Writing a successful NRSA

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Overview

Keep in mind that this is a training mechanism. Reviewers are looking for training potential in all aspects of the proposal.
Evaluation criteria: emphasis on training

- Applicant (you)
- Sponsor (mentor)
- Research training plan (the proposal)
- Training potential
- Environment
Your Biosketch

• Personal statement related to training

• List honors, invited talks, etc.

• List all publications and abstracts
  • It’s especially important to show progress in current lab.

• List grades and GRE scores
  • Improvement over time is important.
Letters of Recommendation

• Ask your referees to use the form!
  • Numerical scores are important.

• Give your referees the required instructions and deadlines.

• Letters should be from people who know your work and can comment on your potential for an independent career.
Sponsor’s Information

Reviewers are looking for specific items:

• **Productivity**
  • Biosketch has a 15 publication limit - use it wisely!

• **Funding through duration of training period**
  • Funding specifically for this project - don’t say there is no money to support the trainee!

• **Track record of training, current # of trainees**
  • Evidence of training success, but not overcommitted.
  • New PI’s are given a break in terms of training record.

• **Involvement in training plan**
  • Technical expertise and mentoring

• **Consider a co-sponsor!**
Research Training Plan

• **Feasibility**
  • Can you do the work in the requested time?

• **Preliminary data (who generated it?)**

• **Training potential**
  • Are you learning new techniques and approaches that will help in career development?

• **Scope**
  • Are you advancing the field?
  • Over/under-ambitious?

• **Likelihood of publications**
Training Potential

• Sponsor’s training plan
  • Should be personalized and detailed
  • Tailored to specific needs of applicant
  • Include technical and career training

• Research plan
  • Diverse, innovative techniques
  • Different than previous training

• Change of institution/system
Environment

- Institutional training atmosphere
- Other labs in department, university
- Coursework, other training opportunities
- Resources

- Collaborators
- Help for techniques outside sponsor lab’s expertise
The Applicant Pool

**Average pre-doc (Score of 5):**
- Grades: A-B.
- Letters: 1’s - 2’s.
- Significant research experience: presentation(s) at national mtgs.
- Preliminary data (clear a paper is taking shape).
- Proposal: strengths outweigh weaknesses by a little bit, no MAJOR flaws.

**Outstanding pre-doc (Score of 1-2):**
- Essentially all A's; great GREs.
- Letters: Personal, glowing, compelling.
- 1+ 1st author publications.
- A lot of prelim data.
- A very well argued and detailed proposal, clearly independent.

**Average post-doc (Score of 5):**
Similar to pre-doc, except:
- 1+ 1st author publications.
- Preliminary data dependent on time in lab.

**Outstanding post-doc (Score of 1-2):**
Similar to pre-doc, except:
- Publications from multiple environments, usually at least 2 1st-author papers from PhD work.
- Exceptional training potential.
- Likely to lead to an independent position.
Other Important Sections
(Used to evaluate training potential)

• Respective contributions
  • Whose idea was the project?
  • How much help did the sponsor give with writing?
  • Who generated the preliminary data?

• Selection of sponsor and institution
  • Emphasis on training potential - why was this the best place to perform this work?

• Career goals
  • Staying in academic science - independent position.
Other Important Sections
(NIH requirements)

Discussed during review:
• Human Subjects
• Animal use

Discussed after review:
• Training in responsible conduct in research
• Resource sharing plan
• Budget
Interpreting Reviewers’ Comments

• **Overall Impact & Component scores**
  - Overall Impact score is not an “average” of component scores.
  - Research plan often has worst score - easiest to criticize.
  - Determine which scores are fixable and which are not.

• **Specific comments**
  - Take bulleted “weakness” comments and summary statement seriously.
  - Remember you are being compared to the overall applicant pool.

• **Strategy for resubmission**
  - Respond to all critiques in some way.
  - Provide missing information.
  - Fix what you can, explain what you can’t fix.
Resubmission Strategy

• Be realistic
  • Can you improve the application enough?
  • Where do you stand relative to the applicant pool?

• No automatic improvement of score for “effort”
  • Resubmitted applications are still scored relative to the current pool.

• Progress is weighed against tenure in lab
Good Luck!