH-LRP*

- Clinical translational research NIH-KL2
- Focused research NIH-K12
- Individual career development NIH-K

https://researchtraining.nih.gov/infographics/dentist-scientist
NIH programs help to prepare the skilled, creative and diverse biomedical research workforce of tomorrow

https://researchtraining.nih.gov/
Explore NIA Training and Career Development

**Institutional Training Grants (T & R25)**
Learn about training grants available to universities, centers, and other institutions.

**Individual Fellowship Awards (F)**
Learn about individual fellowships available to graduate students, postdocs, and independent researchers.

**NIH Loan Repayment Program for Clinical Researchers**
Learn about loan repayment opportunities.

**Research Career Development Awards (K)**
Funding opportunities for independent investigators and postdocs pursuing independent research careers.

**Training Opportunities for Special Populations**
NIA participates in programs to increase diversity in the research workforce, from high school to early-career investigators and clinician-researchers.

**Research and Entrepreneurial Development Immersion (REDI)**
Individual and institutional awards supporting entrepreneurial training.

https://www.nia.nih.gov/research/training
Train with NIA Intramural Researchers in Baltimore

• Thinking about a career in research and looking for a way to try it out? Want to build on your aging research interest with more lab experience?

• The NIA Intramural Research Program offers excellent training opportunities in laboratory and clinical medicine related to aging.

• Opportunities for high school, college, post-bac, medical students, and post-docs.

https://www.nia.nih.gov/train-nia-researchers-baltimore
Useful Resources

• NIA Training and Career Development: https://www.nia.nih.gov/research/training

• NIA Training Officer: Dr. Maria Carranza
  Email: NIATraining@mail.nih.gov

• NIA Grants & Funding: https://www.nia.nih.gov/research/grants-funding

• Sample Applications: https://www.niaid.nih.gov/grants-contracts/sample-applications

• NIA Diversity Supplement Guidelines: https://www.nia.nih.gov/research/diversity-supplements
Other Ways to Connect with the National Institute on Aging

Inside NIA A Blog for Researchers

Subscribe and see our recent posts on research workforce diversity

Read about the NIH UNITE Initiative

#ResearchDiversity Day
Twitter Chat

Watch video on Diversity Supplements launched on Oct. 21, 2021
Q&A