Why a Career Development Award?

- To provide protected time for individuals to further develop their research expertise
- Because the odds of funding are higher
- About 75-80 at OHSU; 25 awarded last year
- K awards most common but don’t forget VA CDA, NSF, AHA, ACS
Learn about NIH IC priorities and goals
Identify the grant programs offered by each IC. Institutes are not harmonized.
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
Common Features of K awards

- 75% protected time for research
- Other 25% for clinical, teaching, admin
- Must have faculty appointment with exceptions
- US Citizen or non-citizen US nationals (except K99)
- Must have mentor team
- 3 to 5 years duration
- Most commonly $100K salary and $25K research funds annually but this varies by program, IC
- Career development plus research goals
- Cannot have had NIH RPG except R03, R21
Common Features: Appointment & Effort

• **Appointment:**
  - For K eligibility purposes, individual must have a **full-time** appointment at applicant organization at the time of application

• **Level of Effort:**
  - Mentored awards require full-time effort (defined as at least 9 person months (i.e. 75%) on research and the rest on other career development related activities)
  - Note, some K programs permit 50% effort for clinical specialties
Mentored K Awards

- **K01**: Mentored Research Scientist Development Award
- **K07**: Cancer Prevention, Control, Behavioral Sciences, and Population Sciences Career Development Award
- **K08**: Mentored Clinical Scientist Development Award for Laboratory Research
- **K22**: Research Career Award for Transition to Independence
- **K23**: Mentored Patient-Oriented Research Development Award
- **K25**: Mentored Quantitative Research Development Award
- **K99/R00**: NIH Pathway to Independence Award
- **K12**: *Institutional* Mentored Research Scientist Development Program
Three sites to know

https://report.nih.gov/success_rates/
Go here to find success rates for every type of K award submitted (or any other grant) by institute by year

https://projectreporter.nih.gov/
Go here to browse through all funded federal awards by type, location, scientific focus, etc.

https://researchtraining.nih.gov/programs/career-development
Go here to see an app that may help you determine which K award to apply for
Research Career Development Awards Number of entry-level awards
K01- Mentored Research Scientist Development Award

- Support for intensive, supervised career development in biomedical, behavioral, or clinical sciences leading to research independence.
- 75% FT effort, usually fixed salary
- Define the need for 3-5 years of additional supervised research, can be in *new area for applicant or one that substantially adds to research capability* of applicant
- Ideal candidate varies by institute
- Specific focus, under-represented in research, disabled, disadvantaged background, interruption of research career
| NICHD | 1. Medical rehabilitation  
2. Child abuse and neglect  
3. Population research, demography  
4. Change in discipline | $75K, $25K res |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NIDDK</td>
<td>2 to 7 years postdoc req</td>
<td>$90K, $25 res</td>
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<tr>
<td>NHLBI</td>
<td>Diversity, disadvantaged, or disability OR epidemiology, biostats, outcomes, implementation</td>
<td>$75K, $30K res</td>
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<tr>
<td>NHGRI</td>
<td>Ethical and social issues in genome science, some genome science res</td>
<td>No $ limit for salary, $40K res</td>
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<tr>
<td>NIA</td>
<td>Parent FOA</td>
<td>$75K, $20K res</td>
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<tr>
<td>NIAMS</td>
<td>Parent FOA</td>
<td>$75K, $25K res</td>
</tr>
<tr>
<td>NIDA</td>
<td>Parent FOA</td>
<td>$90K, $50K res</td>
</tr>
<tr>
<td>NIMH</td>
<td>&lt;6 yrs postdoc, 4 years support only</td>
<td>$90K, $50K res</td>
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Success Rate of K01 Awards

- Reviewed
- Awarded
- Success Rate

Fiscal Year

Applications and Awards

Success Rate
<table>
<thead>
<tr>
<th>Year</th>
<th>Action</th>
<th>Component</th>
<th>Final Number</th>
<th>Initial Number</th>
<th>Percentage</th>
<th>Total</th>
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<tbody>
<tr>
<td>2017</td>
<td>K01</td>
<td>NCI</td>
<td>3,208</td>
<td>998</td>
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<td>$172,826,147</td>
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<td>K01</td>
<td>NHLBI</td>
<td>22</td>
<td>7</td>
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<td>$984,001</td>
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<tr>
<td>2017</td>
<td>K01</td>
<td>NIDCR</td>
<td>63</td>
<td>22</td>
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<td>K01</td>
<td>NIDDDK</td>
<td>111</td>
<td>32</td>
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<td>$4,318,658</td>
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<tr>
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<td>K01</td>
<td>NINDS</td>
<td>15</td>
<td>6</td>
<td>40.0%</td>
<td>$1,288,578</td>
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<tr>
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<td>K01</td>
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<td>4</td>
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<td>26</td>
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<td>K01</td>
<td>NIDCD</td>
<td>15</td>
<td>6</td>
<td>40.0%</td>
<td>$1,288,578</td>
</tr>
<tr>
<td>2017</td>
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<td>NIAAA</td>
<td>65</td>
<td>29</td>
<td>40.0%</td>
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<tr>
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<td>NINR</td>
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<td>4</td>
<td>44.4%</td>
<td>$356,328</td>
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<tr>
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<td>K01</td>
<td>NHGRI</td>
<td>3</td>
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<td>0.0%</td>
<td>$0</td>
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<tr>
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<td>K01</td>
<td>NIBIB</td>
<td>7</td>
<td>2</td>
<td>50.0%</td>
<td>$335,329</td>
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<tr>
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<td>NLM</td>
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<td>OD Common Fund</td>
<td>3</td>
<td>3</td>
<td>100.0%</td>
<td>$500,967</td>
</tr>
<tr>
<td>2017</td>
<td>K01</td>
<td>OD ORIP-SEPA†</td>
<td>13</td>
<td>5</td>
<td>38.5%</td>
<td>$1,326,371</td>
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<tr>
<td>2017</td>
<td>K01</td>
<td>Activity Total</td>
<td>645</td>
<td>203</td>
<td>31.5%</td>
<td>$30,292,372</td>
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</table>
Eligibility:
- Intramural or extramural postdocs with 1-4 years of experience
- US Citizens and non-US Citizens
- Cannot have held a faculty position
- No more than 4 years of postdoc research training when submitted
- Cannot have been PI on R01, P01, etc (except R03, R21)

Mentored Phase (K99): 2 yrs or less
- Costs: Salary $50,000 + Fringe + $20,000 Research Expenses
- Total Costs < $90,000 /yr
- 0.75 FTE, Time to complete research, publish results

Independent Investigator Phase (R00): 3 yrs or less
- Costs: Salary + Fringe + $50,000 Research Expenses
- Total Costs < $249,000 /yr
NIH Pathway to Independence (PI) Award
K99 / R00

- Phase 1, 1-2 years of mentored support
- Phase 2, 3 years of independent support
- Phase 2 contingent on securing independent research position, evaluation of research plan, positive career development
- Initial application must have proposal for research project as independent investigator in Phase 2
• Clinical degree or equivalent.
• Must have completed clinical training, including specialty/subspecialty training, prior to receipt
• Must be willing to spend minimum of 75% FT professional effort on research career development and clinical research.
• Must be citizen, noncitizen national, or permanent resident (no temp or student visas)
• No prior R01, R29, SBIR, P01 or P50 subproject, K08 or equivalent. R03 or R21 OK.
• Goal is to support development of outstanding clinician research scientist
• This is the equivalent of K23
• Limited to clinicians (MD/DO, clinical PhD, others with terminal doctorate, clinical license)
• 75% FT, $25K for research
• Prospective candidate should propose study, research training for all years consonant with previous training and needs
K25- Mentored Quantitative Research Development Award

- For statisticians, chemists, engineers, physicists, computer scientists
- May be faculty-level scientists with little training in biology, medicine
- Must be willing to spend minimum of 75% FT professional effort on research career development and clinical research.
- Must be citizen, noncitizen national, or permanent resident (no temp or student visas)
- 3-5 years of study, seminars, observation, mentored research
- NHLBI, NIA, NIAA, NIAID, NIGMS, NIDA, NIEHS, NIDCD, NIDDK, NICHD
Reduced time to R01? Sadly, no

Gender equity. Yes, differentiated by application rates

Increased odds of subsequent NIH funding? Yes (~45% for K01, K23, K08)

Publication? Yes, K awardees have more pubs than non-awardees at same stage

More involved in the scientific community? Yes, K awardees are highly engaged in scientific enterprise.
• **K07 Academic Career Development Award.**
  May be curriculum development, development of teacher scientist. Also related to research ethics. NIA only.

• **K22 Career Transition Award.**
  Often intramural, but includes NIAID, NCI. Usually 2-3 years.

• **K76 Paul Beeson Emerging Leaders Career Development Award in Aging**
  Like a K23 but better!

• **R50 NCI Research Specialist.**
  Support to non-PI; stable research specialist, essential to lab operation such as core director, data scientist.
• Scholars selected by institution, program leadership
• Awards 2, 3, or 5 years of research training
• Could be considered a pre-K award
• Otherwise, fairly typical compared to individual K awards
• What follows a K12? Usually another K award (K01, K23, K08) but could be RPG
• Irregular application cycles. Watch blogs or talk with program directors or OCTRI
K12 awards at OHSU

- OCTRI KL2
- BIRCH WH K12 (Building interdisciplinary research careers in women’s health)
- Learning health systems K12 (New!)
- Emergency medicine K12
- Women’s reproductive health research K12
- Ophthalmology K12
Other CDA to consider

• VA CDA1 and CDA2
  o Somewhat more generous research costs
  o Helps one to get established within VA

• NSF
  o Faculty Early Career Development Program (CAREER)
  o Must be Asst Prof
  o No citizenship requirements
  o Minimum $400K over 5 years; $500K for biology, engineering, or polar research
Foundations, professional organizations

**American Heart Association**
- Up to Asst Professor (inclusive)
- <4 years since doctoral degree
- Can submit as a postdoc
- Citizenship includes many different visas

**American Cancer Society**
- Phasing out research scholar grants, now emphasizing clinical scientist development

**American Diabetes Association**
- Junior Faculty Development
- $138K total, $75K PI salary
- Up to Assistant Professor (inclusive)
- <10 years after terminal degree
Medical Research Foundation of Oregon
• These are often the first grants for new faculty
• Funding begets funding…..

New Investigator Awards
• $40K, can include some salary
• Should be at the beginning of an independent career

Early Career Investigator
• $20K, can include some salary
• Postdoc or clinical fellows are eligible
• Must be clinical or translational research
Early Stage Investigator

• This is for RPGs and not K awards
• NIH gives a score bonus on payline for early stage investigators who qualify
• Must have received the terminal research degree or have finished postdoc clinical training within 10 years
• Not every IC uses this policy

Steven Katz Early Stage Investigator Award (NEW!)

Loan Repayment Program (LRP)
General Tips for Writing a Mentored K Award

- 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.
Mentored K Awards: Review

• Overall Impact Score
• Scored Review Criteria
  o Candidate
  o Career Development Plan
  o Research Plan
  o Mentor(s), Consultant(s), and Collaborator(s)
  o Environment and Institutional Commitment to the Candidate
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.
- Personal narrative of your professional career.
- 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.
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).

This must be compelling
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?
Career Development Plan

- Start with career goals and objectives

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

Each member of your “team” must play a role in your training or research plan. Introduce each with a short paragraph.

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
The letter from the primary mentor is very important. 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.
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.
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.

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.

Do NOT include a comment that “If funded, then the applicant will be appointed to faculty…. ” No contingencies.
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 (full-time faculty position, assistant professor) during the review period or at the very least, K award period.
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
Talk with a program officer
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
Don’t forget about OCTRI! We can help.
Design Studio? Optimally 2-3 mos ahead of time