NIH Career Development (K) Awards provide support for research careers

~2.1% NIH budget: $618 million (FY13)
3,840 awards (FY13)
Currently 12 different types (K01-K99)
  • for clinicians & basic scientists
  • for junior & senior faculty

Mentored K awards:
designed for postdocs & junior faculty
   → K01, K08, K23, K99/R00

The Goal of Mentored K Awards

To provide support and “protected time” (3-5 years) for an intensive, supervised career development experience in the biomedical, behavioral, or clinical sciences leading to research independence.

A dedicated mentor is essential for
  • successful application
  • successful outcome

NIH provides funding for career development at different stages

post doc resident → junior faculty → independent investigator

K08 Mentored Clinical Scientist Award
K23 Mentored Patient-Oriented Research
K01 Mentored Research Scientist Award
K22 Career Transition Award
K99/R00 Pathway to Independence Award
Know Your K

Joan M. Lakoski, PhD • Robert J. Milner, PhD

K01: Mentored Research Scientist Award

—to develop research independence or to foster career development in a new area

- for candidates with potential for productive independent research
- mentor with extensive research experience
- 75% effort over 3-5 years
- different Institutes use the K01 award for different purposes
  — contact the Program Officer!

K08: Mentored Clinical Scientist Award

—to develop clinician research scientists as independent investigators

Requires:
- clinical doctoral degree
- must have initiated postgraduate training
- mentor with extensive research experience
- 75% effort over 3-5 years

K23: Mentored Patient-Oriented Research Career Development Award

—to develop investigators committed to patient-oriented research

Requires:
- clinical or nursing doctoral degree
- completion of all clinical training
- mentor with extensive research experience
- 75% effort over 3-5 years
K22: Career Transition Award

— support for postdoctoral fellows in transition to faculty positions

- for candidates with potential for productive independent research
- differences among Institutes: may involve training in intramural NIH programs

K99/R00: Pathway to Independence Award

— to facilitate independent funding earlier in an investigator’s career

- for highly promising postdoctoral scientists
- established in response to increasing age of first independent support
- non-citizens are eligible

K awards have high success rates

<table>
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<th>Success Rate 2013 (%)</th>
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Data from: http://report.nih.gov/DisplayRePORT.aspx?id=551
http://report.nih.gov/success_rates/Success_ByActivity.cfm

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Common features of K Awards

Eligibility:
• doctoral degree
• US Citizen, non-citizen national, or permanent resident *(except K99/R00)*
• not eligible if previous PI on R or K grants

Duration: 3–5 years
Effort: minimum 75%

Other individual K Awards

K02 Independent Scientist Award
K05 Senior Scientist Research & Mentorship
K07 Academic Career Award
K18 Career Development Award in the Environmental Health Sciences / Career Enhancement Award for Stem Cell Research
K24 Midcareer Investigator Award in Patient-Oriented Research
K25 Mentored Quantitative Research Development Award
K26 Midcareer Investigator Award in Mouse Pathobiology Research

For more information on K awards see the NIH website — “K Kiosk”

http://grants.nih.gov/training/careerdevelopmentawards.htm

Contact the appropriate Program Officer!
Information on K Awards by NIH Institute

Spreadsheet: K award information for Institutes/Centers
http://grants.nih.gov/training/K-Awards_Across_ICs.xls

Spreadsheet: K award success rates for Institutes/Centers

K Awards are reviewed by 5 criteria

- Candidate
- Career development plan
- Research strategy
- Mentor
- Environment & Institutional Commitment

Remember the criteria as you write your proposal!

Program Announcements for K awards (see K Kiosk *)

- **K01**: Mentored Research Scientist Development Award
  PA-11-190
- **K08**: Mentored Clinical Scientist Research Career Development Award
  PA-11-193
- **K22**: see individual institutes on K Kiosk *
- **K23**: Mentored Patient-Oriented Research Career Development Award
  PA-11-194

* http://grants.nih.gov/training/careerdevelopmentawards.htm

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Read the Program Announcement (PA) — link to application package & download

PA-14-036 (K08 award)

Apply for Grant Electronically

Watch for updates!

Your institution may use a software system to interface with Grants.gov

CAYUSE → GRANTS.GOV

The interface may be more user-friendly but the components you need to write are the same

— contact your Grants Office for more details

Application for a K award should be a collaboration between you & your advisor

You (the "applicant") are Principal Investigator

• you are responsible for submitting the application
• you write the research training plan in collaboration with your sponsor

Your advisor/mentor is the Sponsor

• she/he must write sections of the application

You must involve your advisor/mentor early & often in crafting the application!
There are additional components & instructions for K Awards

Career Development Supplemental Form:

Instructions:
Part I, Section 7
— preparation of a K award proposal

Complete the Cover Component according to standard instructions

Consult with your grants office for help in completing the forms

Title: limited to 81 characters & spaces

You sign the application by checking "I agree" (Page 2)

Remember that in submitting the application, you certify that the contents are "true, complete, and accurate"
**Other Project Information Form**

7. Project Summary/Abstract
   - no more than 30 lines
   - the abstract should include a description of your research project & your training plan

9. Bibliography
   - for whole proposal

10. Facilities & Other Resources; 11. Equipment
   - description of resources available to candidate
   - establishes feasibility of proposal

**Attach your Biosketch:**

Five sections:
- Education
  - A. Personal statement
    - why you are best suited to receive a K award
  - B. Positions & honors
  - C. Selected publications
    - limit of 15
    - with NIH Manuscript Submission ref #
  - D. Research Support

**Attach Biosketch & Research Support for Mentor, Co-Mentor, & Key Persons**

Include:
- education/training
- positions & honors
- publications

List Research Support
- ongoing & completed projects (last 3 years) with goals
- do not confuse with "Other Support"
Budget: allowable costs may differ by award type & institute

- consult your grants office &/or Program Officer
- modular budgets not used for K awards
- only a few budget categories used

The application also includes “PHS398 Components”

Cover Letter Component
- required for mentored K awards
- must include list of references

Cover Page Component

Checklist
- follow general instructions

Career Development Supplemental Form

Watch for changes in forms!

The Career Development Supplemental Form contains the proposal itself

Important sections:
- Introduction (if applicable)
- Candidate Information
- Statements of Support
- Environment and Institutional Commitment
- Research Plan
- Human Subjects, etc

Each component is attached as a separate pdf
Key sections have a page limit

Candidate Information (items 2–4) + Research Strategy (item 11) = 12 pages total + 1 page for Specific Aims

Watch for changes in page limits!

RCR (item #5) now has a separate 1 page limit
Plans & Statements by Mentors & Co-mentors (item 7) — limited to 6 pages
Letters of support from Consultants & Collaborators — limited to 6 pages
Institutional environment (item 9) limited to 1 page
Institutional letter of support (item 10) limited to 1 page

See current page limits:
http://grants.nih.gov/grants/forms_page_limits.htm#car

Tip: write the Candidate Information & Research Strategy as a single document

Better able to assess fit to 12 page limit
Then separate into sections for uploading as pdfs
NIH will not count white space generated as part of page limits

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The supplemental sections correspond to the review criteria for K Awards

- Candidate
- Career development plan
- Research strategy
- Mentor
- Environment & Institutional Commitment

*Remember the criteria as you write your proposal!

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Candidate’s Background (item 2)

Describe any relevant information about you that is not included in your Biosketch
- e.g., research, clinical training experience

*Be succinct:* this section is included in the 12-page limit!

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Describe your “Scientific Biography” in Career Goals & Objectives (item 3)

Justify the proposal by describing how it fits into your career development

- past history
- this proposal
- future career

Describe previous scientific history
Describe how the award will enable you to enhance your career objectives
Include reasons for any changes in career direction

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Mentored K Award applications require letters of reference

Required for K01, K08, K22, K23 & K99/R00 applications

- 3–5 letters from individuals other than those involved in the application
- I.e., not sponsor/mentor or collaborators

Letters should address candidate’s competence & potential as an independent investigator

List your referees in the “Other Attachments” section

List of Referees:

- at least 3, not including your sponsor
- you must include the name of the referee, departmental affiliation, and institution
- same list must be included in the Cover Letter Component

“Applicants must include a cover letter”

List Referees (including contact information)

You can an request assignment to a specific Institute and/or review panel:

Application Title

Please assign this application to the following:

Institute/Center:
- National Cancer Institute (NCI)

Scientific Review Group:
- Cancer Etiology Study Section (CE)
Describe what you will learn in the Career Development Plan (item 4)

- Describe new skills & knowledge
  - provide details of courses & workshops
- Define distribution of effort for activities
  (use timeline)
- Relate activities to career development & research plans

*Proposing to do what you already know will be viewed as having no training potential!*

Items that you must include in a Career Development Plan

Describe your goals:

- what you hope to achieve . . .
- describe specific activities designed to achieve each goal
- include a specific aspect of advanced research training and professional skills
  (e.g. training in grant writing)
- describe how your institutional environment will enhance your success in achieving your goals

Your mentor(s) must describe detailed plans for mentoring

The specific expertise of your mentors and how their guidance will help you to achieve your goals

The specifics of mentoring, including frequency of meetings (e.g., weekly)

Consider adding an Advisory Committee to monitor your progress every 6 months
Include a Timeline for your Career Goals & Objectives

List:
- your distribution of effort
- specific objectives for each year
- plans for subsequent grant support

Research Plan should “develop skills needed by a researcher”

- should be hypothesis-driven
- not overly ambitious or routine

Format of the Research Plan:
Specific Aims (1 page)
Research Strategy:
a) Significance
b) Innovation
c) Approach

The Mentor must have a strong record of research and mentoring

Your mentor should meet these qualifications (& document them adequately!)
If not, provide a plan to correct any deficiencies:
- co-mentor(s)
- mentoring advisory team

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Statements by Mentor must also explain how award will develop candidate’s career

**Should include:**
- plans for candidate’s career development
- source(s) of support for research project
- supervision & mentoring of candidate
- candidate’s teaching load (if any)
- plan for transition of candidate to an independent investigator

*Statement limited to 6 pages!*

Institutional Environment: document a strong research program (item 8)

List names of key faculty members

Describe availability of necessary facilities and resources (refer to resources description)

Describe opportunities for intellectual interactions (journal clubs, seminars, presentations)

*Statement limited to 1 page!*

A strong statement of Institutional Commitment is essential (item 9)

- on institutional letterhead
- commitment to candidate independent of award
- agreement to provide protected time for candidate’s research & career development
- equipment, lab space, office, facilities, resources

*Letter limited to 1 page!*

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You must include plans for instruction in Responsible Conduct in Research

NIH has defined guidelines for Instruction in Responsible Conduct in Research (RCR)

Update on the Requirement for Instruction in the Responsible Conduct of Research

NOT-OD-10-019

*Applications lacking a plan for instruction in responsible conduct of research will be considered incomplete and may be delayed in the review process or not reviewed."

There are three deadlines per year for submission of NIH Awards

K awards:

<table>
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<th>Receipt</th>
<th>Review</th>
<th>Council</th>
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<td>Oct 12</td>
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Applications must be received electronically on or before the receipt date

The Office of Research requires proposals to review at least 5 days before the deadline

Plan ahead for resubmission!

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