NIH Fellowships or Career Transition Awards

15 Steps to the Payline

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15 Steps to the Payline

Step 1 Start the Application

• An Idea
• A Mentor
• An Institution
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Step 2  Have the Right Attitude

NINDS website:
http://www.ninds.nih.gov/funding/areas/training_and_career_development/index.htm

Google: ninds training website
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Step 3 Dates to Remember

- Training:
  - Individual NRSAs (All): April 8, August 8, December 8
  - K Series (New): February 12, June 12, October 12
  - K Series (renewal, resubmission, revision):
    March 12, July 12, November 12

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Step 4 Frame the Question

Specific Aims

A Testable Hypothesis

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Step 5 Define the Goals

Research & Training Programs

What you’ll accomplish

What you’ll learn
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Step 6 Contact References

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Step 7 Stock the Reservoirs

Research Plan

- Statement of Hypothesis & Specific Aims - What
- Background, Significance & Rationale - Why
- Preliminary Studies & Any Results - Feasibility
- Research Design & Methods - How

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Crafting a Successful Proposal

Communication!

- Why is this study important?
- Are the experiments feasible?
- What will be accomplished?
- How will it change the field?

Keep it simple, concise & logical!

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Step 9  Build a Model

Specific Aim # 1

Hormone 1

Specific Aim # 2

Hormone 2

Specific Aim # 3

ATP  cAMP  Calcium  IP3  PIP3
Advice: Writing the Proposal

- Abstract and Specific Aims: clearly say what you will do - why and how, without distracting detail
- Make it easy for the primary reviewer
  - She will present your case!
  - Clear significance, fair literature review
  - Clear and sound hypotheses
  - Logical experimental design, feasible
    - Avoid Aims that may make next step impossible
    - Don’t assume they know what you mean, tell them
    - Would you want to read it???

Crafting a Successful Proposal

**Design a clear experimental plan:**

- have a clearly stated, testable hypothesis
- keep the proposal focused
- indicate outcomes: what will you learn?
- anticipate pitfalls; outline alternatives
- provide a timeline: limit the experiments to what can be accomplished within the time period

Crafting a Successful Proposal

**Communicate to your audience:**
What Are They Looking For?

- In general
  - WHAT are you proposing?
  - WHY is it important?
  - CAN IT BE DONE (by you)?
- Career Development
  - Candidate, mentor(s), training plan, resources, institutional commitment, protected time

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Step 10 Get Feedback

Mentor

Applicant

Student

Advisor

Postdoc

Faculty

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Step 11 Comply with the Regulations

Assurances/Certifications
  - Human Subjects
  - Animal Welfare
  - Recombinant DNA
  - Biohazards
  - "GAFA/Financial Disclosure"
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Step 12  Manage your Mentor

<table>
<thead>
<tr>
<th>Sponsor’s Checklist</th>
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<tbody>
<tr>
<td>Mentor’s Statement</td>
</tr>
<tr>
<td>Environment &amp; Institution</td>
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<tr>
<td>Feedback on draft</td>
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</tbody>
</table>

Tips for Best Reference Letters

- develop effective working relationships with potential referees
- keep your referees updated on your progress
- make your referees’ job easy, provide:
  - current CV, reprints
  - draft of proposal

Remember: this is a personal & professional relationship that may last your entire career

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Step 13  Proof & Check
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Step 14  Submit the Proposal

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Step 15  Move Forward

The Decision

- Reject
- Reapply
- Funded

Try, Try Again...

- Try not to get discouraged; even UNscored is not the end of the world
- However, be realistic (it is very competitive)
- Paylines leave some flexibility
- Wait till you see the summary sheets
  - Revised applications: later due date & include an introductory section to address changes. This “response” is important
Common Problems in Applications

• Lack of new or original ideas
• Lack of strong training potential and/or plan
• Lack of knowledge of published relevant work
• Questionable reasoning in experimental approach
• Uncritical approach
• Diffuse, superficial, or unfocused research plan
• Unrealistically large amount of work ("overambitious")

Tips for a Successful Proposal or Grantspersonship

Terri Wood

Specific Aims

Specific Aims: 1 page or less (5%)
• What is the overall question and long-term goal (1 paragraph)
• Brief background info for immediate project
  – Previously published data
  – New preliminary data presented here
• Thus, the goal of the experiments proposed in this application is to test the hypothesis that…
Specific Aims (cont.)

- Propose specific aims to test the hypothesis and demonstrate that...
- **MAKE SURE YOUR AIMS TEST YOUR HYPOTHESIS!!!**
- Restate hypothesis or aims to match!

Background & Significance

- **ONLY Background relevant to the application!**
  - Keep this very focused and highlight gaps in knowledge
  - Write this AFTER you have defined the aims of the application and have written the research plan
  - Refer to how each aim will test the gap where relevant

Background

- Background on state of field
  - General literature
  - Work of potential reviewers
  - Your previous work
- Use topic sentences, single point per paragraph, use headers
- **Stay focused and be succinct!**

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Significance

- Significance -
  - to field
  - to announcement
  - to agency
- *By the end of the Background & Significance, the reviewer should be convinced of the importance of the work and that it fills a gap*

Preliminary Data

- Maintain a logic flow of points to lead the reader through your data
- Title each section with specific point or result
- *Build your argument to support your hypothesis*

Preliminary Data (cont.)

- By the end of the PD, the reviewer should be convinced that:
  - *this is a very exciting area of research*
  - *the hypothesis is strongly supported*
  - *you have all the tools in hand to do the work*
Research Plan

• Start with paragraph overview
  – Briefly recap or summarize conclusions from preliminary data
  – Outline the research plan/aims
  – Provide an overview of the aims with diagram/model

Research Plan (cont.)

• Start each aim with VERY STRONG rationale section - short but critical
  – Reiterate the gap this aim fills
  – Add new detailed published information if needed to support rationale
  – Summarize goal, approaches and specific experiments

Research Plan (Cont.)

• Experiments - numbered & sub-exps
  – Title what the experiment will test
    • “Determine…”, “Test…”, etc.
  – What is the approach
  – How will it be done - treatment groups
  – How many animals, numbers of cells
  – Leave detailed procedures to the end of aim (or end of grant)
Research Plan (Cont.)

- Expected Results and Alternative Experiments (rather than Pitfalls, etc) for each Specific Aim
- This should be a very thoughtful discussion of expected results and how result “x” would support the hypothesis but result “y” would suggest an alternative hypothesis. What would the next tests be for future studies?

Expected Results/Alt. Exps. Cont.)

- Spending time to think and work through this section will help ensure you have designed good experiments,
  - which will give you an answer even if your hypothesis is wrong
  - that include all the controls for interpretation!
- Provide alternate approaches

End of Research Plan

- Add time-line for aims and experiments
  - as a table
- List detailed experimental protocols (these can also be at the end of each aim)
  - Can cite previously published work from your lab in lieu of too much detail in protocols
In a Word...

Rationale, Rationale, Rationale