



Princeton
.....
Research
.....



Faculty
Research Forum

2022-2023

Office of the Dean for Research

[Research.princeton.edu](https://research.princeton.edu)

innovation.princeton.edu



Putting Together a Grant

- Early career faculty may be new to working with a grant manager
- It is not always clear who does what
- There is more than one way to approach things



Three examples

- National Science Foundation funding
 - Barry Rand, Associate Professor of Electrical and Computer Engineering
 - Alison Coakley, grant manager PRISM
- National Institutes of Health funding
 - Ileana Cristea, Henry L Hillman Professor of Molecular Biology
 - Myra Smith, grant manager Molecular Biology
- National Endowment for the Humanities
 - Courtney Kohut, shared services and training manager ORPA



National Science Foundation funding

- Barry Rand, Associate Professor of Electrical and Computer Engineering
- Alison Coakley, grant manager PRISM



Background

- National Science Foundation (NSF) is the only federal agency whose mission includes support for all fields of fundamental science and engineering, except for medical sciences. In addition to funding research in the traditional academic areas, the agency also supports "high-risk, high pay-off" ideas.
- With an annual budget of \$8.8 billion (FY 2022), NSF is the funding source for approximately 25% of all federally supported basic research conducted by America's colleges and universities.



Proposals Preparation at Princeton

- All proposals must be reviewed by Office of Research and Project Administration (ORPA)
 - Exceptions: LOIs or pre-proposals that do not require a budget or institutional signoff - best to check with your grant administrator
- Proposals should be completed at least 5 days ahead of the proposal due date set by the sponsor
- Every proposal requires an assurance or certification to be completed for all internal key personnel
- Your grants administrator will enter the proposal in the sponsor portal.
- They will work the appropriate ORPA representative to submit the proposal to the sponsor once all documents have been reviewed and approved



NSF Proposals

- Standard Full Proposal
- Collaborative Proposals: A collaborative proposal is one in which investigators from two or more organizations wish to collaborate on a unified research project. Collaborative proposals may be submitted to NSF in one of two methods:
 - as a single proposal, in which a single award is being requested (with subawards administered by the lead organization)
 - or by simultaneous submission of proposals from different organizations, with each organization requesting a separate award.

*Your grant administrator may help identify the appropriate collaborative proposal type if not stated in the RFP



Getting Started

- Once you find an opportunity you are interested in, notify your grants administrator as soon as possible - make sure to let them know the request for proposal (RFP) number or provide a copy of the RFP

Faculty Early Career Development Program (CAREER)

Includes the description of NSF Presidential Early Career Awards for Scientists and Engineers (PECASE)

PROGRAM SOLICITATION

NSF 22-586

REPLACES DOCUMENT(S):

NSF 20-525



Helpful Guidance

- Identify all PIs/Co-PIs/Key personnel and affiliated organizations
- Start Dates: If the RFP does not outline a specific start date, we typically recommend a start date 6 months from the proposal due date
- Budget:
 - Who will be working on the project and should they get paid from the project?
 - Will any equipment be required to perform the work or will you be building equipment?
 - Travel - domestic, foreign, or both?
 - Is any funding going to external collaborators?



Proposal & Award Policies & Procedures Guide (PAPPG)

- The source for information about NSF's proposal and award process. Each version of the PAPPG applies to all proposals or applications submitted while that version is effective.
- Current version: [22-1](#)
- Version update as of January 30, 2023: [23-1](#)
- All NSF proposals must follow the guidelines outlined in the PAPPG unless there is a specific deviation outlined in the RFP



NSF Standard Formatting

- Fonts: Arial (not Arial Narrow), Courier New, or Palatino Linotype at a font size of 10 points or larger; Times New Roman at a font size of 11 points or larger; or Computer Modern family of fonts at a font size of 11 points or larger.
- No more than six lines of text within a vertical space of one inch.
- Margins: Margins, in all directions, must be at least an inch. No proposer-supplied information may appear in the margins.
- Paper size: Must be no larger than standard letter paper size (8 1/2 by 11")



Standard NSF Proposal Documents

1. Project Summary (1 page max.)*
 - a. Must include separate sections: Overview, Intellectual Merit, Broader Impacts
2. Project Description (15 pages max.) *
3. Must include a separate section for Broader Impacts and Results from Prior NSF Support
4. References Cited (no page limit)
5. Data Management Plan (2 page max.)
6. Postdoctoral Mentoring Plan - if applicable (1 page max.)*

* documents should not contain URL links



Helpful Guidance

- Broader impacts should describe the potential of the proposed activity to benefit society and contribute to the achievement of specific, desired societal outcomes.
 - Working with diverse or underrepresented groups, improved STEM education, increased public scientific literacy and public engagement, increased partnerships between academia
- Results from Prior NSF Support: The purpose of this section is to assist reviewers in assessing the quality of prior work conducted with prior or current NSF funding. If any PI or co-PI identified on the proposal has received prior NSF support including: an award with an end date in the past five years; or any current funding, including any no cost extensions (discuss specific formatting w/ your grant administrator).



Standard NSF Proposal Documents (Cont.): Grant administrators can assist

1. Biographical Sketch (3 page max.) - Use of SciEncv preferred*
2. Current and Pending support - Use of SciEncv preferred*
3. Collaborators and Other Affiliations (COA) - NSF specific template*
4. Budget
5. Budget Justification
6. Facilities, Equipment and Other Resources
7. Letters of collaboration from external partners

Your grant administrator can also collect all administrative components from subcontractors or partner institutions.

*Speak with your grant administrator regarding the requirements for these documents



SciENCv and ORCID

- SciENCv - Science Experts Network Curriculum Vitae: an electronic system available through NCBI. Researchers can use SciENCv to create and maintain biosketches that must be submitted with NIH and NSF grant applications and annual reports.
(<https://www.ncbi.nlm.nih.gov/sciencv/>)
- ORCID - Open Researcher and Contributor ID: stores automatic links to all your research through a unique 16 digit identifier (<https://orcid.org/>)
- The NSF mandate to use SciENCv for preparation of the biographical Sketch/current and pending support goes into effect as of October 23, 2023
- Getting started:

<https://researchdata.princeton.edu/research-lifecycle-guide/sciencv-biosketches-and-orcid-id>



Best Practices

- Maintain open communication with your grants administrator throughout proposal preparation - ensure they are aware of any changes in personnel, budget, or direction
- Once you provide the necessary technical documents, ensure you are available should we need to request any revisions or changes
- Technical documents should be provided to your grant administrator in Word format - if minor revisions are needed such as formatting, the grant administrator can adjust as needed
- Grants Administrators are here to make your life easier. We may request revisions that seem burdensome, but it is for a good reason.



National Institutes of Health funding

- Ileana Cristea, Henry L Hillman Professor of Molecular Biology
- Myra Smith, grant manager Molecular Biology

National Institutes of Health (NIH)

What is the National Institutes of Health (NIH)?

- **National Institutes of Health (NIH)**

- A Federal agency whose mission is to improve the health of the people of the United States. NIH is a part of the Public Health Service, which is part of the U.S. Department of Health and Human Services. Go to NIH.
- NIH is the 2nd largest federal sponsor of grants at Princeton University.

Request for Application (RFA)

- Request for Application (RFA)

- An RFA is a formal statement that solicits grant or cooperative agreement applications in a well-defined scientific area to accomplish specific program objectives. An RFA indicates the estimated amount of funds set aside for the competition, the estimated number of awards to be made, whether cost sharing is required, and the application submission date(s). For cooperative agreements, the RFA will describe the responsibilities and obligations of NIH and awardees as well as joint responsibilities and obligations. Applications submitted in response to an RFA are usually reviewed by a Scientific Review Group (SRG) specially convened by the awarding component that issued the RFA.

Learn more about [types of funding opportunity announcements](#).

Funding Opportunity Announcements

Parent Announcements (For Unsolicited or Investigator-Initiated Applications)

- Parent announcements are broad funding opportunity announcements allowing applicants to submit investigator-initiated applications for specific [activity codes](#). They are open for up to 3 years and use [standard due dates](#).
- Not all NIH Institutes and Centers participate on all parent announcements. Before submitting your application, make sure the NIH Institute or Center that might be interested in your research is listed as a participating organization in the announcement.

● [Ruth L. Kirschstein National Research Service Awards \(NRSA\)](#)

- Awards to both individuals and institutions to provide research training in specified health-related areas. Go to [Ruth L. Kirschstein National Research Service Award Research Training Grants and Fellowships](#).

NRSA grants includes:

- F30 – Individual Predoctoral dual degree (MD/PhD) Fellowship
- F31 – Individual Predoctoral Fellowship
- F32 – Individual Postdoctoral Fellowship

Substantial Grants i.e., the R01

- **R01 Equivalent Grant**

- R01-equivalent grants are defined as activity codes DP1, DP2, DP5, R01, R37, R56, RF1, RL1, U01 and R35 from select NIGMS and NHGRI program announcements (PAs). Not all of these activities may be in use by NIH every year.

Program Director/Principal Investigator (PD/PI)

- Program Director/Principal Investigator (PD/PI)

- The individual(s) designated by the applicant organization to have the appropriate level of authority and responsibility to direct the project or program to be supported by the award. The applicant organization may designate multiple individuals as program directors/principal investigators (PD/PIs) who share the authority and responsibility for leading and directing the project, intellectually and logistically. When multiple PD/PIs are named, each is responsible and accountable to the applicant organization, or as appropriate, to a collaborating organization for the proper conduct of the project or program including the submission of all required reports. The presence of more than one PD/PI on an application or award diminishes neither the responsibility nor the accountability of any individual PD/PI.

Multiple Program Director/Principal Investigator

- **Multiple Program Director/Principal Investigator**

Multiple Program Director/Principal Investigator (multiple PD/PI) awards are an opportunity for multidisciplinary efforts and collaboration through a team of scientists under a single grant award. All PD/PIs share equally the authority and responsibility for leading and directing the project, intellectually and logistically. Each PD/PI is responsible and accountable to the applicant organization, or as appropriate to a collaborating organization, for the proper conduct of the project or program, including the submission of all required reports. The presence of more than one PD/PI on an application or award diminishes neither the responsibility nor the accountability of any individual PD/PI. Go to [Multiple Principal Investigators](#).

New Investigator

• New Investigator

- A PD/PI who has not previously competed successfully as a PD/PI for a substantial independent research award is considered a New Investigator. For example, a PD/PI who has previously received a competing NIH R01 research grant is no longer considered a New Investigator. However, a PD/PI who has received a Small Grant (R03) or an Exploratory/Developmental Research Grant Award (R21) retains his or her status as a New Investigator. The list of NIH grants that a PD/PI can hold and still be considered a New Investigator is the same as the list of grants that a PD/PI can hold and still be considered an Early Stage Investigator. This list can be found at <https://grants.nih.gov/policy/early-investigators/list-smaller-grants.htm>.

Some special award programs for new investigators includes:

- NIH Director's New Innovator Award Link to Non-U.S. Government Site - Click for Disclaimer (DP2)
- MIRA (R35)
- KATZ - Stephen I. Katz Early Stage Investigator Research Project Grant (R01 Clinical Trial Not Allowed)

Early Stage Investigator (ESI)

- **Early Stage Investigator (ESI)** A Program Director / Principal Investigator (PD/PI) who has completed their terminal research degree or end of post-graduate clinical training, whichever date is later, within the past 10 years and who has not previously competed successfully as PD/PI for a substantial NIH independent research award. A list of NIH grants that a PD/PI can hold and still be considered an ESI can be found at <https://grants.nih.gov/policy/early-investigators/list-smaller-grants.htm>.
 - Pathway to Independence Award-Research Phase (R00)
 - Small Grant (R03)
 - Academic Research Enhancement Award (R15, UA5)
 - Research Excellence Award (R16)
 - Exploratory/Developmental Grant (R21)

Senior/Key Personnel

- Senior/Key Personnel

- The PD/PI and other individuals who contribute to the scientific development or execution of a project in a substantive, measurable way, whether or not they receive salaries or compensation under the grant. Typically these individuals have doctoral or other professional degrees, although individuals at the masters or baccalaureate level may be considered senior/key personnel if their involvement meets this definition. Consultants and those with a postdoctoral role also may be considered senior/key personnel if they meet this definition. Senior/key personnel must devote measurable effort to the project whether or not salaries or compensation are requested. "Zero percent" effort or "as needed" are not acceptable levels of involvement for those designated as Senior/Key Personnel

Co-Investigator

- Co-Investigator

- An individual involved with the PD/PI in the scientific development or execution of a project. The Co-Investigator (collaborator) may be employed by, or be affiliated with, the applicant/recipient organization or another organization participating in the project under a consortium agreement. A Co-Investigator typically devotes a specified percentage of time to the project and is considered senior/key personnel. The designation of a Co-Investigator, if applicable, does not affect the PD/PI's roles and responsibilities as specified in the NIH Grants Policy Statement, nor is it a role implying multiple PD/PI.

Other Significant Contributors (OSCs)

- Other Significant Contributors (OSCs)

- Individuals who have committed to contribute to the scientific development or execution of the project, but are not committing any specified measurable effort (i.e., person months) to the project. These individuals are typically presented at "effort of zero person months" or "as needed." Individuals with measurable effort may not be listed as Other Significant Contributors (OSCs). Consultants should be included if they meet this definition.

Budget

• Budget

- The financial plan for the project or program that the Federal awarding agency or pass-through entity approves during the Federal award process or in subsequent amendments to the Federal award. It may include the Federal and non-Federal share or only the Federal share, as determined by the Federal awarding agency or pass through entity.

• Direct Costs

- Costs that can be identified specifically with a particular sponsored project, an instructional activity, or any other institutional activity, or that can be directly assigned to such activities relatively easily with a high degree of accuracy.
 - If you are requesting a budget with \$500,000 or more in direct costs for any budget period, contact the awarding component to determine whether you must obtain prior approval before submitting the application.

Budget (continued)

- **Facilities and Administrative (F&A) Costs (or indirect costs)** Necessary costs incurred by a recipient for a common or joint purpose benefitting more than one cost objective, and not readily assignable to the cost objectives specifically benefited, without effort disproportionate to the results achieved. To facilitate equitable distribution of indirect expenses to the cost objectives served, it may be necessary to establish a number of pools of F&A (indirect) costs.
- **Modified Total Direct Cost (MTDC)** Modified Total Direct Cost (MTDC) means all direct salaries and wages, applicable fringe benefits, materials and supplies, services, travel, and up to the first \$25,000 of each subaward (regardless of the period of performance of the subawards under the award). MTDC excludes equipment, capital expenditures, charges for patient care, rental costs, tuition remission, scholarships and fellowships, participant support costs and the portion of each subaward in excess of \$25,000. Other items may only be excluded when necessary to avoid a serious inequity in the distribution of indirect costs, and with the approval of the cognizant agency for indirect costs.

Salary Cap/Limitation

- **Salary Cap/Limitation**

- A legislatively-mandated provision limiting the direct salary (also known as salary or institutional base salary, but excluding any fringe benefits and F&A costs) for individuals working on NIH grants, cooperative agreement awards, and extramural research and development contracts. For current and historical salary cap levels, go to [Salary Cap Summary](#).
- Current Salary Cap is \$203,700.

NIH Biosketch Formatted Page

OMB No. 0925-0001 and 0925-0002 (Rev. 10/2021 Approved Through 09/30/2024)

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME:

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE:

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY

A. Personal Statement

B. Positions, Scientific Appointments, and Honors

C. Contributions to Science

Public Access Policy

• Public Access Policy

- The NIH policy designed to ensure that the public has access to the published results of NIH-funded research. See <http://publicaccess.nih.gov/>

• PubMed

- PubMed provides access to citations from biomedical literature. It includes over 17 million citations from MEDLINE and other life science journals for biomedical articles back to the 1950s, along with links to full text articles and other scientific resources. These citations are indexed with a PMID, a series of numbers

• PubMed Central (PMC)

- PubMed Central (PMC) is the NIH digital archive of full-text, peer-reviewed journal papers. These papers are indexed with a PMCID, a series of numbers preceded by 'PMC'. PMC content is publicly accessible and integrated with other databases. See: <http://www.pubmedcentral.nih.gov/>.

• PubMed Central Reference Number (PMCID)

- The reference number assigned to an article or manuscript archived in [PubMed Central](#). The PMCID is the number that must be cited on applications, proposals or reports as part of compliance with the [Public Access Policy](#). See also "Citation ID."

What is ERA Commons

eRA Commons (<https://public.era.nih.gov/commons/>) is an online interface where grant applicants, grantees and federal staff at NIH and grantor agencies can access and share administrative information relating to research grants ([see eRA Commons overview](#)).

Receipt, Referral, and Assignment of Applications

- Receipt, Referral, and Assignment of Applications

- Routing of applications arriving at NIH. The Division of Receipt and Referral (DRR) of CSR is the central receipt point for competing applications. The role of the DRR is to assign each application to a review group that has the expertise to evaluate the scientific and technical merit of the application and to one or more ICs for funding consideration. Information on the assignment of grant applications is accessed through the [Commons](#).

Just-In-Time (JIT)

• Just-In-Time (JIT)

- NIH policy allows the submission of certain elements of a competing application to be deferred until later in the application process, after review when the application is under consideration for funding. Within the Status module of the eRA Commons, users will find a feature to submit Just-In-Time information when requested by the NIH. Through this module, institutions can electronically submit the information that is requested after the review, but before award. See [Completing the Pre-Award Process-Just-In-Time Procedures](#) for additional information.

• Other Support

- Includes all financial resources, whether Federal, non-Federal, commercial or organizational, available in direct support of an individual's research endeavors, including, but not limited to, research grants, cooperative agreements, contracts, or organizational awards. Other support does not include training awards, prizes, or gifts. Learn more about [Other Support](#).

Continuing Resolutions

- Under the “Continuing Appropriations Act” NIH will issue non-competing research grant awards at a level below that indicated on the most recent Notice of Award (generally up to 90% of the previously committed level). Upward adjustments to awarded levels will be considered after appropriations are enacted.

Research Performance Progress Report (RPPR)

- Research Performance Progress Report (RPPR)

- Progress reports are required annually to document grantee accomplishments and compliance with terms of award. They describe scientific progress, identify significant changes, report on personnel, and describe plans for the subsequent budget period or year.

See <http://grants.nih.gov/grants/rppr/>

Grant Writing Webinar Series

Link to NIH webinar series on grant writing:

- <https://nigms.nih.gov/training/Pages/Grant-Writing-Webinar-Series-for-Institutions-Building-Research--and-Research-Training-Capacity.aspx>

Link to the RePorter: <https://reporter.nih.gov/>

View abstracts, scope of work, writing styles, etc.

Link to NIH Glossary: <https://grants.nih.gov/grants/glossary.htm>

Interaction between PI and GM

- Communication exchange between the PI and Grants Manager when the PI wants to submit a NIH grant application.



Shared Services and National National Endowment for the Humanities funding

- Courtney Kohut, Shared Services & Training Manager ORPA



Humanities & Social Science Proposal Submissions

- Submitted through Sponsored Research Shared Services (SSRS)
- Two Grants Managers for Shared Services fall under the ORPA umbrella - departments *without* existing research administration personnel.
- Two Grants Managers covering 60 departments (Division I and Division II)
- Each department is assigned to a specific Grants Manager as a main point-of-contact for predominantly pre-award (proposal submission) tasks
- Office Location: Fisher Hall

Sarah Porter	Caroline McHugh-Sitren
sp7@princeton.edu	cm7091@princeton.edu
(609) 258-5461	(609) 258-6325



Shared Services

- Contact your assigned Grants Manager as soon as you are aware of a new proposal submission – 5-day advance notice rule!
- Provide the RFP/Solicitation, Deadline, Budget Details, Start/End Dates, and names of all parties participating in the submission (are there subs, other Princeton faculty Pis)
- Grants Manager will review details and provide an outline of all the required elements and who is responsible for each part – as well as formatting reminders (as applicable)



Shared Services

- Grants Manager will develop a budget based on the information provided, using the latest rates and salary costs
- Grants Manager will upload the final documents for submission.
- ALL proposals are routed through an internal proposal system, ERA for review and approval. Waiting until the day of submission to notify or provide information to your GM may cause errors!



National Endowment for the Humanities

- Every submission is different! Plan ahead!
- You Grants Manager will submit through **Grants.gov/Workspace** - no PI login information required
- RFP outlines specific sections required and page length
- Budget with budget justification is required for every submission - your Grants Manager will draft both of these documents for your review (salary information will be obtained by your Grants Manager)





National Endowment for the Humanities

- Identify all key personnel on the project
 - Post-docs and students do not have PI status and cannot be a Co-PI without approval
 - Individuals at Princeton listed as Key should be integral to the project - and if they leave during an award, sponsor approval is required.
- Do you have subawards?
 - Your Grants Manager will coordinate obtaining all necessary documents with each part - so provide contact details
 - Both submission and Princeton required documents to be obtained



National Endowment for the Humanities

- A [PI Assurance](#) will be requested on every proposal submission - this is attesting that you are responsible for the completeness of the information within the proposal record and that it is true and accurate - as lead PI you are responsible for the proposal in its entirety.
- [Compliance questions](#) - identify human subjects, animals, biological agents, human stem cells, etc - and provide information on protocols and approvals.
- What [foreign parties](#) are you collaborating with on this project? Will need names of individuals directly involved on this project for visual compliance check.
- NEH provides a full checklist of all components of a submission in the RFP.



National Endowment for the Humanities

- NEH, unlike other sponsors, the Research rate is not appropriate for these applications - Princeton established a formal “**Other Sponsored Activities**” rate - now set at 35%.

For applicants seeking reimbursement for indirect costs: carefully review your institution’s negotiated indirect cost rate(s) to make sure you are using the most appropriate rate in your application budget. Many institutions of higher education negotiate multiple rates—for example, “Research,” “Instruction,” and “Other Sponsored Activities.” With rare exceptions, your institution’s “Research” rate will **not** be the appropriate rate for inclusion in your NEH project budget, as the use of this rate is reserved for projects involving scientific research, not scholarly inquiry of the type most often supported by NEH.

- Your Grants Manager will facilitate the entire process - keep them informed and coordinate efforts!



Shared Services

- In addition to proposals - work with your Shared Grants Manager for all sponsored research activities such as:
 - Pre-proposals, white papers
 - Fellowship applications where you are the advisor/mentor
 - Pre-award spending requests
 - Rebudgeting approval requests
 - Award transfers (to or from Princeton)
 - Agreement routing for review and approval - DUA/NDA's, etc.
 - Other changes requiring sponsor prior approval!

Princeton > Faculty
Research Research Forum



Questions and Discussion



Princeton > Faculty
..... Research Research Forum
.....

2022-2023

Office of the Dean for Research

research.princeton.edu