Pathway to Independence Award (K99/R00)
— 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

Goal of training & career development awards is research independence

F31  F31  K Awards  R01
F30

Research independence is demonstrated by obtaining research project grants

BUT, first major independent research support occurs at an ever-later age

Average Age of Initial Research Award (R01/R23/R29)

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http://grants.nih.gov/grants/20040712_New_Investigator_Talk.ppt

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The K99/R00 Award was established to facilitate the transition to independence

Overall Goal of Award:
• to assist new investigators in transitioning to stable independent research positions at an earlier age and with an enhanced probability of success in obtaining independent NIH or other independent research support.*

K99/R00 Awards combine elements of K and R (research) awards

K99/R00 Awards provide up to five years of support in two phases
K99 Phase:
• 1-2 years of mentored support for highly promising postdoctoral research scientists
R00 Phase:
• up to 3 years of support contingent on securing an independent research position

* K99/R00 Program Announcement (PA-10-063)
Eligibility for K99/R00 Awards

- doctoral degree (PhD or MD), with no more than 5 years postdoctoral research training
- postdocs in mentored positions who do not have the ability to be independent researchers, i.e.,
  - individuals who have not held an independent research position
  - or been PI on NIH research (R01, R03, R21) or career development (K) awards
- commitment of 75% effort
- U.S. citizens and non-U.S. citizens are eligible

Mentored (K99) Phase provides 1–2 years of mentored support

- for highly promising postdoctoral research scientists who have clinical or research doctorates
- training may be at NIH or extramural institutions but not at foreign institutions
- total cost per year up to $90,000 (level of support varies by I/C*)
  includes salary & research support

* see K99/R00 Table of Institute and Center Contacts http://grants.nih.gov/grants/guide/contacts/parent_K99_R00.html

Independent Investigator (R00) Phase provides up to 3 years of support

- to conduct research as an independent scientist
- contingent on acceptance of a tenure-track, full time assistant professor position (or equivalent)
  - Federal or foreign institutions not eligible
  - transition is subject to administrative review of progress and evaluation of research plan
  - institution must demonstrate commitment to candidate (minimum 75% effort, space)
- up to $249,000 total costs per year, including salary, research support, indirect costs
Current Status of NIH Pathway to Independence Awards

- First group of 58 awards announced in November 2006 (FY 2007)

<table>
<thead>
<tr>
<th>Year</th>
<th>Proposals Submitted</th>
<th>Grants Awarded</th>
<th>Success Rate</th>
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<tr>
<td>2007</td>
<td>893</td>
<td>183</td>
<td>20.5%</td>
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<tr>
<td>2008</td>
<td>795</td>
<td>180</td>
<td>22.6%</td>
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<tr>
<td>2009</td>
<td>703</td>
<td>204</td>
<td>29.0%</td>
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<tr>
<td>2010</td>
<td>~800</td>
<td>194</td>
<td>24.0%</td>
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</table>

- Program now in 5th year: very likely to continue

K99/R00 awards made by NIH institute: total awards 2007–2009

Success rates vary by NIH Institute: average success rates 2007–2009

Data from: http://report.nih.gov/FileLink.aspx?id=551

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Average age of K99/R00 recipient is 34

K99/R00 Contacts at NIH

K99/R00 Contacts at NIH

For Questions & Answers about K99/R00 Awards

http://grants.nih.gov/grants/new_investigators/QsandAs.htm

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K22 Career Transition Awards are an alternative to K99/R00 Awards
— 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

Application for a K99/R00 Award follows the same process as other K Awards

- similar application package: SF424 (R&R) with Career Development Supplement
- same deadlines: Feb 12, June 12, Oct 12
- same general review criteria

BUT, K99/R00 applications must emphasize the unique features of this award:
- division into 2 distinct but connected phases
- goal of preparation for independent research

Before applying you must obtain & be familiar with 3 sources of information

- SF424 (R&R) Application Guide
- Program Announcement (PA) for your Award (K99/R00)
- Application Form for your Award (K99/R00)
Read the Program Announcement (PA) — link to application package

Each application package is for a specific Award

• Application package is a pdf document

NIH will update forms before next submission deadline

Make sure you have the right forms!
Know Your Kangaroo: Pathway to Independence Award (K99/R00)
Joan M. Lakoski, PhD • Robert J. Milner, PhD

Emphasize the unique features of K99/R00 Awards for each review criterion

1. Candidate
2. Career Development Plan
3. Research Plan
4. Mentor
5. Environment and Institutional Commitment

Emphasize:
• division into 2 distinct but connected phases
• preparation for independent research

Remember:
these sections are limited to 12 pages

The Candidate must demonstrate the potential for independent research

Key review questions:
• What is the record of research productivity?
• What is the quality of the candidate's pre- & postdoctoral research training experience?
• Will the candidate be able to achieve an independent, tenure-track position within the time period requested for the K99 phase?
• How do the letters of reference evaluate the candidate?

The Candidate must demonstrate the potential for independent research

Answer these questions with:
• A detailed and complete biosketch
• A strong statement of commitment to a career in biomedical research (Candidate Background)
• A detailed description of career goals & how these goals relate to prior training & experience (Career Goals & Objectives)
• Outstanding letters of reference from at least 3 well-established scientists

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Career Development Plan must be appropriate for the candidate

Key review questions:

• Is the plan likely to contribute substantially to the development of the candidate including his/her successful transition to independence?

• Is the plan appropriate for the candidate's current stage & future research career goals?

• Are the plans for evaluating progress during the K99 phase adequate for guiding the candidate towards successful transition to independence?

• Is the timeline appropriate for the transition to the independent phase of the award?

Career Development Plan must be appropriate for the candidate

Answer these questions with:

• A systematic plan that shows a logical progression from prior research and training to the training and research proposed for the K99 phase and subsequently to the R00 phase.
  (Career Goals & Objectives)

  prior experience  K99 phase  R00 phase

• A training plan that fits the past experience & future needs of the candidate.
  (Career Development & Training Activities)

Career Development Plan must be appropriate for the candidate

You should also:

• Justify the need for the award, both K99 & R00 phases and make a convincing case that the proposed support will enhance your career &/or allow the pursuit of a novel or promising approach to a particular research problem.

• Describe how the plan will promote your scientific independence, by including grant-writing, communication and laboratory management skills and knowledge.
  (Career Development & Training Activities)
Include a Timeline for your Career Goals & Objectives

- indicate how the two phases relate
- list specific objectives for each year
- describe plans for subsequent grant support

<table>
<thead>
<tr>
<th>Year</th>
<th>K99 Phase</th>
<th>R00 Phase</th>
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<tbody>
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<td>1</td>
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The Research Plan must be divided into distinct but connected K99 and R00 phases

Key review questions:
- Is the K99 phase research an appropriate vehicle for developing research skills & a highly successful R00 research program?
- Is the R00 phase research scientifically sound and a logical extension of the K99 research?
- Is the R00 research significant, innovative & creative? Does it have long-term viability?
- Is the R00 research likely to foster the career of the candidate as an independent investigator?

The Research Plan must be divided into distinct but connected K99 and R00 phases

Answer these questions with:
- A description of how prior research, the K99 research, and the R00 research intersect: i.e., what you still need to accomplish during the K99 phase in order to compete successfully.
- A detailed description of the R00 phase research, including the novelty, significance, creativity, and approach.
- A description of how your research plan relates to your mentor’s research and how you will achieve research independence your mentor.
The Mentor must have a strong record of research and mentoring

Key review questions:

- What is the mentor's record of training?
- Are the mentors research qualifications, stature, and mentoring record appropriate?
- What is the nature & extent of supervision during the K99 phase?
- Is there an appropriate plan for evaluation of progress (K99 phase) and the transition to independence?
- Are any collaborators & consultants qualified?

The Mentor must have a strong record of research and mentoring

Answer these questions with:

- A mentor that meets these qualifications (& has documented them adequately!)
- If not, provide a plan to correct any deficiencies:
  - co-mentor(s)
  - mentoring advisory team
- Detailed plans during the K99 phase for
  - supervision by the mentor(s)
  - evaluation of progress & transition
  (Statements by Mentor)

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

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A strong statement of **Institutional Commitment** is essential

**Key review questions:**

- Does the institution provide a high quality environment for the candidate’s development?
- Are the research facilities and educational opportunities adequate and appropriate for the candidate’s research and career development goals during the K99 phase of the award?
- Is the K99 sponsoring institution strongly committed to fostering the candidate’s development and transition to the independent (R00) phase?

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A strong statement of **Institutional Commitment** is essential

**Answer these questions with:**

- Description of how the institutional environment & facilities are appropriate & available for the research & career development of the candidate.
- A strong institutional statement of commitment to the candidate during the K99 phase & support for transition to independence. (This commitment should not be dependent on receipt of the award.)

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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

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You must include plans for instruction in Responsible Conduct in Research

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

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.”

Write to the review criteria

• Candidate
• Career development plan
• Research plan
• Mentor
• Environment & Institutional Commitment
• RCR Instruction

A strong response for each criterion!