Applying for a K08 Strategies for Success

SITC Early Career Scientist Professional Development Session
10/24/2012
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Disclosures

• No financial conflicts of interest to disclose

• Also, I am not a K08 Study Section Reviewer
• But I did successfully apply for a K08
Learning Objectives

• Demystify the K08 grant application process
• Identify the critical components of a successful application
• Develop a strategy for a successful application
• Identify common shortcomings of applications
• Respond to feedback if not initially funded
I. Demystifying the K08

http://grants.nih.gov/training/careerdevelopmentawards.htm
What is a K08, who is it for?

• Objective: To provide salary and research support for a sustained period of “protected time” (3-5 years) to support didactic study and/or mentored research for individuals with clinical doctoral degrees (e.g., M.D., D.D.S., D.M.D., D.O., D.C., O.D., N.D., D.V.M., Pharm.D., or Ph.D. in clinical disciplines).

• Provides support for an intensive, mentored research career development experience in biomedical or behavioral research, including translational research leading to research independence.

• Translational research is defined as application of basic research discoveries toward the diagnosis, management, and prevention of human disease.

What is a K08, who is it for?

• Candidates for this award must have a **clinical doctoral degree**. Individuals holding the Ph.D. in a non-clinical discipline who are certified to perform clinical duties should contact the appropriate Institute concerning their eligibility for a K08 award.

• **Former PD/PIs** on NIH research project (R01), program project (P01), center grants, FIRST Awards (R29), sub-projects of program project (P01) or center grants, other career development awards (K–awards), or the equivalent are **not eligible**.

• Open to U.S. citizens, non-citizen nationals, and permanent residents.

II. Identify the critical components of a successful application
Download and Read the Instructions!
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Critical components of K08

- Candidate
- Career Development Plan
- Mentor(s)
- Research Plan

The Candidate

• Who are you?
  – How have you been trained to date?
  – What are your short and long-term career goals?
  – Explicitly state that you aim to become an independent researcher.
  – Emphasize any accomplishments (papers) to date.
  – Don’t mistakenly put abstracts or review articles in the biosketch under peer reviewed articles.
The Candidate

• What is the justification for needing additional training?
  – Remember, the primary purpose of a K08 is not to fund your research project but instead to **fund your training**. (If you don’t need training, apply for an R award!)
  – Briefly state how your Career Development Plan and Mentor(s) will help you achieve your stated goals.
  – State how your research goals are distinct from those of your mentor(s).
The Career Development Plan

- The **most important part** of the grant.
- Briefly restate your goal to progress to an independent researcher.
- Lay out short, medium, long-term career goals.
- Take stock of deficiencies in your training and lay out your plan to correct them.
  - Limited number of publications: take courses in manuscript and grant writing, propose schedule for for anticipated publication of with target journals.
  - Limited experience in ____: collaborating with world expert in ____ , taking graduate courses in statistics to permit analysis of ____.
The Career Development Plan

• Include an appropriate didactic plan.
  – Courses, schedules, timetable to complete.
• Consider obtaining additional degree (e.g. MPH, PhD, Masters in Clinical Investigation).
• Explicitly state how clinical responsibilities will be integrated with coursework and research.
• Carefully review plan with mentor(s) to ensure consistency between your proposal and their support letters.
The Mentor(s)

• Choose a mentor who is an expert in your proposed field of study.
  – In addition to reputation, accessibility is a critical attribute of a good mentor.
  – A strong history of prior mentoring is looked upon very favorably.

• A co-mentor may be appropriate if part of your project lies outside of the expertise of your primary mentor.
  – For example, your mentor and research are in immunology but your Research Plan includes deep sequencing of cancer tumor antigens—a co-mentor with a track record in high-throughput sequencing would be appropriate.
The Mentor(s)

• Include an explicit schedule of the frequency of meeting with the primary mentor and any co-mentors (e.g. weekly lab meeting).

• State what will be discussed at the meeting (e.g. new data, goals needed to complete a manuscript, review of posters for scientific meetings).

• If co-mentors are not at a candidates institution, state how communication will be accomplished (e.g. web conference twice a month).

• Mentor(s) must read and critique all aspects of the grant before submission.
The Mentor Letter

• Don’t let a weak letter doom the application.
• Must be consistent with applicant’s career development plan and research proposal.
• Should list results of prior mentoring.
• Highlight why mentoring team is appropriate and how it will supervise candidate.
• Helpful to include milestones to measure progress and anticipated timeline.
• During a resubmission, letter must be updated to reflect recent accomplishments by applicant.
The Research Plan

• Written with input/review from the mentor(s).
• Be sure to cite relevant literature (or risk angering your study section by omitting their work).
• Novelty, even in a K award, is always favorable.
• Don’t include an overly ambitious number or extent of aims/sub-aims (typically 2-4 is plenty).
• Aims should stand independent of each other’s success.
The Research Plan

• Acknowledge if others generated preliminary data you include (if you already have advanced technical/lab skills why get more training).
• State anticipated results and next steps.
• Provide a timeline to accomplish the experiments.
• Avoid jargon, and layout a clear narrative how the background, preliminary data, and anticipated results support your hypotheses.
The Research Plan

• List limitations/pitfalls and alternative outcomes/experiments; what is your response to these data?

• Emphasize that the necessary institutional resources are available to perform the proposed research.

• Discuss statistical analysis of data (extremely important for clinical trials).
III. Develop a strategy for a successful application
Preparing your application

• Start early!
• Seek feedback from mentors, colleagues, and others in your institution who have had success applying.
• Don’t forget other requirements.
  – Course in Research Ethics.
  – Animal protocols.
  – Protection of human research subjects.
  – Getting PMCIDs for any prior published research.
  – Letter of institutional commitment (often department chair).
• Work with your institutional office of research administration.
  – They often want the whole grant 1-2 weeks in advance of due date to look for clerical deficiencies.
Submitting your application

• Explore if different NIH branches would consider your application.
  – For example, immunology may fall under NHLBI, NCI, NIAID; *salary support and paylines differ*.
  – Contact institute program director to discuss if applying to that institute is appropriate.
    (http://grants1.nih.gov/grants/guide/contacts/parent_K08.html)

• Solicit letters of reference early.
  – Late submissions will result in grant not being reviewed.
  – Follow up with referees that letters are in on time.
IV. Identify common shortcomings of applications
Problems with the Candidate

• Too few publications.
  – Include an anticipated schedule for completing experiments and publishing results.
  – Include a course in manuscript/grant writing in Career Development Plan.
  – In the meantime, write review articles/chapters with the mentor to expand expertise in the field.

• Unexplained gap in training.
  – Explain any interruptions (health, pregnancy, etc.), it won’t count against you.

• Poorly articulated or incongruous career goals.
  – The training plan must be one to direct you towards a defined set of clinical and research goals.
Problems with Career Development Plan

• No documented need for further training.
  – You applied for wrong class of grant, get an R01!

• Poorly structured mentoring plan, inaccessible mentor
  – Articulate the frequency and type of meetings, what will be discussed, milestones of achievement.
  – Make sure there are no inconsistencies between mentor letter and proposed training plan (and don’t just have mentor talk about the great science you will do).

• Insufficient or too much didactic work to gain the expertise proposed.
  – Courses should be explicitly listed and timetable for taking them provided.
  – Courses should be finished earlier in the training.
  – But, if credits are sufficient for an advanced degree then get it.
Problems with Career Development Plan

• Poorly documented support for protected time or too much clinical responsibility.
  – Must be negotiated with department and articulated in letter of support.

• Too much overlap in goals with primary mentor.
  – Must articulate a plan for independence.
  – Helpful to have institution document criteria for promotion if you plan to stay.
Problems with Research Plan

• Poorly articulated “big picture” of importance and novelty of work.
• Too many aims or sub-aims to accomplish in proposed time.
• Insufficient articulation of limitations, pitfalls, or alternative outcomes.
• Aims dependent on each other’s results.
• Unrealistic expectations about clinical trial accrual/insufficient explanation of statistics.
V. Responding to feedback and resubmitting
Resubmission

• Respond to all of the reviewers’ comments.
• Highlight changes made in the grant so they are easy to identify.
• **Publish!!!** Demonstrate a productive research relationship with your mentor.
• If the mentoring relationship was considered a weakness, add additional expertise with a co-mentor or mentoring committee.
Good luck!

References
