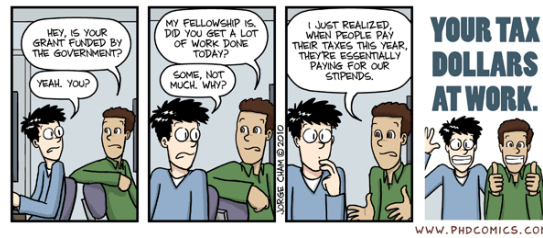


Extramural Predoctoral Fellowships: Overview and Insights from Successful Applicants

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Why it is Worth Your Time to Apply*

Benefits of Submitting an Application:

- Opportunity to think deeply about your project and plan your dissertation research
- Improve writing and grantsmanship skills
- Receive feedback on your preliminary data and proposed research

Benefits of a Successful Application:

- An additional scholarship of (20% of the NIH stipend) for the duration of the award
- A significant achievement to add to your CV
- Increases your chances of receiving a post-doctoral fellowship or a career development award



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NIH Ruth L. Kirschstein National Research Service Award (NRSA) Program

Program goal: "...ensure that a diverse pool of highly trained scientists is available in appropriate scientific disciplines to address the Nation's biomedical, behavioral, and clinical research needs "



F31: support PhD candidates performing dissertation research and training in scientific health-related fields*

- Ruth L. Kirschstein NRSA for Individual Predoctoral Fellows
- Ruth L Kirschstein NRSA for Individual Predoctoral Fellowships to Promote Diversity
 - Individuals from underrepresented racial & ethnic groups, with disabilities, or from disadvantaged backgrounds

F30: provide support to combined MD/PhD candidates performing dissertation research and training in scientific health-related fields*

*must be relevant to the missions of the participating NIH Institutes and Centers.



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Participating Institutes and Centers

•Dissertation research must be relevant to the missions of the participating NIH Institutes and Centers

National Center for Complementary and Integrative Health (NCCIH)

National Cancer Institute (NCI)

National Eye Institute (NEI)

National Human Genome Research Institute (NHGRI)

National Heart, Lung, and Blood Institute (NHLBI)

National Institute on Aging (NIA)

National Institute on Alcohol Abuse and Alcoholism (NIAAA)

National Institute of Allergy and Infectious Diseases (NIAID)

National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) (F31 only in 2021)

Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)

National Institute on Deafness and Other Communication Disorders (NIDCD)

National Institute of Dental and Craniofacial Research (NIDCR)

National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

National Institute of Environmental Health Sciences (NIEHS)

National Institute of Mental Health (NIMH)

National Institute on Minority Health and Health Disparities (NIMHD)

National Institute of Nursing Research (NINR) (F31 only in 2021)

National Institute of Neurological Disorders and Stroke (NINDS) (F31 only in 2021)

National Library of Medicine (NLM)

Office of Research Infrastructure Programs (ORIP)

National Institute on Drug Abuse (NIDA) (F31 only in 2021)



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Important Note

Most other predoctoral fellowship funding mechanisms use the NIH F-award as a model, so even if you are not eligible to apply for an F30 or F31, the information in this session will be relevant to you



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Eligibility Criteria for F30/F31 Applicants*

- U.S. citizen, non-citizen U.S. national, or permanent resident
 - Individuals on temporary or student visas are not eligible
 - International students are eligible to apply for some non-NIH predoctoral fellowships (e.g. American Heart Association)
- Hold a baccalaureate degree and be enrolled in a PhD (F31) or combined MD/PhD (F30) program in the biomedical, behavioral, health services, or clinical sciences
- Have reached the dissertation research stage of their training (At or near candidacy)
- Identify one or more sponsor(s). Sponsor(s) must have NIH funding or equivalent.
 - One sponsor is thesis advisor
- Evidence of strong academic performance in the sciences and substantial interest in research areas of high priority to the participating Institutes/Centers.



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Are You Eligible For a Diversity Award?

- A. Individuals from racial and ethnic groups that are underrepresented in health-related sciences on a national basis including Blacks or African Americans, Hispanics or Latinos, American Indians or Alaska Natives, Native Hawaiians and other Pacific Islanders. See data at <http://www.nsf.gov/statistics/showpub.cfm?TopID=2&SubID=27> and the report [Women, Minorities, and Persons with Disabilities in Science and Engineering](#).
- B. Individuals with disabilities, who are defined as those with a physical or mental impairment that substantially limits one or more major life activities, as described in the [Americans with Disabilities Act of 1990, as amended](#). See NSF data at, <https://www.nsf.gov/statistics/2017/nsf17310/static/data/tab7-5.pdf>
- C. Individuals from disadvantaged backgrounds, defined as those who meet two or more of the following criteria:
1. Were or currently are homeless, as defined by the McKinney-Vento Homeless Assistance Act (Definition: <https://nche.ed.gov/mckinney-vento/>);
 2. Were or currently are in the foster care system, as defined by the Administration for Children and Families (Definition: <https://www.acf.hhs.gov/cb/focus-areas/foster-care/>);
 3. Were eligible for the Federal Free and Reduced Lunch Program for two or more years (Definition: <https://www.fns.usda.gov/school-meals/income-eligibility-guidelines/>);
 4. Have/had no parents or legal guardians who completed a bachelor's degree (see <https://nces.ed.gov/pubs2018/2018009.pdf>);
 5. Were or currently are eligible for Federal Pell grants (Definition: <https://www2.ed.gov/programs/fpg/eligibility.html>);
 6. Received support from the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) as a parent or child (Definition: <https://www.fns.usda.gov/wic/wic-eligibility-requirements/>).
 7. Grew up in one of the following areas:
 - a) a U.S. rural area, as designated by the Health Resources and Services Administration (HRSA) Rural Health Grants Eligibility Analyzer (<https://data.hrsa.gov/tools/rural-health/>), or
 - b) a [Centers for Medicare and Medicaid Services-designated Low-Income and Health Professional Shortage Areas](#) (qualifying zip codes are included in the file).
- Only one of the two possibilities in #7 can be used as a criterion for the disadvantaged background definition.



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Sponsor(s) Criteria*

Federal research funding

- Funding to cover research for the first two years of the fellowship
- Preferably NIH R01 or equivalent (other major grants can be acceptable)

Recent publications and strong publication history

Established track record of training Ph.D. students

- Previous/current doctoral students with first-author papers
- Previous/current doctoral students with fellowships
- Previous doctoral students are now postdocs, faculty, or in industry



If the sponsor lacks these credentials (e.g. a junior faculty member with limited track record of training students), then a co-sponsor is strongly recommended



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F30 and F31 Application Basics

Deadlines:

- Electronic submission to NIH by April 8, Aug. 8, Dec. 8
- Submit to UNMC sponsored programs three days prior (research plan may be in draft form for this early deadline)
- Non-NIH predoctoral fellowships generally have one submission deadline per year



Length of award: Up to 5 years (usually 2-3 years)

Annual budget: stipend (NIH level-25,836 in 2021), tuition and fees (up to 60% for a max of \$16,000 in 2021), institutional allowance for health insurance (\$4,200 in 2021)

- Non-NIH predoctoral fellowships may cover other costs



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Pre-Planning Stage

- Read the **funding opportunity announcement** (FOA or guidelines) for the F30 or F31 program AND the individual fellowship **application guide** (or similar documents for other predoctoral fellowships)
- **Talk to your thesis advisor (sponsor) to determine:**
 - if you and your sponsor are eligible
 - when is the right time to apply
 - which NIH institute is most appropriate
- **If/When you decide to apply, then:**
 - discuss expectations and timelines for drafts of sections with your sponsor
 - discuss who will be co-sponsors, collaborators, consultants, etc.
 - discuss who will write your letters of reference
 - ask sponsor for contact information for department grant administrator
 - contact your department grant administrator, graduate program director, co-sponsors, collaborators, etc. immediately to make them aware of your plans and timeline



Begin planning and writing several months in advance



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Links to Funding Opportunity Announcements and Instructions

F30 FOA:

<https://grants.nih.gov/grants/guide/pa-files/PA-21-050.html>

F31 FOA (Individual):

<https://grants.nih.gov/grants/guide/pa-files/PA-21-051.html>

F31 FOA (Diversity)

<https://grants.nih.gov/grants/guide/pa-files/PA-21-052.html>

Fellowship Instructions (SF424):

<https://grants.nih.gov/grants/how-to-apply-application-guide/forms-g/fellowship-forms-g.pdf>

General Instructions (SF424):

<https://grants.nih.gov/grants/how-to-apply-application-guide/forms-g/general-forms-g.pdf>

Note: FOA instructions supersede generic instructions



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Working with Your Departmental Grants Administrator

Contact your department's grant administrator as soon as you decide to apply

- Ask your sponsor for the name of this individual

Your department's grants administrator will complete the following:

- Set up of your eRA Commons account and ORCID ID
- Form pages
- Budget
- Internal paperwork
- Coordinate with Sponsored Programs Administration (SPA) for internal review and electronic submission of the grant



You are the PI of the application, so you must work with the grant administrator

On the above items as needed and proof final the application before submission



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Application Sections and Formatting: Some Key Information

Section of Application *	Page Limits [†] (if different from FOA, FOA supersedes)
Project Summary/Abstract	30 lines of text
Project Narrative	Three sentences
Introduction to Resubmission or Revision Application (when applicable)	1
Applicant's Background and Goals for Fellowship Training	6
Specific Aims	1
Research Strategy	6
Respective Contributions	1
Selection of Sponsor and Institution	1
Training in the Responsible Conduct of Research	1
Sponsor and Co-Sponsor Statements	6
Letters of Support from Collaborators, Contributors, and Consultants	6
Description of Institutional Environment and Commitment to Training	2
<small>Note: This page limit includes the Additional Educational Information required for F30 and F31 applications.</small>	
Applications for Concurrent Support (when applicable)	1
Biographical Sketch	5

* Not a complete list of all required sections

- Prepared by others:
- sponsors
 - co-sponsors
 - grad program director
- Make sure key documents are tailored to you
• Consider drafting these documents for others

- Write sections in MS Word (**Arial, 11-point font, minimum of 0.5 margins**)
- Sections will be converted to pdf and merged for submission



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Applicant's Background and Goals for Fellowship Training

- **Subsection 1: Doctoral Dissertation and Research Experience**
- **Subsection 2: Training Objectives and Goals**

- Identify the skills, conceptual approaches, etc. to be learned/enhanced during the award including expertise in rigorous research design, experimental methods, quantitative approaches, and data analysis and interpretation
- Describe near-term training and career goals and explain how the proposed research training will allow you to achieve these goals

- **Subsection 3: Activities Planned Under This Award**

- Activities planned under this award should be individually tailored and well-integrated with your research project
- Estimate the percentage of time to be devoted to each activity (total should be 100%)
- Provide a timeline detailing the proposed research training, professional development, and clinical activities for the duration of the fellowship award.



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Tips for Success: Applicant's Background and Goals for Fellowship Training

- Training goals and activities should be uniquely tailored to you
 - Should take into account your goals and previous experience/training
 - Include at least 2-4 specific training areas beyond generic training in your program
 - Training activities can include research, coursework, workshops, conferences, other professional development, clinical activities, etc.
 - Include a mixture of didactic training and “hands on” research training experiences
 - Present training activities in a table
 - list year by year
 - organize by goal
 - include percent time devoted to each
- Describe goals and activities with as much detail and specificity as possible
 - List specific conferences you want to attend (including dates)
 - List plans to work with a specific collaborator to learn particular skills



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More Tips for Success: Applicant's Background and Goals for Fellowship Training*

- Write your training plan as a cohesive narrative
 - It is more than just a list of goals and activities
 - Training activities, including research, should be explicitly linked to training objectives
 - Explain how each training activity will help you achieve training and research objectives
- Integrate this section with other sections of the application
 - Sponsor’s “Research Training Plan” section must describe same training goals and activities
 - “Research Strategy” section must discuss how training goals/activities relate to proposed research
 - This purposeful and planned redundancy is very helpful to reviewers



Other predoctoral fellowships also have similar sections including a career development plan, so these same suggestions apply



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Letters of Reference*

- Not the same as letters of support from Collaborators, etc.
- **Number of Letters Required:** Minimum of three, and a maximum of five
- **Referees:**
 - Faculty members who are familiar with your work, training, and goals
 - Sponsor/co-sponsor(s) cannot provide letter(s) of reference
 - Include names of referees in your cover letter
- **Timing:**
 - Solicit letters of reference at least three to four weeks before the deadline
 - Send friendly reminders as deadline approaches
- **Information to provide to referees:**
 - Submission deadline (their deadline is same as grant deadline)
 - FOA number
 - Your eRA Commons account username
 - First and last name as they appear on your eRA Commons account
 - Your biosketch or CV and any other info you think would be helpful (e.g. iDP)
 - NIH reference letter guide (includes instruction and link to site for submission)
 - <https://grants.nih.gov/grants/how-to-apply-application-guide/submission-process/reference-letters.htm>



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Application Review Process



- Applications reviewed in thematic groups by a study section
 - Composed of faculty with at least somewhat relevant expertise
 - Not all study section members are experts in your area of research
- Assigned a primary and secondary reviewer, but discussed and scored by all
- Scores for NIH grants range from 1 (exceptional) to 9 (poor)
- Scored Criteria
 - Applicant, Sponsor(s), Research Training Plan, Training Potential, and Institutional Env. & Commitment
- After the study section you will receive a summary statement:
 - Reviewers' scores and comments
 - Summary of general discussion



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Scoring for F30 and F31 Applications

Overall Impact:

The likelihood that the proposed training will enhance the candidate's potential for a productive, independent scientific research career in a health-related field.

Overall Impact	High	Medium	Low
Score	1 2 3	4 5 6	7 8 9

Evaluating Overall Impact Consider the 5 criteria (weighting based on reviewer's judgment):		<i>e.g. Proposes training or career development of high value/benefit for the candidate who has high potential for developing into a productive, independent scientist. May have some or no weaknesses in the criteria.</i>	<i>e.g. Proposes training or career development of high or moderate value/benefit for the candidate who has high or moderate potential for further development, but weaknesses in the criteria reduce the overall impact to medium.</i>	<i>e.g. Proposes training or career development of moderate or low value/benefit for the candidate who has moderate or low potential for further development. Weaknesses in the criteria reduce the overall impact to low.</i>
Fs				
<ul style="list-style-type: none"> • Applicant • Sponsor(s) • Research Training Plan • Training Potential • Institutional Environment & Commitment 		<i>e.g. Proposes training or career development of moderate value/benefit for the candidate who shows moderate potential. May have some weaknesses in the criteria.</i>	<i>e.g. Proposes training or career development of low value/benefit for the candidate who shows low potential. May have some weaknesses in the criteria.</i>	
and other score influences, e.g. human subjects, animal welfare, inclusion plans, and biohazards				

5 is a good, medium-impact application. The entire scale (1-9) should always be considered.



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Basic Tips from Reviewers

1. A strong research proposal is essential
 - Pitfalls | Alternatives | Statistical considerations
2. ~30-50% of the score derives from the training plan and career development plan
 - No one wants to fund a search to find yourself : know where you are going and how you will get there
3. Mentor experience and funding are significant factors
 - Add a co-sponsor if there is a deficiency, perceived weakness
4. Develop a strong mentoring committee (often your supervisory committee)
 - Articulate the contributions of each to your potential success
5. Letters are important - identify good writers that know you well



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Training Plan Tips from Reviewers

- List professional development activities to improve your:
 - Management (\$ and scientists)
 - Mentoring
 - Communication
 - Leadership
- Identify **gaps in training** and justify the need for career development
- Describe opportunities to
 - Present and publish
 - Attend conferences and network
 - Learn unique techniques
- Include a time-line with milestones and benchmarks
 - Sponsor(s) should evaluate your progress



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Tips from Reviewers on Integrating Your Plans

- Every activity and objective presented in the research plan, training plan, and career development plan should be interlinked
 - Clearly describe the linkage
- Missed opportunity (example)
 - Proposed career in bioinformatics, but...
 - Only one sub-aim involved bioinformatics
 - No coursework/training planned to develop bioinformatics skills
 - Lacked bioinformatics experts on the supervisory committee
- Each activity and objective in the research plan and training plan should also be described in your sponsor's statement
 - Sponsor's statement must be specific to you
 - Sponsor's statement should not refer to a different trainee or training activities not included in your goals for fellowship training
 - Consider preparing the first draft of the sponsor's statement
 - Review the sponsor's statement to ensure it is accurate



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