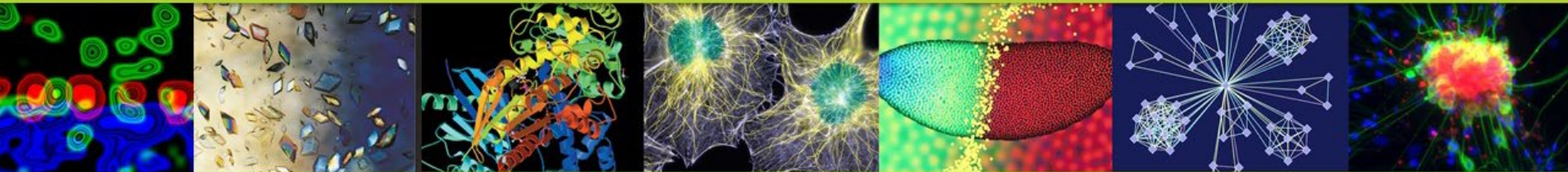


Grant Writing Webinar Series for Institutions Building Research and Research Training Capacity

Webinar 3 – Writing a Competitive Application

November 1, 2022



About Today's Webinar

This webinar is being recorded. It will be posted online for future access. If you registered to attend, you will receive an email notification when the recording is available.

You can enter questions in the Q&A Box. We will answer as many as we can throughout the webinar.

You will also have the opportunity to ask questions in an open Office Hour. Details will be shared at the meeting's end.

Acknowledgements

Thank you to the following teams that helped make this webinar series possible!

- The NIGMS Information Resources Management Branch
- The NIGMS Web Team
- The NIGMS Administrative, Travel and Service Center
- The NIGMS Communications and Public Liaison Branch
- The NIGMS Division of Extramural Activities
- The NIGMS Division of Data Integration, Modeling and Analytics

Thank you to all of today's speakers & volunteers!

Thank you for attending or viewing this event.

Purpose of This Webinar Series

This series is *not* a detailed review of specific NIGMS or NIH funding opportunities.

The goal of the entire series is to share strategies for how to navigate the NIH funding process, considerations for determining research and grant writing readiness, and thoughts on effective writing strategies.

This information is appropriate for investigators and sponsored programs or research development professionals.

This information does *not* supersede official NIH instructions in funding opportunity announcements, the SF424 or the Grants Policy Statement.

Today's Topics & Speakers

1. Forming A Feedback Team
2. Getting Helpful Feedback
3. Getting Reviewers' Attention: Practices for Effective Grant Writing
4. The NIH Funding Decision Process

Speakers:



Sydella Blatch, Ph.D.
Program Officer,
NIGMS



Alison Gammie, Ph.D.
Director, Training, Workforce
Development and Diversity,
NIGMS



Marc Rigas, Ph.D.
Scientific Review Officer,
NIGMS



Latarsha Carithers, Ph.D.
Section Chief, Training,
Mentored Research, and
Diversity, NIGMS

PART I

Forming A Feedback Team

Appreciate the purpose and functions of a feedback team.
Understand an overall structure for working with a feedback team.

Sydella Blatch, Ph.D.
Program Officer, NIGMS
sydella.blatch@nih.gov

Purpose of a Feedback Team

- A very helpful practice in grant writing is to form a team to provide feedback on your application as you write
- This team can -
 - comment on the research question or project goals
 - recognize problematic areas: what is unclear, unconvincing, etc.
 - help refine ideas
- **It is better to have your team identify areas of concern than to have the reviewers find them after you submit!**

Check with any staff, e.g., research development professionals, that may be able to help assemble a feedback team

Possible Composition of a Feedback Team

- Ideally, people that have been awarded the same or related grant funding, or have reviewed similar grants
- Helpful to have people that are experienced in their field and are familiar with the funding agency
- Combination of people in
 - the same specific research/project area
 - a related but different specific area
 - outside of the field/type of work
- Current or former colleagues, collaborators, lab-mates, coworkers, supervisors, etc.



Redundancy helps. One person's advice may not always be the best. Everyone may not be able to follow-through with each of your requests.

Working with a Feedback Team

- Ask potential members
 - if they are willing to help you and read application drafts
 - whether they can help you **more than once and over a specified time-window**
 - their preferred method to share feedback: in writing, calls, etc.
- **Seek feedback before you write a significant amount!**
 - It is helpful to start by getting feedback on **just an overview**: a Specific Aims page, or brief project description
 - If you wait to until after you have written a substantial amount, you risk having insufficient time to edit/revise. Most people need this! **A common pitfall is waiting for a near perfect draft to seek feedback.**



PART II

Getting Helpful Feedback

Understand that multiple types of input may be helpful to seek from your feedback team.
Learn various methods to obtain feedback.

Alison Gammie, Ph.D.
Director, Training, Workforce Development and Diversity, NIGMS
alison.gammie@nih.gov

Helpful Types of Feedback

- **Understand your needs as a writer – what kind of feedback is most helpful? For example:**
 - Candid, constructive and actionable
 - Subject matter focused - checks for accuracy, relevancy, or gaps
 - Broader perspectives - related and/or other biomedical perspectives
 - Motivational – help with getting past writing “blocks”
 - Writing quality
- **One person may provide feedback in multiple categories**
- **Assemble the team early and make commitments to get the draft document to the team member on agreed upon deadlines**

Get targeted advice

Flag the areas requiring improvement and ask for targeted advice depending on the role in your support team, for example:

- *Non-expert biomedical scientist and skilled writers* – is the proposal:
 - Accessible to all reviewers?
 - Compelling and persuasive?
 - Clearly written?
- *Subject matter expert and candid, constructive reviewer*
 - Are the aims interdependent?
 - Are there sufficient alternative approaches to addressing the goals?

Get targeted advice – continued

Flag the areas requiring improvement and ask for targeted advice depending on the role in your support team, for example:

- *Subject matter expert* - Are the methods feasible, rigorous and aligned with the goals?
- *Candid, constructive reviewer* – Are there logical flaws, inconsistencies, barriers to success?
- *Non-expert biomedical scientist and skilled writers* –
 - Does the proposal clearly state innovative and significant long-term goals?
 - Is the significance of the project compelling?
 - Does the innovation of the project come through in the proposal?

Beyond the support team - soliciting *ad hoc* advice

Get quick feedback from a broad range of sources - Seek feedback before you write a significant amount! For example,

- Short conversations
 - Are you persuaded by the significance and innovation of my research?
 - Does this hypothesis seem plausible given the data?
 - Do you think the methods are feasible and will address the hypothesis/scientific question?
 - Does the outline of the research seem logical?
 - Is this figure clear and compelling?
- Oral presentations of components – e.g., invite colleagues to a video conference of the overall research plan
- Quick email queries (e.g., could you please read my Specific Aims?)

PART III

Getting Reviewers' Attention: Practices for Effective Grant writing

Learn considerations to keep in mind writing for the audience.
Identify potential uses of samples.
Appreciate structures useful for reserving writing time

Marc Rigas, Ph.D.
Scientific Review Officer, NIGMS
marc.rigas@nih.gov

Considering your audience



Mock Study Section:

<https://www.youtube.com/watch?v=Vx6qO8z9swQ>

- **Who** will review your application – explore study sections in your area
- **What** are the review criteria
- **How much time do they spend?** Reviewers typically responsible for several applications (depending on mechanism)

Using NIH RePORTER

NIH RePORT RePORTER

Quick Search

quorum sensing Search

Welcome to the NIH RePORTER

Active Funding by State

Active Projects by Institute/Center

Advanced Projects Search

Matchmaker

Publications Search

<https://reporter.nih.gov>

- Read abstracts... (Scope of work, writing style)
- Identify review panels that might review your research
 - listed under “Other Information” in RePORTER for each award
- Then you can find the public rosters of these review panels

Read applications

- Try to read for same mechanism/program to which you will apply.

ALWAYS carefully review the Funding Opportunity Announcement when you apply... don't assume application will look the same!

- Reflect on the scope of the project (how much work is being proposed)
- Read the **specific aims** or **projects** and reflect on how they are logically connected to each other and to project objectives.
- Do **biosketches** showcase experience relevant to the project?

Links to submitted manuscripts deposited in BioRxiv or similar public preprint repositories may be listed in the biosketch.

- Observe writing style throughout.
- Repeat!

Create communities of practice

- Writing groups and retreats
 - Sponsored projects teams may organize
 - Organize for repeat interactions
 - Consider diversity of membership
- Protect time
 - Allow yourself the time needed to prepare grants (set aside time weekly)
 - Advocate for yourself (with respect to committee work, administrative responsibilities, etc.)
 - Enlist allies
 - Serve on review panels if possible (NIH has an [Early Career Reviewer](#) Program through the Center for Scientific Review)

PART IV

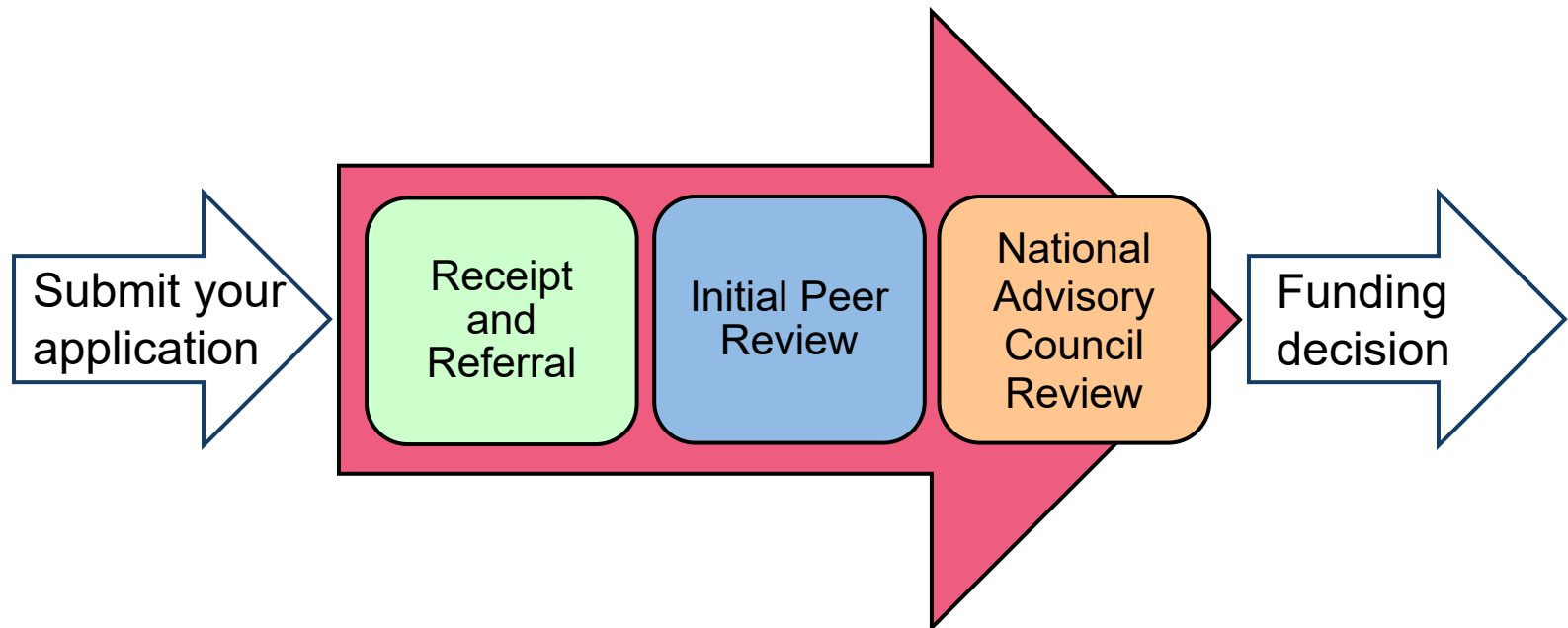
The NIH Funding Decision Process

Understand the major steps of the NIH application review and funding decision process.

Latarsha Carithers, Ph.D.
Scientific Review Officer, NIGMS
latarsha.carithers@nih.gov

NIH Review Process

- Cornerstone of NIH extramural research
- Two-stage review process



Insider's Guide to Peer Review for Applicants:

<http://www.csr.nih.gov/applicantresources/insider>

What does the Division of Receipt & Referral Do?

- Determines whether an application is:
 - on time
 - formatted correctly
 - complete
 - compliant
- Makes institute assignment for funding consideration
- Makes review locus assignment (Center for Scientific Review or Institute/Center)
 - Considers applicant assignment requests



Assignment Request Form (ARF)

	First Choice	Second Choice	Third Choice
Assign to Awarding Component:	<input type="text"/>	<input type="text"/>	<input type="text"/>
Do Not Assign to Awarding Component:	<input type="text"/>	<input type="text"/>	<input type="text"/>
	First Choice	Second Choice	Third Choice
Assign to Study Section: <i>Only 20 characters allowed</i>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Do Not Assign to Study Section: <i>Only 20 characters allowed</i>	<input type="text"/>	<input type="text"/>	<input type="text"/>

List individuals who should not review your application and why *(optional)*

Only 1000 characters allowed

Identify scientific areas of expertise needed to review your application *(optional)*

Note: Please do not provide names of individuals

	1	2	3	4	5
Expertise: <i>Only 40 characters allowed</i>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

You should never suggest specific reviewers

Peer Review in CSR and at Institutes

- Scientific Review Groups (SRG) are managed by a **Scientific Review Officer (SRO)**
- For a **Chartered Study Section**, the panel consists of 12-25 regular members who are from the scientific community.
 - Standing members serve for multiple years
 - Temporary members are recruited as needed
- For a **Special Emphasis Panel**, the panel will consist of members from the scientific community on a one-time basis
- Number of applications vary for each SRG

Initial Role of a Scientific Review Officer

- Check for compliance
- Recruitment
 - Demonstrated research expertise, mentoring experience, type of degree, etc.
 - SRO also accounts for the diversity on the review panel including faculty rank, geographic location and racial and gender diversity
 - Identify conflicts of interest
 - Assignment Request Form (ARF) can help SROs match expertise to application



Pre-meeting Reviewer Tasks

- Assignments are confidential!
- Examine assignments (~ six weeks in advance)
- May participate in an orientation teleconference
- Sign Conflict of Interest and Confidentiality certifications
- Read applications, prepare written critiques
- Enter preliminary scores, critiques into secure website
- Read and consider critiques and preliminary scores from other SRG members



Written Critiques

RPG/R01/R03/R21/R33/R34 Review

Application #:

Principal Investigator(s):

OVERALL IMPACT

Reviewers will provide an overall impact score to reflect their assessment of the likelihood for the project to exert a sustained, powerful influence on the research field(s) involved, in consideration of the following five scored review criteria, and additional review criteria. An application does not need to be strong in all categories to be judged likely to have major scientific impact.

Overall Impact *Write a paragraph summarizing the factors that informed your Overall Impact score.*

See subsequent slide for sample application list.

Most include summary statements.

SCORED REVIEW CRITERIA

Reviewers will consider each of the five review criteria below in the determination of scientific and technical merit, and give a separate score for each.

1. Significance

Strengths

-

Weaknesses

-

Types of Review Criteria

Category	Criteria (Research)	Criterion Scores?	Affect Overall Impact Score?
Scored Review Criteria	Significance Investigators Innovation Approach Environment	Yes	Yes
Additional Review Criteria	Study Timeline (CT only) Human Subjects Vertebrate Animals Inclusion Biohazards	No	Yes
Additional Review Considerations	Foreign Institutions Select Agents Resource Sharing Authentication of Key Resources Budget	No	No

At the Meeting



- Any member in conflict with an application leaves the room
- Reviewer 1 introduces the application and presents their critique
- Reviewers 2 and 3 indicate concurrence or differing opinion and highlight new issues
- Additional review criteria are considered
- The application is open for discussion by the entire panel
- The Chair provides a summary of the discussion before calling for the 3 reviewers' final scores, which sets the range
- All members (not just those assigned) then enter their **final overall impact scores** online (rationales must be given if voting outside the range)
- Additional review considerations are then discussed (do not affect overall impact score)

Mock Study Section: <https://www.youtube.com/watch?v=Vx6qO8z9swQ>

Discussions and Summary Statements

If your application is discussed, you will receive a summary statement with:

- An overall impact score and percentile ranking for those that are percentiled
- A summary of the review discussion written by the SRO
- Scores for each review criterion
- Critiques from assigned reviewers
- Administrative notes if any

Sample Summary Statements: Search “sample grant applications” from IC pages

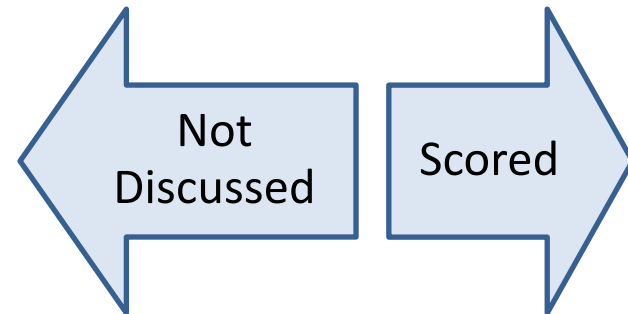
- [NIAID](#) – R01, R03, R21, R15, R21/R33, K08, K01, F31, G11, U01
- [NCI, Division of Cancer Control and Population Sciences](#) – R01, R03, R21, R37
- [NHGRI](#) – R01, R21, R03
- [NIA](#) – K99/R00
- [NIA](#) – SBIR/STTR
- [NIDCD](#) – R01

Streamlining applications

- The decision to not discuss requires full concurrence of the entire study section

If your application is NOT discussed (ND), you will receive a summary statement with:

- Scores for each review criterion
- Critiques from assigned reviewers
- Administrative notes if any.



NIH Impact Score

- Impact scores run from 10 to 90, where **10 is best**.
- **Reminder: Funding decisions are made by the IC Director following the recommendation of Program staff**
- Some Institutes have firm paylines that differ between funding mechanisms
- Some Institutes do not publish firm paylines; funding decisions are driven by the Impact scores as well as other factors
 - NIGMS Funding Policy:
<https://www.nigms.nih.gov/research/pages/policies.aspx>
- Contact the Program Officer, not the SRO:
 - For insights, suggestions for improvement

National Advisory Councils

- The Advisory Council/Board of the potential awarding Institute/Center performs the second level of review of all applications
- Broad and diverse membership
 - Basic/research scientists
 - Clinician scientists
 - “Public” members
- Council procedures vary across IC’s
- Council is chaired by Institute Director, advised by IC extramural research staff



National Advisory Councils

- Council procedures vary across ICs
- Advise IC Director about
 - Research priority areas
 - Funding priorities
 - Diverse policy issues
 - Concept clearance for future initiatives
- Consider unresolved appeals and grievances related to the initial peer review



Funding Decisions: IC Director

- IC Directors make funding decisions following recommendations of Program staff
- Based on:
 - Outcome (score/percentile) of initial peer review
 - Mission of the NIH Institute or Center
 - Program priorities, Congressional mandates
 - Recommendation of IC Program Staff
 - Recommendation of the IC Advisory Council
 - Available Funds



What to do if your grant application is not funded:

- **19% of research project grant applications were funded in 2021.**
- **Don't take it personally (Your application was reviewed, not YOU)**
- Carefully read the summary statement with reviewers' comments.
- Contact the Program Officer, not the SRO, for insights or suggestions for improvement
- You are **ENCOURAGED** to **resubmit or submit a new application** depending on the FOA
- For most investigators, achieving funding success usually comes from persistence and patience.
 - **The typical applicant who is successful in obtaining funding has submitted several applications prior to obtaining support for their research.**

http://grants.nih.gov/grants/next_steps.htm

<https://nexus.od.nih.gov/all/2016/10/28/are-you-on-the-fence-about-whether-to-resubmit/>

Who should you talk to? When?

- **Before you submit** – identify and talk to a Program Officer
- **After you submit and before the review** – Scientific Review Officer (SRO)
- **After the review meeting**– Program Officer

Review Process: Usual Timeline

Timeframe

Activity

(From submission date)

1 - 2 months

Referral

4 - 6 months

Review Panel

6 - 7 months

Summary Statement Available

7 - 8 months

Advisory Council

8 - 9 months

Funding Decisions

9 - 10 months

Award Start Date

Please complete a brief survey that will be sent to all attendees for feedback on this webinar series.

Open Office Hour

December 14, 2022. 1:30-2:30pm US Eastern Time

No RSVP Needed. Up to 30 attendees.

We will send the link to the email used to log into this webinar.

If you have additional questions, please reach out!

sydella.blatch@nih.gov, alison.gammie@nih.gov,
marc.rigas@nih.gov, latarsha.carithers@nih.gov

