
Division of
Integrative Organismal Systems (IOS)
Virtual Office Hour
Welcome! We will begin the Virtual Office Hour soon.
Please submit questions via the Q&A box.

Division of Integrative Organismal Systems (IOS)

Welcome! NSF staff in attendance today:

- Anna Allen (IOS/DSC)
- Kim Hoke (IOS/BSC)
- Melissa Coleman (IOS/NS)

Administrative Support & Technical Assistance:

- Janice Hermann

IOS Virtual Office Hour
Today's Topics

- Updates and Reminders
- Recent Solicitations and Dear Colleague Letters (DCLs)
- Interpreting Panel Summaries, Reviews, and PO Comments
- **January 16, 2025 – Topic to be announced**

NSF's Broadening Participation Portfolio

Relevant opportunities:

- Dear Colleague Letter (DCL): Strengthening the Evidence Base Related to Broadening the Participation of LGBTQI+ Individuals in STEM (DCL NSF 24-101)
  - https://www.nsf.gov/pubs/2024/nsf24101/nsf24101.jsp?org=NSF

- DCL: Post-Baccalaureate Research and Training (PBRT) in the Biological Sciences Supplemental Funding Opportunity (DCL NSF 24-128)
  - https://new.nsf.gov/funding/opportunities/post-baccalaureate-research-training-pbrt-biological

Centralized information available on NSF's Broadening Participation page:
https://new.nsf.gov/funding/initiatives/broadening-participation

Dear Colleague Letters (DCLs)

DCL: Neurobiology in Changing Ecosystems (NiCE) (NSF 24-121 - **Updated**)
Follow guidance for Core Programs

DCL: Advancing Plant Transformation (NSF 24-120)
Follow guidance for Core Programs

DCL: UKRI/BBSRC-NSF/BIO Lead Agency Opportunity in Biological Informatics, Systems Understanding of Host-Microbe Interactions, Synthetic Cells and Cellular Systems, and Synthetic Microbial Communities (NSF 24-112)

Dear Colleague Letter: Advancing Research at the Intersection of Biology and Artificial Intelligence (AI)/Machine Learning (ML) (NSF 24-131)

Goals

To promote research that benefits from AI/ML and reduces barriers to its use in the biological sciences. Topics/areas include (but not limited to):

- Implementing existing AI/ML methods to solve pressing questions in biology
- Developing new AI/ML models to derive biological insights
- Validating and/or comparing results from AI/ML methods against results from traditional analytical methods, theoretical models, and/or experimental approaches

How to submit

- Submit to an existing BIO program, according to that program's solicitation and submission guidelines
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Mid-Career Advancement (MCA) (NSF 22-603) **Feb. 1-Mar. 3, 2025**

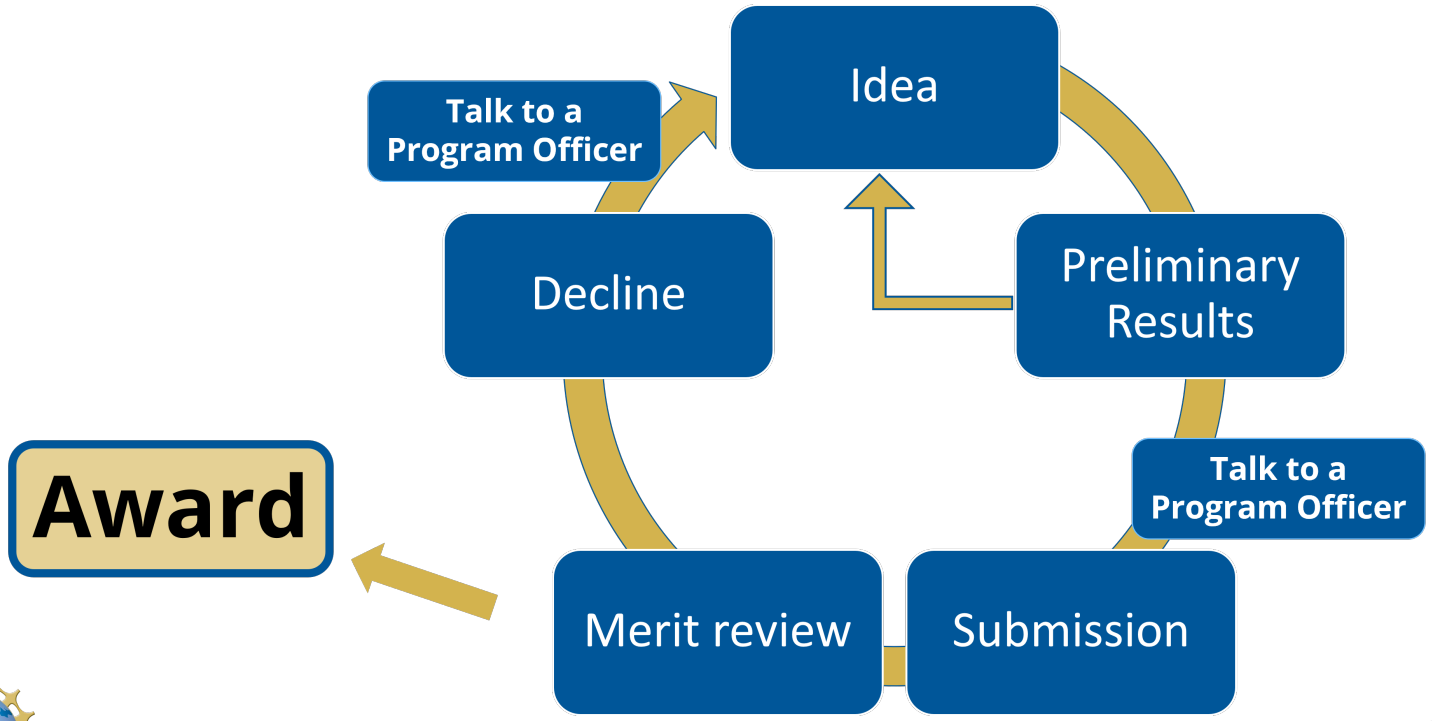
Emerging Mathematics in Biology (eMB) **March 3, 2025**
Upcoming Webinar: Wed., Nov. 25 from 1-2pm ET (https://new.nsf.gov/events/emerging-mathematics-biology-webinar-updated-funding/2024-11-25)

Today's VOH

Interpreting…

- Panel Summaries
- Reviews
- PO Comments

Proposal Submission Process: PI Perspective



After the Review ….

PAPPG NSF 24-1

"After scientific, technical, and programmatic review and consideration of appropriate factors, the NSF Program Officer recommends to the cognizant NSF Division Director whether the proposal should be declined or recommended for award. Normally, final programmatic approval is at the Division/Office level. Because of the large volume of proposals, this review and consideration process may take up to six months."

- Program Officers consider the reviewed proposals and their existing portfolio of funded work.
- Division Director and Deputy Division Director approve plan
- Program Officers write justifications for funding decisions (internal) and PO Comments (external, to PI)
- PIs are notified of decision to recommend or decline, and receive verbatim anonymous copies of the reviews and panel summary

Decision → Award or Decline

Status →

Application Status History

Status	Status Date
Declined	

Cognizant PO Comments →

Cognizant Program Officer Comments

Review of your proposal is now complete. The panel summary and/or the reviews capture all the relevant reasons for the action being taken. Having read through the proposal and review documentation, I concur with the panel's assessment.

There was significant enthusiasm for some aspects of your proposal. For example, some reviewers appreciated the supportive preliminary data and the strength of the established research team. However, the weaknesses identified by the panel, specifically the interdependency of the aims and lack of experimental details, outweighed the strengths. Based on the concerns documented in the reviews and, if applicable, in the panel summary, I recommend that this proposal be declined.

If investigators have questions or would like any additional information regarding their proposal, they should feel free to contact the program, waiting about two weeks after receiving notice and taking that time to review the individual reviews and panel summary.

Charles Darwin
Developmental Systems Cluster

Review Information

Please note: The Sponsored Projects Office (or equivalent) at the submitting organization is NOT given the capability to read the below review information.

Panel Summary →

Panel Summary

Panel Summary	Release Date
Panel Summary #1	

Proposal Reviews →

Proposal Review Summary of All Reviews

Review	Release Date
Proposal Review #4	
Proposal Review #3	
Proposal Review #2	
Proposal Review #1	

Decision → Decline

Suggestions

- Read the Cognizant Program Officer comments
- Read the Panel Summary before the individual Reviews
- Take a couple of days to process the reviews
- Email the managing Program Officer and ask for a time to discuss your recently declined proposal
  - Figure out what were really the panel's concerns and what is just "noise"

Talk with a Program Officer ….

What are "Cognizant Program Officer Comments"?

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***Note- These are are fictitious PO comments that are just shown here as an example. ***

Merit Review Criteria

- **Intellectual Merit (IM):**
  the potential to advance knowledge

- **Broader Impacts (BI):**
  the potential to benefit society and contribute to the achievement of specific, desired societal outcomes

Panel Summary Template

1. Description:

2. Intellectual Merit:

a. Strengths:
b. Weaknesses:

3. Broader Impacts:

a. Strengths:
b. Weaknesses:

4. Solicitation-Specific Review Criteria:

5. Results of Prior Support:

6. Data Management Plan:

7. Mentoring Plan:

8. International Collaboration:

9. Panel Ranking:

10. Justification for Panel Recommendation:

This summary was read by the assigned panelists, and they concurred that the summary accurately reflects the panel discussion.

Panel Summary Template (Review Criteria)

1. Description:
[[Provide a brief (2-3 sentences) summary of the proposed work in regard to both intellectual merit and broader impacts.]]

2. Intellectual Merit:
[[Summarize the panel's discussion of the strengths and weaknesses of the intellectual merit of the project, keeping in mind the 5 review criteria. Note any aspects that were discussed as being high risk/high reward.]]

a. Strengths:

b. Weaknesses:

3. Broader Impacts:
[[Summarize the panel's discussion of the strengths and weaknesses of the broader impacts and, if appropriate, how they will be assessed. If the project involves off campus / off site research and a plan for safe and inclusive work environments is included in the proposal, please comment on it, addressing the three associated review criteria for Safe and Inclusive Work Environments.]]

a. Strengths:

b. Weaknesses:

4. Solicitation-Specific Review Criteria:
There are no solicitation-specific review criteria.
[[If applicable, replace the default text with the panel's evaluation of solicitation-specific review criteria found under "special review criteria" in the solicitation, e.g., for CAREER, MCA, RUI, etc. proposals.]]

Individual Reviews

Intellectual Merit: **Strengths** **Weaknesses**

Broader Impacts: **Strengths** **Weaknesses**

A 5-point scale is used for overall rating of the proposal.

- **POOR (P)**: Proposal has **serious deficiencies**.
- **FAIR (F)**: Proposal **lacking in one or more critical aspects**; key issues need to be addressed.
- **GOOD (G)**: A **quality proposal, worthy of support**.
- **VERY GOOD (V)**: **High quality proposal in nearly all respects**; should be supported if at all possible.
- **EXCELLENT (E)**: **Outstanding proposal in all respects**; deserves highest priority for support.

Individual Reviews (cont.)

Remember

- just as in there are “easy graders” and ”hard graders” the same exists for individual reviews
- you will have most likely have reviews from experts in your field (ad hoc reviewers) and generalists in your field (panelist reviewers)

Common responses from PDs on how they talk to PIs post-decision

I tell them to pay close attention to the panel summary because that reflects the **consensus of what were the major weaknesses** they may want to address in a revised proposal rather than what they may think is an arbitrary comment from a single written review that doesn't really show in the panel summary. I also tell them not to get caught too much on the ratings or the priority ranking one way or another but more on **what they can do to address the critiques and weaknesses they received in all reviews**.

I tell them that it is their job (opportunity) to **convey their excitement** for the proposed project. They need to convince the reviewers that the project is **feasible** and the choice of system justified. They need to make sure that they acknowledge any other related studies and why this project will **shed new insight**. Need to convey in a way that the reviewers need not have all the expertise necessary to draw their own conclusions - reviewers are volunteering their time and effort and may not be able to sift through to find the important details in order to understand and appreciate the potential of the project outcomes.

Look at the panel summary as the primary source of feedback. It reflects input from the community (albeit a small community). Individual reviews reflect the positive and negative biases of the individual reviewer. That does not mean that the comments by the individual reviewers are not constructive, but not everyone might agree with the comments. I tell them that **they (the PIs) are in the driver's seat**. It is up to them to decide what feedback makes sense to them and to improve the proposed work and/or the way they present it. In other words, it's not about pleasing reviewers or Program Directors, but to **look at the comments and use them as data to revamp their plans and/or how they present them**.

Remember to **close the loop** in the proposal- lay out your goals (i.e., questions/hypotheses), detail the studies / experiments, and then explain how the data you collect will meet the goals.

I remind them that panelists are more **'generalists**', so they need to make the **proposal accessible** and of interest to people not directly in their field. They also have to remember that ad hoc reviewers tend to be more specialized, so also need to provide enough details to satisfy them. In line with this suggestion, **get people to read their proposal**, especially people not familiar with the work. Finally, resubmitting a proposal is not like resubmitting a paper. When you resubmit your proposal you will have different reviewers, so try not to focus on small details (with exceptions), but what the major problem was.

Suggestions for how to approach your reviews

- Identify comments / weaknesses that arise in multiple reviews
- Think about your audience on panel who are experts but not necessarily the world experts in your specialty
- Assessment of Broader Impacts is a must
- NSF does **not** have standing panels, so the panelists reviewing your proposal will not be the same next time
- Don't get hung up on what you cannot add or do that is outside of what you are proposing (if a reviewer brings it up)
- If you are thinking "How did the reviewers miss that?!", then try and make that point clearer when you are re-writing.
- Step outside of yourself and be critical of yourself.

Suggestions for how to approach a new submission

- Re-write / re-work the proposal
- Be clear and concise.
- Take the reader on a journey and keep them on the path you have built.
- Use previous comments as data to revamp your plans and/or how you present those plans.
- Ask someone in your larger general field (not a collaborator!) to read the proposal and identify places they lost the thread of the work or got confused.
- Send a revised project summary to the Program Director before you submit the revised proposal.

Final Thoughts….

Talk with a Program Officer

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IOS Cluster and Program Contacts

Cluster/Program	Contact	Email
Behavioral Systems	Jodie Jawor	jjawor@nsf.gov
Developmental Systems	Anna Allen	akallen@nsf.gov
Neural Systems	Mel Coleman	melcolem@nsf.gov
Plant Genome Research Program	Diane Jofuku Okamuro	dokamuro@nsf.gov
Physiological and Structural Systems	Miriam Ashley-Ross	mashleyr@nsf.gov

We're listening! Tell us more about you and your research and broader impacts

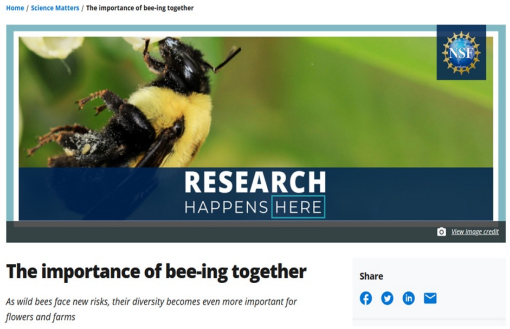
Investigator Demographic Data
Why provide it in your NSF profile?

- This information helps NSF develop future Broadening Participation opportunities.
- Large gaps in self-reported information make it challenging to evaluate program award scope and impede NSF's ability to track impact and progress.
- Individual demographic data in your NSF profile is not available to panelists or reviewers.

Science Happens Here!
#NSFstories

- Share your awesome findings and fantastic outreach experiences

  https://beta.nsf.gov/about/science-happens-here



BIO Virtual Office Hours

- BIO Directorate and each Division offers VOH
  - **DBI:** third Tuesday, 3-4 p.m. EST
  - **DEB:** second Monday, 1-2 p.m. EST
  - **IOS:** third Thursday, 1-2 p.m. EST
  - **MCB:** second Wednesday, 2-3 p.m. EST
- Monthly (or periodic) informational webinar focused on:
  - New and ongoing funding opportunities
  - Topics of general interest
  - Open questions from audience to be answered live
- Upcoming topics and links for Virtual Office Hours can be found in BIO and Division blogs


NSF