Why a Career Development Award?

- To provide protected time for individuals to further develop their research expertise
- Because the odds of funding are higher than with an R01
- 78 awarded at OHSU since 2017
- K awards most common but don’t forget VA CDA, NSF, AHA, ACS
Early Career Advice

- 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
Two equal components

- The science
- Career development plan

- They are equal in importance
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
• Cannot have had NIH RPG except R03, R21
• **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
• 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
## K01s vary by IC

<table>
<thead>
<tr>
<th>IC</th>
<th>Details</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCI</td>
<td>2 to 5 years postdoc, diversity, disadv, disability</td>
<td>$100K, $25K res</td>
</tr>
<tr>
<td>NIDDK</td>
<td>2 to 4 years postdoc req</td>
<td>$90K, $25 res</td>
</tr>
<tr>
<td>NHLBI</td>
<td>Diversity, disadvantaged, or disability OR epidemiology, biostats, outcomes, implementation</td>
<td>$100K, $30K res</td>
</tr>
<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>
</tr>
<tr>
<td>NIA</td>
<td>Parent FOA</td>
<td>$90K, $25K res</td>
</tr>
<tr>
<td>NIAMS</td>
<td>Parent FOA</td>
<td>$75K, $20K res</td>
</tr>
</tbody>
</table>
| NICHD       | 1. Medical rehabilitation  
2. Child abuse and neglect  
3. Population research, demography | $75K, $25K res |
| NIDA        | Parent FOA                                                              | $90K, $50K res |
| NIMH        | <6 yrs postdoc, 4 years support only                                    | $90K, $50K res |
# K01 success rates 2020

<table>
<thead>
<tr>
<th></th>
<th>Applications</th>
<th>Successful</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCI</td>
<td>15</td>
<td>8</td>
<td>53%</td>
</tr>
<tr>
<td>NHLBI</td>
<td>90</td>
<td>32</td>
<td>36%</td>
</tr>
<tr>
<td>NIDDK</td>
<td>119</td>
<td>39</td>
<td>33%</td>
</tr>
<tr>
<td>NIAID</td>
<td>21</td>
<td>9</td>
<td>43%</td>
</tr>
<tr>
<td>NCCIH</td>
<td>10</td>
<td>3</td>
<td>30%</td>
</tr>
<tr>
<td>NIMHD</td>
<td>36</td>
<td>15</td>
<td>42%</td>
</tr>
<tr>
<td>NINDS</td>
<td>17</td>
<td>5</td>
<td>29%</td>
</tr>
<tr>
<td>NIA</td>
<td>92</td>
<td>22</td>
<td>29%</td>
</tr>
<tr>
<td>NIAMS</td>
<td>32</td>
<td>8</td>
<td>25%</td>
</tr>
<tr>
<td>NICHD</td>
<td>8</td>
<td>3</td>
<td>37%</td>
</tr>
<tr>
<td>NIMH</td>
<td>75</td>
<td>29</td>
<td>39%</td>
</tr>
<tr>
<td>NIDA</td>
<td>75</td>
<td>22</td>
<td>29%</td>
</tr>
</tbody>
</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
• 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
K99/R00 continues

- Transition from K99 to R00 is NOT automatic
- Contingent on securing an appointment as assistant professor, tenure track
- Only 30% of salary from R00
- NIH PO approves faculty position
- Expected to apply for R01 during R00 phase
• Goal is to support development of outstanding clinician research scientist
• Similar to 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
## K08 success rates 2020

<table>
<thead>
<tr>
<th>Institution</th>
<th>Applications</th>
<th>Successful</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCI</td>
<td>172</td>
<td>65</td>
<td>36%</td>
</tr>
<tr>
<td>NHLBI</td>
<td>92</td>
<td>45</td>
<td>49%</td>
</tr>
<tr>
<td>NIDDK</td>
<td>66</td>
<td>28</td>
<td>42%</td>
</tr>
<tr>
<td>NIAID</td>
<td>41</td>
<td>19</td>
<td>46%</td>
</tr>
<tr>
<td>NCCIH</td>
<td>2</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>NIMHD</td>
<td>2</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>NINDS</td>
<td>59</td>
<td>18</td>
<td>31%</td>
</tr>
<tr>
<td>NIA</td>
<td>54</td>
<td>22</td>
<td>41%</td>
</tr>
<tr>
<td>NIAMS</td>
<td>20</td>
<td>6</td>
<td>30%</td>
</tr>
<tr>
<td>NICHD</td>
<td>2</td>
<td>1</td>
<td>50%</td>
</tr>
<tr>
<td>NIMH</td>
<td>15</td>
<td>8</td>
<td>53%</td>
</tr>
<tr>
<td>NIDA</td>
<td>9</td>
<td>4</td>
<td>44%</td>
</tr>
</tbody>
</table>
• 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.
## K23 success rates 2020

<table>
<thead>
<tr>
<th>Agency</th>
<th>Applications</th>
<th>Successful</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCI</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>NHLBI</td>
<td>175</td>
<td>75</td>
<td>43%</td>
</tr>
<tr>
<td>NIDDK</td>
<td>83</td>
<td>39</td>
<td>47%</td>
</tr>
<tr>
<td>NIAID</td>
<td>36</td>
<td>8</td>
<td>22%</td>
</tr>
<tr>
<td>NCCIH</td>
<td>16</td>
<td>7</td>
<td>44%</td>
</tr>
<tr>
<td>NIMHD</td>
<td>17</td>
<td>7</td>
<td>41%</td>
</tr>
<tr>
<td>NINDS</td>
<td>68</td>
<td>15</td>
<td>22%</td>
</tr>
<tr>
<td>NIA</td>
<td>16</td>
<td>8</td>
<td>50%</td>
</tr>
<tr>
<td>NIAMS</td>
<td>30</td>
<td>9</td>
<td>30%</td>
</tr>
<tr>
<td>NICHD</td>
<td>7</td>
<td>5</td>
<td>71%</td>
</tr>
<tr>
<td>NIMH</td>
<td>107</td>
<td>40</td>
<td>37%</td>
</tr>
<tr>
<td>NIDA</td>
<td>50</td>
<td>13</td>
<td>26%</td>
</tr>
</tbody>
</table>
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
Other K awards

• 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.
Institutional K12

- 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
- BIRCWH K12 (Building interdisciplinary research careers in women’s health)
- Learning health systems K12 (with KP)
- Emergency medicine K12
- Women’s reproductive health research K12
- Ophthalmology K12
What has been achieved?

- 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.
## K to R at OHSU

<table>
<thead>
<tr>
<th></th>
<th>Advance to NIH RPG or equivalent</th>
<th>Advance to NIH R01 or equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall (2009-20)</td>
<td>101/129 (78%)</td>
<td>84/129 (65%)</td>
</tr>
<tr>
<td>K01</td>
<td>13/16 (81%)</td>
<td>10/16 (62%)</td>
</tr>
<tr>
<td>K08</td>
<td>24/29 (83%)</td>
<td>18/29 (62%)</td>
</tr>
<tr>
<td>K23</td>
<td>29/39 (74%)</td>
<td>25/39 (64%)</td>
</tr>
<tr>
<td>K25</td>
<td>3/3 (100%)</td>
<td>2/3 (67%)</td>
</tr>
<tr>
<td>VA CDA</td>
<td>25/31 (81%)</td>
<td>24/31 (77%)</td>
</tr>
<tr>
<td>Foundation CDA</td>
<td>7/11 (64%)</td>
<td>5/11 (45%)</td>
</tr>
</tbody>
</table>
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
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
Do you need some pilot or feasibility data to apply?

- Technically no.
- Practically yes.

- Funding begets funding. It demonstrates your research interest to reviewers
- It allows reviewers to see that others see you as fundable, never a small matter
Medical Research Foundation of Oregon

- These are often the first grants for new faculty
- Funding begets funding.....

New Investigator Awards

- $50K, can include some salary
- Should be at the beginning of an independent career

Early Career Investigator

- $30K, can include some salary
- Postdoc or clinical fellows are eligible
- Must be clinical or translational research
Collins Memorial Trust

- $30K awards given 3 times a year
- Seed funding for projects that will be eligible for larger funding, like NIH
- Early investigators must have mentor
Plan Your Next Steps

• Commit to a date and application cycle.
• Identify the funding mechanism and IC
• Confirm a research question and start to formulate specific aims
• Talk with potential mentors and identify at least one person who will support you throughout grant writing. Your team is larger.
• Consult the grant library
• Have a strong draft of aims
• Contact the appropriate PO
• Listen carefully to advice and follow through
• Have strong draft by 2 mos prior to due date
• Share with others
• Design Studio
K awards Part 2

October 13   12-1 pm   Wednesday

Look for an invitation