



NATIONAL INSTITUTES OF HEALTH



Basic Advice for Mapping Your Career with NIH

- Learn about IC priorities and goals
 - Not all ICs support all grant programs but each IC has a research training and career development program
- Identify the grant programs offered by each IC
- Identify the priorities of the IC. These can change!
- Make early contact with program officers
- Find good mentors and collaborators
- Study successful grant applications
- Only propose your best and most creative ideas
- You won't get a grant if you don't apply

Purpose of Career Development Programs:

To provide protected time for individuals to further develop research skills and experience

General Tips on Mentored K Awards

- To help promising new investigators achieve research independence (i.e., to compete successfully for R01 funding).
- Preparing for the R01 grant application you will submit at the end of the K award should be the organizing principle of the K grant application.
- Think about your short-term goals and long-term goals.

- Develop a career development training plan that is uniquely suited to you.
- Given your previous training and research experience, and your short- and long-term career goals, propose a mix of didactic training and “hands- on” research experience that make perfect sense for you .
- Degree-granting programs are appropriate for candidates with little or no previous formal training in research, but even these programs should be customized whenever possible.

Mentored K Awards: Review

- Overall Impact Score
- Scored Review Criteria
 - Candidate
 - Career Development Plan
 - Research Plan
 - Mentor(s), Consultant(s), and Collaborator(s)
 - Environment and Institutional Commitment to the Candidate

Mentored K Awards: Review (cont)

- Additional Review Criteria
 - Protection for Human Subjects
 - Inclusion of Women, Minorities, and Children
 - Vertebrate Animals
 - Biohazards
 - Resubmission, Renewal, Revision factors
- Additional Review Considerations
 - Training in the Responsible Conduct of Research
 - Select Agents Research
 - Resource Sharing Plans
 - Budget & Period of Support

The Candidate

- Candidate's background
- Career goals and objectives
- Career development activities during award period
- Suggested length: 2-3 pages

The Candidate: Review Criteria

- Quality of the candidate's academic and clinical record
- Potential to develop as an outstanding independent researcher
- Commitment to a career in scientific research
- Likelihood that the career development plan will contribute substantially to the scientific development of the candidate.

Candidate's Background

- Suggested length: About 1 page.
- Using your NIH biosketch as your guide, provide a personal narrative of your professional career.
- Explain why you made key career choices (e.g., to pursue specific kinds of training opportunities or research projects).
- OK to use 1st person (“I”)
- Make this a narrative, not a strict chronological statement.
- Doing this well may be the most difficult task in writing a K proposal

Candidate's Background

- Give examples of the opportunities you've had to engage in research (basic or clinical) as evidence of your long-standing commitment to research.
- Highlight early evidence of productivity (e.g., pursuing a specific question, analyzing data, presenting or publishing your results).
- Describe any formal research training
- This must be compelling

Candidate's Background

- **Tip:** Begin this section with a summary statement regarding your long-term research career goals.
- **Example:** “ My goal is to become an independent clinical investigator and leader in the study of To continue my progress towards this goal, I am proposing an observational prospective study addressing specific hypothesis surrounding the role of gastroesophageal reflux in.....”

Career Goals and Objectives

- Suggested length: at least 2 paragraphs
- The research plan you propose should include some specific “challenges,” for which you need additional training and/or experience to accomplish successfully.
- These “deficits” in your training/experience then become the focus of your career development training plan.
- Describe the specific areas where you have deficiencies as related to your research (e.g., primary data collection, biostatistics, qualitative research methods).

Career Development Plan

- Suggested length: 1 - 2 pages.
- List the specific training areas you will pursue to acquire the new set of skills you need.
- Explain why gaining additional training and mentored research experience in these areas will be critical to achieving your short-term and long-term career development goals.
- Describe in detail how you will gain this training, such as through specific courses, individualized tutorials, or practical experience gained in someone's research lab

Review of training plan

- Appropriateness of the content, the phasing, and the proposed duration of the career development plan for achieving scientific independence
- Consistency of the career development plan with the candidate's career goals
- Likelihood that the plan will contribute substantially to the achievement of scientific independence
- Timeline – When are you planning to submit manuscripts? How about the next phase of funding?



Formal Coursework

- If you will need to perform new tasks or require skills that can be taught in a course
- If have limited or no formal postgraduate education in research methods used in the conduct of the award
- List the courses, method of teaching, when you will enroll. Describe the course

Immersion Training Examples

- Laboratory techniques/methods – Working in a collaborator's lab
 - If you do this, be specific about when you will pursue this, how long
- Other courses, workshops
 - Again, be specific

Review of Research Plan

- Scientific and technical merit of the research question, design and methodology
- Relevance of the proposed research to the candidate's career objectives
- Appropriateness of the research plan to the stage of research development and as a vehicle for developing the research skills described in the career development plan
- Innovation! Does this create a niche for applicant?

Statements by Mentors, Co-Mentors, and Collaborators

- Assemble a complementary team
- Choose a primary mentor who is a senior investigator with a track-record of NIH funding; your primary mentor should be at OHSU
- Include co-mentors who will complement the primary mentor's strengths
- Can you have mentors outside of OHSU? Yes. Discuss how you will keep in contact.

Mentors, Co-Mentors, and Collaborators

- Each member of your “team” must play a role in your training or research plan. Introduce each with a short paragraph.
- Create a table of what each will provide.
- Establish a mentoring committee of 3-4.
- If you need to add additional members, call them scientific or technical advisors/collaborators, who have a relatively narrow area of responsibility and focus.
- Include an evaluation component that describes how your mentors will assess your progress (e.g., quarterly meetings); include specific milestones during the K award.
- Include timeline, frequency of mentoring

Statements by Mentors, Co-Mentors, and Collaborators (Cont'd)

- Evaluation criteria for primary mentor:
 - Appropriateness of mentor's research qualifications in the area of this application.
 - Quality and extent of mentor's role in providing guidance and advice to candidate.
 - Previous experience in fostering the development of more junior researchers.
 - History of productivity and support.
 - (Adequacy of support for the research project.)

Letters of Collaboration

- The letter from the primary mentor is key. It should cover the following areas:
 - His or her qualifications in the research area proposed by the candidate.
 - Previous experience as a research supervisor.
 - The nature and extent of supervision that will occur during the award period.
 - What resources, if any, they will make available to you in support of your training and/or research.
 - This MUST agree with what you say in the body of the grant

Primary mentor's letter

- The primary mentor's letter can also “re-frame” any potential weaknesses in the application.
 - Examples:
 - Productivity of candidate (e.g., few publications).
 - Feasibility of conducting research plan with resources of K award.
 - Limited mentoring experience of primary mentor.
 - Limited resources of primary mentor (e.g., no current R01 funding).
 - Co-mentor(s) not at OHSU.
 - Scientific overlap with primary mentor.

Letters of Collaboration

- Letters from co-mentors, scientific advisors, and others can be much shorter.
- Be sure to include description of the role of the co-mentor/scientific advisor.
- Make sure that letters are consistent with text in grant application (re: frequency of meetings, etc.).

Description of Institutional Environment

- Evaluation criteria:
- Adequacy of research facilities and the availability of appropriate educational opportunities.
- Quality and relevance of the environment for scientific and professional development of the candidate.
- Describe the research facilities and educational opportunities of the sponsoring institution (OHSU) that are related to the candidate's career development training and research plans.
- Include relevance of each component to your career development plan.

Institutional Commitment to Candidate's Research Career Development

- Applicant institution's commitment to the scientific development of the candidate and assurances that the institution intends the candidate to be "an integral part of its research program."
- Applicant institution's commitment to protect at least 75% of the candidate's effort for proposed career development activities.
- Do NOT include a comment that "If funded, then the applicant will be appointed to faculty...." No contingencies.

Institutional Commitment to Candidate's Research Career Development (Cont'd)

- These assurances are stated in a letter from your department chair or division chief
- Note: For fellows, this letter must state that you will be promoted from your current position to a “higher” position (ideally, to a full-time faculty position) during the K award period.

Letters of Recommendation

- 3 - 5 letters are required.
- They should be from senior investigators who have competed successfully for NIH funding and have been involved in the training of junior investigators.
- Can be from any period in your career (e.g., medical school, residency).
- Cannot be from your primary mentor or co-mentors.

Training in the Responsible Conduct of Research

- This is important but is more like a checkbox for the reviewer
- See boilerplate

Plan 6 mos in advance

Work with your mentors on specific aims

Have a draft of the overall 3 mos in advance

Plan to have time to work on this in the 6 weeks before submission

Give your mentors and letter writers time to complete their submissions

Design Studio? Optimally 2-3 mos ahead of time