Grant Writing Workshop: NIH Fellowships

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DISEASES

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A Brief Introduction to...

• NIH Structure and Staff
• Grant application process and resources
• Fellowship opportunities
• Grant writing basics
### The 27 Institutes and Centers (ICs) of the NIH

<table>
<thead>
<tr>
<th>Institute Name</th>
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</tr>
</thead>
<tbody>
<tr>
<td>National Institute on Aging</td>
<td>National Institute on Alcohol Abuse and Alcoholism</td>
<td>National Institute of Allergy and Infectious Diseases</td>
<td>National Institute of Arthritis and Musculoskeletal and Skin Diseases</td>
<td>National Cancer Institute</td>
<td>National Institute of Child Health and Human Development</td>
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<td>National Institute on Deafness and Other Communication Disorders</td>
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<td>National Institute of Diabetes and Digestive and Kidney Diseases</td>
<td>National Institute on Drug Abuse</td>
<td>National Institute of Environmental Health Sciences</td>
<td>National Eye Institute</td>
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<td>National Heart, Lung, and Blood Institute</td>
<td>National Human Genome Research Institute</td>
<td>National Institute of Mental Health</td>
<td>National Institute of Neurological Disorders and Stroke</td>
<td>National Institute of Nursing Research</td>
</tr>
<tr>
<td>National Center for Complementary and Integrative Health</td>
<td>Fogarty International Center</td>
<td>National Center for Advancing Translational Sciences</td>
<td>National Library of Medicine</td>
<td>National Institute of Biomedical Imaging and Bioengineering</td>
<td>National Institute on Minority Health and Health Disparities</td>
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<tr>
<td><strong>Clinical Center</strong></td>
<td><strong>Center for Information Technology</strong></td>
<td><strong>Center for Scientific Review</strong></td>
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</tbody>
</table>
Your NIH Contact, the Program Official

- Provides technical assistance to applicants
- Evaluates the mission relevance and programmatic merit of applications

Pre-application

- Observes scientific review meetings
- Discusses review issues with applicant
- Prepares funding recommendations

Post-application

- Reviews annual research progress of grantees
- Reports on scientific progress and program accomplishments

Post-funding
Use Matchmaker to find similar projects and program officials.

Enter abstracts or other scientific text and Matchmaker will return lists of similar projects from RePORTER or program officials associated with those projects. These matches are based on the terms and concepts used in the submitted text. Up to 15,000 characters are permitted. Matchmaker summarizes the projects by the program official, institute or center, review panel, and activity code.

Enter your Text:

Terms will be weighted by frequency of appearance in the text above. The process is automated and confidential. The Matchmaker system does not track and store submitted text.

Your aims here!
Funding Opportunity Announcements (FOAs) are Found in “The Guide”

Funding

NIH offers funding for many types of grants, contracts, and even programs that help repay loans for researchers. Learn about these programs, as well as about NIH’s budget process, grant funding strategies, and policies, and more.

Grants (NIH Guide to Grants and Contracts)

The NIH Guide for Grants and Contracts is our official publication for NIH grant policies, guidelines and funding opportunities. We publish daily, and issue a table of contents weekly. Learn more about the NIH Guide and subscribe today!

View all Parent Announcements
(for unsolicited applications)

Search for funding opportunities and notices

[Search Bar]
Funding Opportunity Announcements (FOAs) are Found in “The Guide”

**Fellowship (F) Announcements**

<table>
<thead>
<tr>
<th>Activity Code(s)</th>
<th>Title</th>
<th>Announcement Number</th>
<th>Issuing Organization</th>
<th>Release Date</th>
<th>Opening Date (SF424 Only)</th>
<th>Expiration Date</th>
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<tbody>
<tr>
<td>F30</td>
<td>Ruth L. Kirschstein National Research Service Award (NRSA) Individual Fellowship for Students at Institutions with NIH-Funded Institutional Predoctoral Dual-Degree Training Programs (Parent F30)</td>
<td>PA-19-191</td>
<td>NIH</td>
<td>02/22/2019</td>
<td>03/08/2019</td>
<td>01/08/2022</td>
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<td>F31</td>
<td>Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research (Parent F31)</td>
<td>PA-19-196</td>
<td>NIH</td>
<td>02/22/2019</td>
<td>03/08/2019</td>
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<tr>
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<tr>
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<td>03/08/2019</td>
<td>01/08/2022</td>
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</table>
NIH Research Training Website

NIH programs help to prepare the skilled, creative and diverse biomedical research workforce of tomorrow

Recent Announcements
- Mentored Research Scientist Development Award (Parent K23) Independent Basic Experimental Studies with Humans Required, Nov 20, 2019
- Independent Scientist Award (Parent 542) Independent Basic Experimental Studies with Humans Required, Nov 20, 2019
- Mentored Clinical Scientist Research Career Development Award (Parent K08) Independent Basic Experimental Studies with Humans Required, Nov 20, 2019
- Mentored Patient-Oriented Research Career Development Award (Parent K23) Independent Basic Experimental Studies with Humans Required, Nov 20, 2019

NIH Research Training and Career Development Programs
NIH programs help prepare individuals for careers in biomedical, behavioral, social, and clinical research.
- Learn more about how NIH institutes and centers may vary in research and training
- Contact NIH training staff to discuss how specific programs fit your training and career goals.
- Explore this website for resources for training program leaders and individuals seeking research support at various career stages.

Research Career Pathways
Interactive guide to describe NIH programs and links to support training and career development of biomedical scientists:
- Physician-Scientist Infographic
- Veterinarian-Scientist Infographic
- Dentist-Scientist Infographic
- Research-Scientist Infographic

CAREER DEVELOPMENT K08
RESEARCH TRAINING K08
FELLOWSHIP K08
OTHER TRAINING-RELATED K08
EXTRAMURAL DIVERSITY K08
WORKFORCE DASHBOARD K08
Does Your Application’s Home IC Participate in the FOA?

Part 1. Overview Information

<table>
<thead>
<tr>
<th>Participating Organization(s)</th>
<th>National Institutes of Health (NIH)</th>
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<tbody>
<tr>
<td>Components of Participating Organizations</td>
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<tr>
<td>National Cancer Institute (NCI)</td>
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<td>National Eye Institute (NEI)</td>
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<td>National Heart, Lung, and Blood Institute (NHLBI)</td>
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<td>National Human Genome Research Institute (NHGRI)</td>
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<td>National Institute on Aging (NIA)</td>
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<td>National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)</td>
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<td>National Institute of Biomedical Imaging and Bioengineering (NIBIB)</td>
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<td><em>Eunice Kennedy Shriver</em> National Institute of Child Health and Human Development (NICHD)</td>
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<td>National Institute on Deafness and Other Communication Disorders (NIDCD)</td>
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<td>National Institute of Dental and Craniofacial Research (NIDCR)</td>
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<td>National Institute on Drug Abuse (NIDA)</td>
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<td>National Institute of Environmental Health Sciences (NIEHS)</td>
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<td>National Institute of General Medical Sciences (NIGMS)</td>
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<td>National Institute of Nursing Research (NINR)</td>
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<tr>
<td>National Center for Complementary and Integrative Health (NCCIH)</td>
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Special Note. Not all NIH Institutes and Centers participate in Parent Announcements. Applicants should carefully note which ICs participate in this announcement and view their respective areas of research interest and requirements at the Table of IC-Specific Information, Requirements, and Staff Contacts website. ICs that do not participate in this announcement will not consider applications for funding. Consultation with NIH staff before submitting an application is strongly encouraged.
Ruth L. Kirschstein National Research Service Awards (NRSA) Fellowships: F30, F31, F32

- Awarded to **predoctoral** and **postdoctoral** trainees who are working with mentors.
- Training can be at **domestic** or **foreign** institutions.
- Opportunities in **basic** and **clinical** research.
- Must be a **citizen, non-citizen national**, or lawfully admitted for **permanent residence**. Permanent Residents must have Permanent Residency by the time of award.
- Please note that **not all ICs** participate in all F FOAs.
F30 Predoctoral Fellowships

- Available only to people in formal dual degree programs.
- Limited to 6 years, at least 50% of which must be devoted to research.
- Requires a full-time research commitment (40 hours/week).

Benefits
- Tuition: 60% of requested tuition, capped at $21,000
- Stipend: $24,816
- Training Expenses: $4,200, includes health insurance

There are 2 Parent F30 FOAs, one for institutions with NIH-Funded MSTP programs and one for institutions without NIH-funded MSTP programs!
F31 Predoctoral Fellowships

- Applicants must be enrolled in a formal PhD or equivalent program.
- Limited to 5 years.
- Requires a full-time research commitment (40 hours/week).

Benefits
- Tuition: 60% of requested tuition, capped at $16,000
- Stipend: $24,816
- Training Expenses: $4,200, includes health insurance

There are 2 Parent F31 FOAs, one to promote diversity and one open to all applicants.
F32 Postdoctoral Fellowships

- Supports postdoctoral research training of clinician and PhD researchers.
- Limited to 3 years.
- Requires a full-time research commitment (40 hours/week).
- Requires “payback” for the first 12 months.

Benefits
- Tuition: 60% of requested tuition, capped at $4,500
- Stipends: Range from $50,004 at Level 0 to $61,308 at Level 7
- Training Expenses: $10,850 including health insurance
Where are the Instructions?

- **Funding Opportunity Announcements (FOAs)**
  - Section IV. Application and Submission Information
  - Section V. Application Review Information
- **Fellowship Instructions for NIH and Other PHS Agencies SF424 (R&R)**
  
<table>
<thead>
<tr>
<th>Application Form Instructions</th>
<th>Description</th>
<th>SF424 (R&amp;R) - Version E</th>
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<tbody>
<tr>
<td>G General Instructions</td>
<td>Comprehensive guidance for research, training,</td>
<td>HTML / PDF</td>
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<td></td>
<td>fellowship, career development, multi-project,</td>
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<tr>
<td></td>
<td>and small business applications</td>
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<tr>
<td>F Fellowship Instructions</td>
<td>Guidance for fellowship only</td>
<td>PDF</td>
</tr>
</tbody>
</table>

- The FOA instructions always supersede the SF424 instructions.
Major Sections of an F Application

- **Biographical Sketch (5 pages)**
- **Reference Letters (3-5)**
- **Fellowship Applicant Section**
  - Applicant's Background and Goals for Fellowship Training (6 pages)
- **Research Training Plan Section**
  - Specific Aims (1 page)
  - Research Strategy (6 pages)
  - Respective Contributions (1 page)
  - Selection of Sponsor and Institution (1 page)
- **Sponsor(s), Collaborator(s), and Consultant(s) Section**
  - Sponsor and Co-Sponsor Statements (6 pages)
  - Letters of Support from Collaborators, Contributors, and Consultants (6 pages)
- **Institutional Environment and Commitment to Training Section**
  - Description of Institutional Environment and Commitment to Training (2 pages)
Five Core Review Criteria

- Fellowship Applicant
- Sponsors, Collaborators, and Consultants
- Research Training Plan
- Training Potential
- Institutional Environment & Commitment to Training
Fellowship Applicant

Your potential based on your academic achievements, research productivity, and letters of reference.

- The more publications you have the better, especially if they are related to your application. However, include all your publications, including the ones you may have had as an undergraduate, as it shows commitment and trajectory.
- Describe any podium or poster presentations.
- Include all relevant awards and achievements.
- Letters of reference should be enthusiastic and clearly detail your intelligence, creativity, drive, and commitment to scientific research.
- This is not the time to be modest with your achievements!
Expertise in the scientific topic of the proposed research project and experience and success in training scientists.

- You may need a mentoring team to make sure all expectations of a mentor are filled:
  - Topic-area experts with an extensive publication record
  - Success in obtaining peer-reviewed grants
  - Experience with mentoring people who go on to become independent scientists
  - Clinicians working with a PhD may want a clinician-scientist as career mentor

- Letters of support should clearly define the roles of the mentors and collaborators in the training plan.
Research Training Plan

A project that will result in publications, provide you with new skills, advance the scientific field, and “launch” your career.

- Develop a strong, coherent training plan with your mentor, making sure it’s related to, but independent from, you mentor’s funded grants.
- The plan should be appropriate to your level of experience and career goals.
- Propose a clear hypothesis that is based on a solid rationale and supportive preliminary data.
- Include potential pitfalls, alternative approaches, data interpretation, statistical analysis, and future studies.
- There is no expectation that the research plan be particularly innovative/risky, as reviewers would prefer a plan that’s likely to succeed/lead to publications.
- State specific, realistic milestones, with associated timelines.
Training Potential

New skills and training that will expand upon your previous training.

- The training activities should match your career goals and make you competitive for the next phase of your career.
- Describe individualized training that addresses your specific training needs.
- Include additional coursework as needed.
- Include opportunities for written and oral communication, through courses, workshops, and presentations at local and national seminar series and conferences.
- Include opportunities to train more junior students.
- It helps to include a formal mentoring/thesis committee to monitor progress.
Institutional Environment & Commitment to Training

Facilities and resources, as well as institutional programs like career development workshops

- Describe the resources and facilities available to successfully complete the proposed experiments.
- Describe seminar series that bring in external leaders in the field.
- Describe opportunities for collaborations and interactions.
- Include seminars and workshops that focus on career development, grant application writing, starting a lab, etc.
Additional Fellowship Review Criteria & Considerations

- **Additional Review Criteria (contribute to score)**
  - Protection for Human Subjects
  - Inclusion of Women, Minorities, and Children
  - Vertebrate Animals
  - Biohazards
  - Resubmissions

- **Additional Review Considerations (can delay funding)**
  - Training in the Responsible Conduct of Research
  - Applications from Foreign Organizations
  - Select Agents Research
  - Resource Sharing Plans
  - Budget & Period of Support
Resources

- NIH Matchmaker: https://projectreporter.nih.gov/reporter_matchmaker.cfm
- Parent FOAs: https://grants.nih.gov/grants/guide/parent_announcements.htm
- NIH research training website: https://researchtraining.nih.gov
- NIH RePORTER: https://projectreporter.nih.gov/reporter.cfm
- CSR Assisted Referral Tool: https://art.csr.nih.gov/ART/
- CSR Fellowship reviews: https://public.csr.nih.gov/StudySections/Fellowship
Thank you!

AMANDA BOYCE

BOYCEA@MAIL.NIH.GOV
Find Active Grants in NIH RePORTER
Find the Best Study Section with the CSR Assisted Referral Tool (ART)

ASSISTED REFERRAL TOOL (ART)

Enter application text and hit the Submit button to get a list of relevant study sections. Entering the Specific Aims is highly recommended.

Title: optional

Enter text here

Terms will be weighted by frequency of appearance in the text above. The process is automated and confidential. ART does not track or store submitted text.

Submit

Your aims here!
# Fellowship Study Sections (CSR)

## Fellowship Study Sections

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<tr>
<th>Study Section</th>
<th>Study Section Description</th>
<th>Scientific Review Officer</th>
</tr>
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<tbody>
<tr>
<td>F01A</td>
<td>Fellowships: Brain Disorders and Related Neurosciences</td>
<td>Dr. Vilen Movsesyan</td>
</tr>
<tr>
<td>F01B</td>
<td>Fellowships: Learning and Memory, Language, Communication and Related Neurosciences</td>
<td>Dr. Susan Gillmor</td>
</tr>
<tr>
<td>F02A</td>
<td>Fellowships: Behavioral Neuroscience</td>
<td>Dr. Mei Qin</td>
</tr>
<tr>
<td>F02B</td>
<td>Fellowships: Sensory and Motor Neurosciences, Cognition and Perception</td>
<td>Dr. Sharon Low</td>
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<tr>
<td>F03A</td>
<td>Fellowships: Neurodevelopment, Synaptic Plasticity and Neurodegeneration</td>
<td>Dr. Mary Schueler</td>
</tr>
<tr>
<td>F03B</td>
<td>Fellowships: Biophysical, Physiological, Pharmacological and Bioengineering Neuroscience</td>
<td>Dr. Sussan Paydar</td>
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<tr>
<td>F04A</td>
<td>Fellowships: Chemistry, Biochemistry and Biophysics A</td>
<td>Dr. Mike Radtke</td>
</tr>
<tr>
<td>F04B</td>
<td>Fellowships: Chemistry, Biochemistry and Biophysics B</td>
<td>Dr. Sudha Veeraraghavan</td>
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<tr>
<td>F05-D</td>
<td>Fellowships: Cell Biology, Developmental Biology, and Bioengineering</td>
<td>Dr. Alexander Gubin</td>
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<tr>
<td>F05-U</td>
<td>Fellowships: Cell Biology, Developmental Biology, and Bioengineering</td>
<td>Dr. Raj Krishnaraju</td>
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<td>F06</td>
<td>Fellowships: Endocrinology, Metabolism, Nutrition and Reproductive Sciences</td>
<td>Dr. Elaine Sierra-Rivera</td>
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<tr>
<td>F07</td>
<td>Fellowships: Immunology and Area</td>
<td>Dr. Lueling Guo</td>
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<tr>
<td>F08</td>
<td>Fellowships: Genes, Genomes and Genetics</td>
<td>Dr. Lystranne Maynard Smith</td>
</tr>
<tr>
<td>F09A</td>
<td>Fellowships: Oncological Sciences</td>
<td>Dr. Reigh-Yi Lin</td>
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<td>F09B</td>
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<td>Dr. Jian Cao</td>
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<td>F09C</td>
<td>Fellowships: Oncological Sciences</td>
<td>Dr. Sarita Sastry</td>
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<tr>
<td>F10A</td>
<td>Fellowships: Physiology and Pathobiology of Cardiovascular and Respiratory Systems</td>
<td>Dr. Richard Schneiderman</td>
</tr>
<tr>
<td>F10B</td>
<td>Fellowships: Musculoskeletal and Oral Sciences, Imaging, Surgery, and Informatics</td>
<td>Dr. Anshumali Chaudhari</td>
</tr>
<tr>
<td>F10C</td>
<td>Fellowships: Physiology and Pathobiology of the Vascular and Hematological Systems</td>
<td>Dr. Katherine Malinda</td>
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