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Career Development Awards

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Research & Education Component (REC)
MCUAAAR

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What is a career development award (CDA)?

- Career Development Awards, also known as CDA or "K" awards, are designed for those with a doctoral degree who have demonstrated independent research accomplishments but need **additional experience to establish or sustain an independent research program.**
- CDAs provide up to five years of salary support and guarantee substantial **protected time** to engage in research and related activities.

https://researchtraining.nih.gov/resources/faq#Research-Training-and-Career-Development?anchor=question56803

Different types of CDAs

- Individual mentored awards
- Career transition awards
- Independent awards
- Institutional scientist development programs

https://researchtraining.nih.gov/resources/faq#Research-Training-and-Career-Development?anchor=question56803

K awards for early stage investigators

- K awards are mentored training awards.
- Within NIH, different institutes have different K awards with different requirements!
- Not all institutes participate in every K mechanism.

Early stage investigators (ESIs)

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- Completed their terminal research degree or end of post-graduate clinical training, whichever is later, within the past 10 years
- Has not previously competed successfully as a PD/PI for a substantial NIH independent research award.

https://grants.nih.gov/policy/early-stage/index.htm

Early stage investigators (ESIs)

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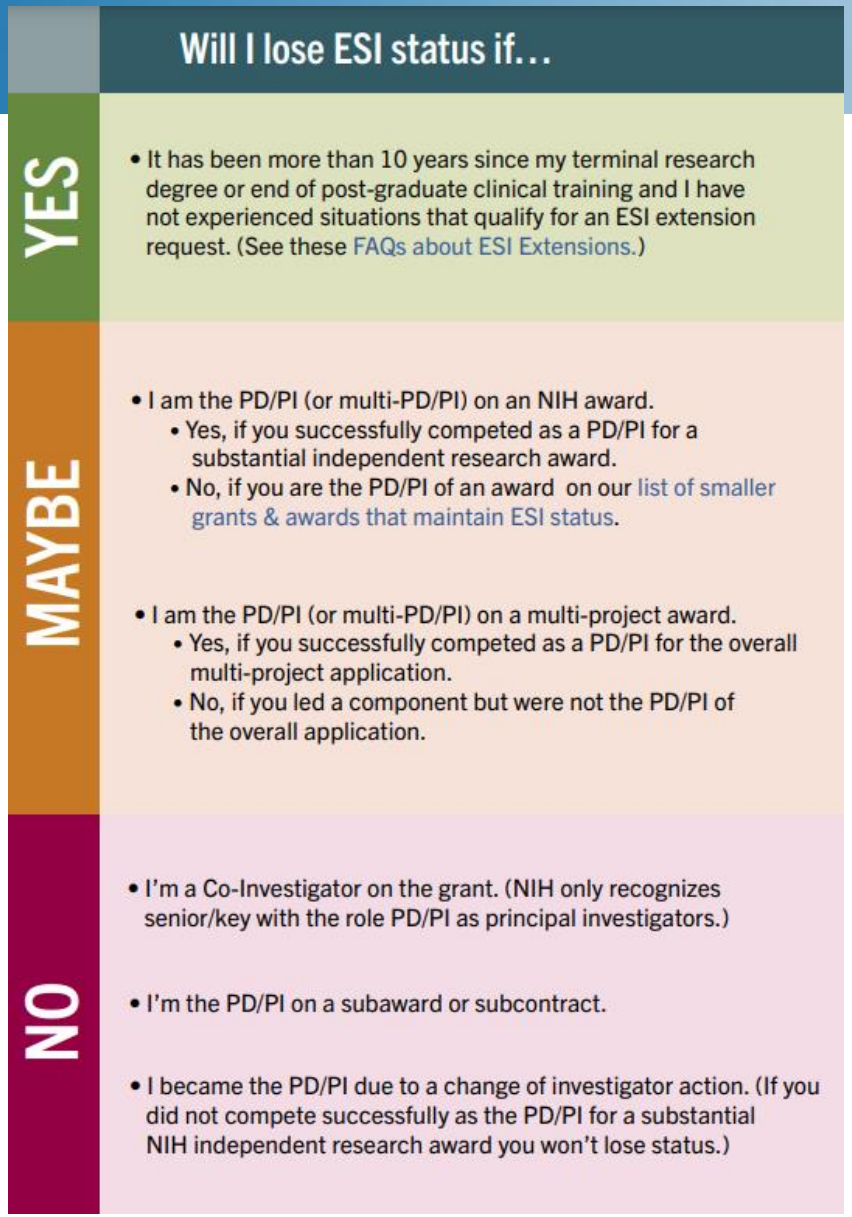

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https://grants.nih.gov/policy/early-stage/index.htm

K award examples

- K01: Mentored Research Scientist Career Development Award
- K02: Independent Research Scientist Development Award
- K07: Academic Career Development Award
- K08: Mentored Clinical Scientist Research Career Development Award
- K22: Career Transition Award
- K23: Mentored Patient-Oriented Research Career Development Award

https://researchtraining.nih.gov/career/early-career

Relevant K awards

- K01: Mentored Research Scientist Career Development Award
  - Provides support and protected time for an intensive, supervised career development experience in the biomedical, behavioral, or clinical sciences leading to research independence.
  - Some NIH Institutes use the K01 to enhance workforce diversity, or for individuals who propose to train in a new field, or for individuals who have had a hiatus in their research career.
  - Up to 5 years.

https://researchtraining.nih.gov/career/early-career

Relevant K awards

- K99/00: Pathway to Independence Award
  - Purpose is to increase and maintain a strong cohort of new and talented, NIH-supported, independent investigators.
  - Facilitates a timely transition of outstanding postdoctoral researchers or clinician-scientists from mentored research positions to independent, tenure-track or equivalent faculty positions.
  - Provides independent NIH research support during the transition that will help these individuals launch competitive, independent research careers.

https://researchtraining.nih.gov/career/early-career

What does it mean to be an independent researcher?

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- Typically, a researcher…
  - With at least one R01 award or equivalent.
  - High impact publications.
  - Recognized in their field for their expertise.
  - Involved in mentoring early stage investigators.

Health Equity Action Network:
https://www.youtube.com/watch?v=tUGMhh_B3OA

Reflections on research funding

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- Research funding can provide…
  - A professional buffer
  - A psychological buffer
  - Opportunities for leadership
- Writing and submitting grants is an intensive, highly competitive process
- Requires patience, tenacity, collaboration, and resilience.

Is a K award right for you?

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- What role does research play in your overall career plan?
- Do you need and/or want more experience to prepare you as an independent researcher?
- What's your track record? You may be too advanced or not advanced enough.
  - Past training?
  - Preliminary data?
  - Past funding.?
  - Publications?

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General components of a K award

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- Candidate
  - Background
  - Career Goals & Objectives
  - Plan for Career Development/Training Activities
- Research Plan
  - Training in the Responsible Conduct of Research
- Mentor, Co-Mentor, Consultant, Collaborators
- Environmental/Institutional Commitment
- **All sections are equally important!**

Budget, salary, effort

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- Covers up to 75% of full-time effort
- Budget allocation
  - Salary: ~ $75K - $100K max.
  - Research and training: ~ $25K - ~50K max.

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Preparation

- Complete a grant writing workshop.
  - A workshop specific to K awards is ideal but any NIH grant workshop will be useful.
- Obtain and review successful K award proposals.
  - Ask around. Usually, colleagues are happy to share.
  - Also ask for summary statements.
- Select appropriate K mechanism and institute/center.

Preparation (cont.)

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- Identify your central research question.
  - Is it manageable given time and budget?
  - How does it extend/expand your past training and work?
  - How does it move you towards career goals?

Mentors

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- Identifying a primary mentor with…
  - Expert and active in your area of research.
  - Committed to mentoring you and supervising your work.
  - Current NIH funding.
  - Sufficient research support to cover the costs of your work not covered by the K.
  - A strong mentoring track record.
    - Past mentees who received K awards.
    - Past mentees who are independent researchers at academic institutions.

Mentors (cont.)

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- Candidates are typically encouraged to form a mentoring team that includes co-mentors.
  - Mentors not only support research but training and career development.
- Choose mentors who are accessible and engaged.

Research plan

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- Connect your proposed research to your mentor's research.
- Research strategy must be sound; reviewers won't be less critical just because it is a K.
- Make sure that your research approach (methodology) is rigorous.
  - Don't neglect sample size justification and statistical analyses.
- .

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Research plan (cont.)

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- Preliminary/pilot data will strengthen the application.
- Cite your own publications and abstracts and those of your mentor(s).
- Be mindful of the scope of work; reviewers may react negatively to a research plan perceived to be too ambitious.
- Make sure there is integration between the research plan, your career goals, and training activities.

Research plan (cont.)

- Are you proposing a clinical trial based on the NIH definition?
  - Does the study involve human participants?
  - Are the participants prospectively assigned to an intervention?
  - Is the study designed to evaluate the effect of the intervention on the participants?
  - Is the effect being evaluated a health-related biomedical or behavioral outcome?
- If the answers are all “yes” the study is a clinical trial and you will have additional administrative components to complete.

https://oir.nih.gov/sourcebook/intramural-program-oversight/intramural-data-sharing/guide-fdaaa-reporting-research-results/frequently-asked-questions-nih-clinical-trial

Candidate section

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- Candidate background.
  - Your commitment to a health-related research career.
  - Short-term and long-term career plans.
  - Accomplishments/track record
  - Your potential to become an independent researcher.

Candidate section (cont.)

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- Career goals and objectives.
  - Describe a "systematic plan."

  - Justify the need for further career development that the K would support

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Candidate section (cont.)

- Plan for career development and training activities
  - Be specific about courses, workshops, conferences, etc.
  - Create an activity timeline.
  - All activities must be relevant to career goals.

Linking career dvlpt./training activities and the research plan

- Your career development and training activities should be linked to research plan topic, methods, and procedures.
  - Ensure that the training timeline is aligned with the research timeline (e.g., training in intervention mapping should precede intervention development).
- Make sure that you are proposing to expand your base of knowledge.

Linking career dvlpt./training activities and the research plan (cont.)

- Example #1
  - Your research plan requires secondary analysis of a large data set with both individual- and area-level data.
  - Your training plan might include a courses on latent variable modeling and GIS /geospatial science as new areas of learning for you

Linking career dvlpt./training activities and the research plan (cont.)

- Example #2
  - You want to integrate more community-based participatory approaches as part of your research.
  - Your training plan might not only include didactic experiences in this area but an experiential component, such as ongoing observation of a mentor's community-engagement practices.

Linking career dvlpt./training activities and the research plan (cont.)

- Both your career plan and research plan can help you determine the mentors you need.
- Regular meetings, article review, one-on-one instruction with mentors can also be part of the career development/training plan.

Mentor statements

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- Research qualifications.
- Mentoring experience.
- Plan for candidate's career progression.
- A plan for monitoring candidate's progression via research, publications, etc.
- Each mentor must have a distinct role and a plan for co-mentoring must be presented.
  - Be specific about type of contact and frequency of contact.

Institutional environment

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- Describe the institutional environment and all resources that are relevant to the success of your proposed work.
  - Faculty.
  - Curriculum.
  - Specialized centers and programs.
  - Facilities/shared resources/cores.
- Demonstrate a strong fit between the institutional environment and your career development and research.

Institutional commitment

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- Often provided by your department chair or institutional leader who has influence over your career trajectory.
  - There can be multiple letters (e.g., from dean, center director).
- Statement needs to indicate clear institutional commitment to candidates' development as an independent researcher.
- Statement should provide assurances of …
  - Protected time.
  - Space and access to needed facilities
  - Time and support made available to mentor(s)

Create a proposal timeline

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- Determine what you need from others early in the process.
- Ask for what you need early in the process.
  - Statistical support.
  - Mentor and reference letters: Provide writers with a draft.
  - Institutional commitment letters: Provide a draft if appropriate.
- Ensure ample time for communication with funding agency, mentors, collaborators, your institution's sponsored programs office, etc.

Create a proposal timeline (cont.)

- Ensure ample time for feedback on all parts of the application from mentors.
  - Your primary mentor should be guiding you throughout this process.
  - Reviewers can often tell when a mentor has had little input; this can affect review negatively.
- Also make time to complete all administrative components (e.g, cover letter, abstract, narrative, biosketches, etc.), as well as the research record if you are proposing a clinical trial.

Talk to a program officer

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- Reach out to program officer about your proposed application early in the process.
  - It would be ideal to include the primary mentor in the meeting.
  - Get feedback on your aims.
  - Ask questions about all requirements, guidelines, policies, deadlines.

From K award to R01

- "The Impact of Individual Mentored Career Development (K) Awards on the Research Trajectories of Early-Career Scientists" (2019)
  - K awards predicted a 24% increased likelihood of subsequent first R01 or RPG.
  - For those researchers who did receive a first R01 or RPG, the time from K application to R01/RPG receipt was about 1 year longer among K award recipients.
  - However, the time delay largely disappeared for those who went on to receipt of a second R01/RPG.

https://journals.lww.com/academicmedicine/fulltext/2019/05000/the_impact_of_individual_mentored_career.43.aspx

K funding rates by race-ethnicity FY 2010-FY 2022

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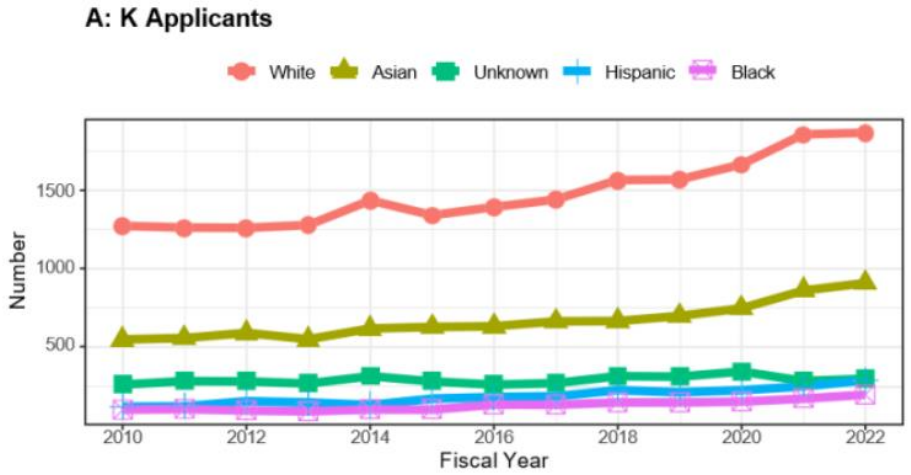

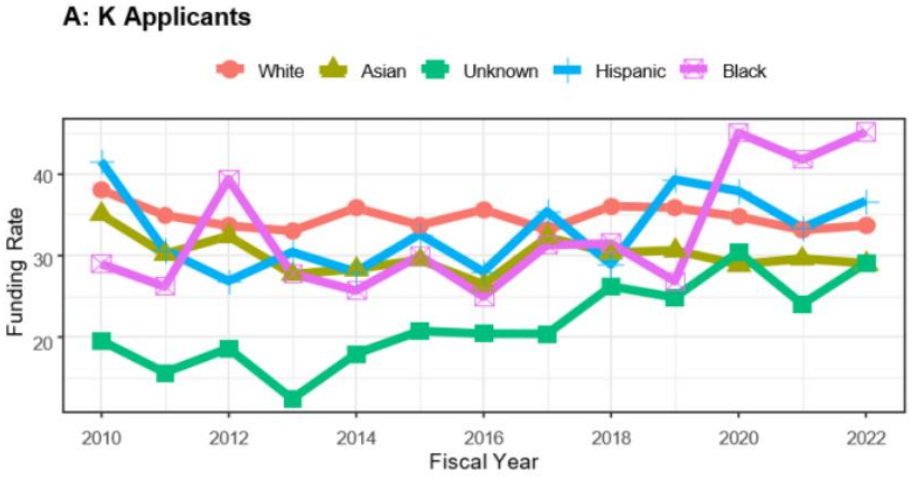

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https://nexus.od.nih.gov/all/2023/03/16/mentored-career-development-application-k-funding-rates-by-race-ethnicity-fy-2010-fy-2022/

Administrative supplements

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- Research Supplements to Promote Diversity in Health-Related Research.
  - Administrative supplements to currently active NIH research grants ("parent grant") to enhance the diversity of the research workforce.
  - Different career levels, ranging from high school to ESI.
  - Technically, the PI of the supplement is the PI of the parent grant, not the candidate.
    - You must have the support and advocacy of the parent grant PI!

https://researchtraining.nih.gov/career/early-career

Administrative supplements

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- Research Supplements to Promote Diversity in Health-Related Research (cont.)
  - Diversity is broad. See "Notice of NIH's Interest in Diversity."
    - Racial/ethnic.
    - Disability.
    - Disadvantaged backgrounds, two or more criteria (e.g., were homeless, in foster care system, have no parents who completed a Bachelor's degree, were eligible for reduced, lunch, etc.)
  - Most announcements recognize that underrepresentation can vary from setting to setting. Your institution can make the case.

https://grants.nih.gov/grants/guide/notice-files/NOT-OD-20-031.html

Administrative supplements

- Research Supplements to Promote Diversity in Health-Related Research (cont.)
  - Project duration is shorter than K (1-2 years).
  - Application is shorter than K but components are similar.
    - Approach as you would a K award.
  - You do not have to be at the same institution as the PI of the parent grant.
  - Your proposal must be within the scope of work as the parent grant and enhance it.

Administrative supplements

- Research Supplements to Promote Diversity in Health-Related Research (cont.)
  - Supplements are not peer-reviewed but reviewed by internal NIH staff.
  - Important to talk with the program officer of the parent grant as well as the leaders of the diversity supplement program at the parent grant's funding institute/center.