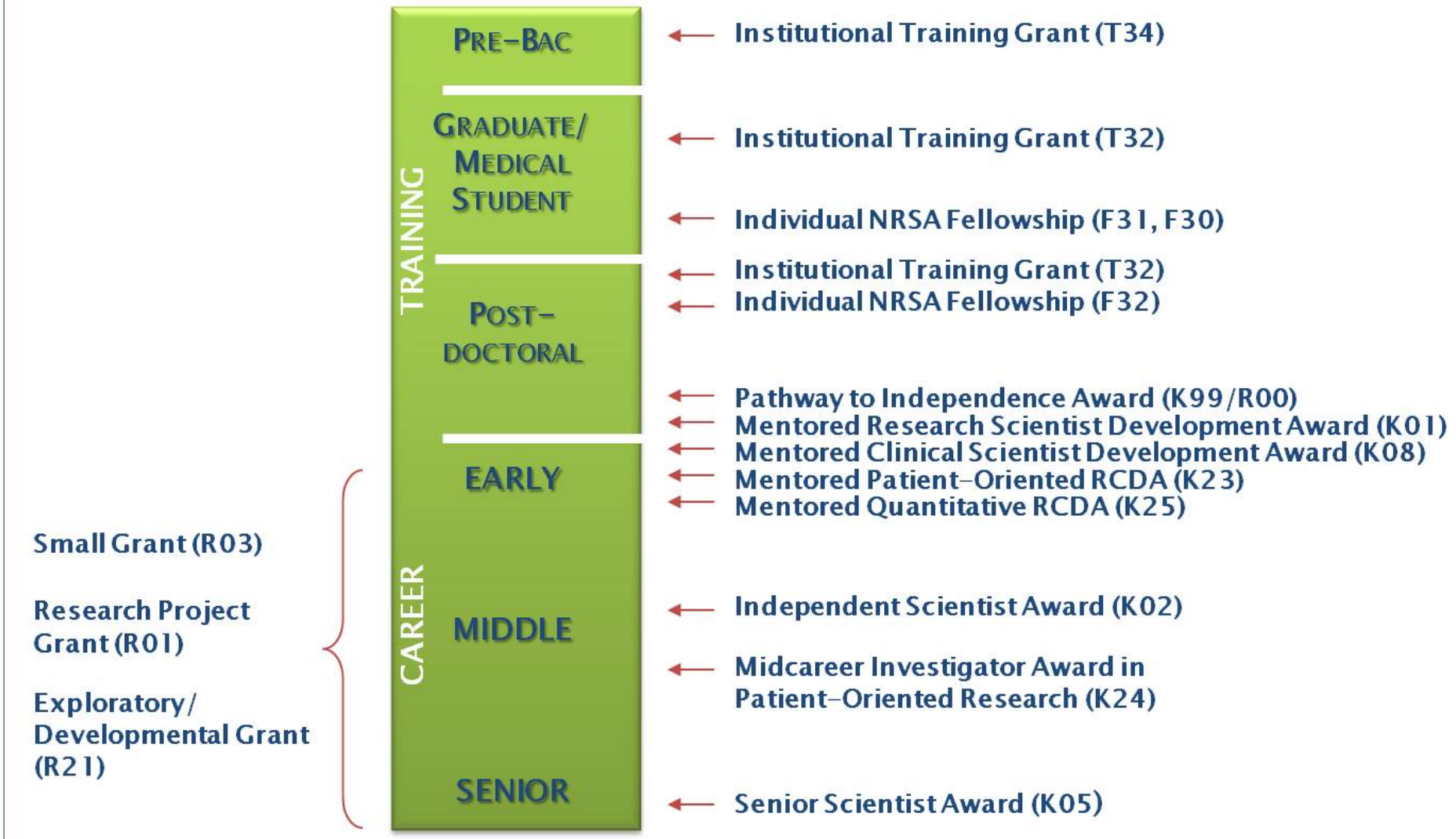
Opinions on grant applications from a study section member

R grants

Career Stages of Funding Programs



Graphic represents a small sample of NIH funding mechanisms available.

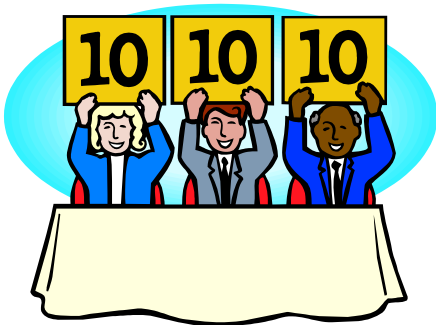
27 Institutes and Centers (IC)

Each with a different:

- mission & priorities
- budget
- funding strategy

Target the Grant to the Appropriate Institute and Study Section

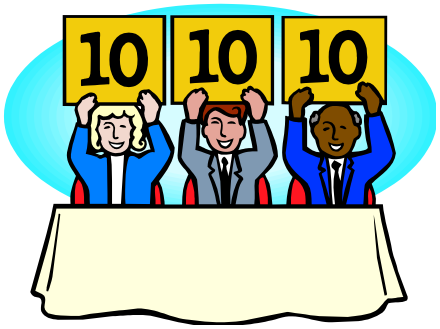
- If the grant could fit the mission of multiple institutes, then target it to the one with the best pay line.
- Target the study section that has members who publish in your field with interest in your problem.



Get to the right review group

- Title, abstract, specific aims all point to the main goals of your project
- Attach a cover letter for the Center for Scientific Review Division of Receipt and Referral
  - suggest IC and review group assignment*
  - outline areas of key expertise needed for appropriate review
  - do not name specific reviewers

* Consult with Program Official



Understand the dynamics of peer review:

- Reviewers will review many applications
- Make your application easy to read and easy to understand
- The impact and significance should be clear throughout the application
- Convince them to be your advocate
  - *Get them on your side!*

Style Matters

- Make certain the grant is not too dense. Have sufficient white space so it is easy to find sections when the reviewer is going back to find specific points.
- Put the importance of the work and the major hypotheses to be tested up front and center.
- Graphical summaries of the hypotheses to be tested are powerful and should be incorporated early in the application.

Align with Review Criteria

Scored Criteria	Application
Significance	Research Strategy a. Significance
Investigator(s)	Biosketch - Personal Statement Letters of Support
Innovation	Research Strategy b. Innovation
Approach	Research Strategy c. Approach
Environment	Facilities & Other Resources

Develop a Strong Research Plan

Specific Aims

- Grab the reader immediately
- State long-term objectives AND expected impact
- Explicitly state hypotheses and research question

Develop a Strong Research Plan

Background/Significance

- Why is this research important?
- Expand on the specific aims
- Identify key themes of the literature and link them to the specific aims
- Critically analyze existing literature
- Document a solid theoretical basis for your study
- Include a graphical summary of your key hypotheses

Develop a Strong Research Plan

Preliminary Studies/ Progress Report

- How previous work -- by you, your team, and others -- leads to this study
- Demonstrate your experience, competence and likelihood of continued success
- Must flow logically from literature review and major themes of the problem area

Develop a Strong Research Plan

Approach

- Does your plan flow logically from the literature review and prior studies?
- How will each hypothesis be tested?
- Do your measures capture the variables needed to test hypotheses?
- Why did you choose those measures?
- Methods and analyses must match

Develop a Strong Research Plan

Common Miscues

Failure to …

- Document why the problem is important
- Distinguish empirical findings from speculation
- Critically analyze key themes in literature
- Consider alternative perspectives
- Read, understand, and cite the crucial studies
- Document your ability to perform the experiments – letters from investigators you've never worked with don't really help your case

Develop a Strong Research Plan

More Miscues

- Superficial of unfocused research plan
- Lack of sufficient detail
- Unrealistically large amount of work
- Lack of new or original ideas
- Outdated methodology
- Poorly written, difficult to follow
- Figures that are too small to read when printed and contain too much content

Ask Collaborators to Review Your Application

- Show your draft application to:
  - Your collaborators
  - A colleague that does not know what you intend to do
  - Someone who is not your best friend
- Draft "reviewers" must understand:
  - What you intend to do
  - Why you believe it is important to do
  - Exactly how you're going to do it.

If they don't get it, you must revise your application!

Hallmarks of a Competitive Grant Application

- Strong significance to an important problem in public health or fundamental biological problem: IMPACT is high
- High degree of novelty and innovation
- Strong track record by a well qualified applicant – for a new investigator, build on successful post-doctoral studies
- Clear rationale
- Relevant and supportive preliminary data
- Clear and focused approach that provides unambiguous results
- Careful attention to details
  - Spelling, punctuation, grammar, fonts, clarity of data, error bars, spelling, etc.
  - Make figures readable and understandable