Why a Career Development Award?

• To provide protected time for individuals to further develop their research expertise

• The odds of funding are higher than with an R01

• ~20 awarded annually at OHSU

• K awards most common but don’t forget VA CDA, NSF, AHA, ACS
There are two components that are equal in weight

- The science
- Career development plan
Common Features of K awards

- 75% protected time for research
- Other 25% for clinical, teaching, admin, research
- 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
Common Features: Appointment & Effort

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

• **Level of Effort:**
  o 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)
  o Note, some K programs permit 50% effort for clinical specialties
How to start

- Learn about NIH IC priorities and goals
- Identify the grant programs offered by each IC. Institutes are not harmonized.
- 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
Mentored K Awards

- K01: Mentored Research Scientist Development Award
- K08: Mentored Clinical Scientist Development Award
- 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

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
<table>
<thead>
<tr>
<th>IC</th>
<th>Requirements</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCI</td>
<td>2 to 5 years postdoc, diversity, disadv, disability</td>
<td>$100K, $50K res</td>
</tr>
<tr>
<td>NIDDK</td>
<td>2 to 7 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 research</td>
<td>No $ limit for salary, $40K res</td>
</tr>
<tr>
<td>NIA</td>
<td>Parent FOA</td>
<td>$75K, $20K 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 2023

<table>
<thead>
<tr>
<th>Institution</th>
<th>Applications</th>
<th>Successful</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCI</td>
<td>19</td>
<td>7</td>
<td>37%</td>
</tr>
<tr>
<td>NHLBI</td>
<td>105</td>
<td>37</td>
<td>35%</td>
</tr>
<tr>
<td>NIDDK</td>
<td>100</td>
<td>32</td>
<td>32%</td>
</tr>
<tr>
<td>NIAID</td>
<td>24</td>
<td>10</td>
<td>42%</td>
</tr>
<tr>
<td>NCCIH</td>
<td>12</td>
<td>4</td>
<td>33%</td>
</tr>
<tr>
<td>NIMHD</td>
<td>25</td>
<td>11</td>
<td>44%</td>
</tr>
<tr>
<td>NINDS</td>
<td>10</td>
<td>3</td>
<td>30%</td>
</tr>
<tr>
<td>NIA</td>
<td>84</td>
<td>46</td>
<td>55%</td>
</tr>
<tr>
<td>NIAMS</td>
<td>26</td>
<td>9</td>
<td>35%</td>
</tr>
<tr>
<td>NICHD</td>
<td>23</td>
<td>9</td>
<td>39%</td>
</tr>
<tr>
<td>NIMH</td>
<td>68</td>
<td>26</td>
<td>38%</td>
</tr>
<tr>
<td>NIDA</td>
<td>55</td>
<td>26</td>
<td>47%</td>
</tr>
</tbody>
</table>
NIH Pathway to Independence (PI) Award: K99 / R00

- **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 $75,000 + Fringe + $20,000 Research Expenses
  - Total Costs cap
  - 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 to $50K for research

Prospective candidate should propose study, research training for all years consonant with previous training and needs
## K08 success rates 2023

<table>
<thead>
<tr>
<th></th>
<th>Applications</th>
<th>Successful</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCI</td>
<td>210</td>
<td>53</td>
<td>25%</td>
</tr>
<tr>
<td>NHLBI</td>
<td>96</td>
<td>36</td>
<td>38%</td>
</tr>
<tr>
<td>NIDDK</td>
<td>59</td>
<td>22</td>
<td>37%</td>
</tr>
<tr>
<td>NIAID</td>
<td>43</td>
<td>10</td>
<td>23%</td>
</tr>
<tr>
<td>NCCIH</td>
<td>1</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>NIMHD</td>
<td>2</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>NINDS</td>
<td>46</td>
<td>14</td>
<td>30%</td>
</tr>
<tr>
<td>NIA</td>
<td>11</td>
<td>4</td>
<td>36%</td>
</tr>
<tr>
<td>NIAMS</td>
<td>19</td>
<td>7</td>
<td>37%</td>
</tr>
<tr>
<td>NICHD</td>
<td>12</td>
<td>5</td>
<td>42%</td>
</tr>
<tr>
<td>NIMH</td>
<td>15</td>
<td>5</td>
<td>33%</td>
</tr>
<tr>
<td>NIDA</td>
<td>9</td>
<td>3</td>
<td>33%</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 2023

<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>135</td>
<td>51</td>
<td>38%</td>
</tr>
<tr>
<td>NIDDK</td>
<td>76</td>
<td>37</td>
<td>49%</td>
</tr>
<tr>
<td>NIAID</td>
<td>33</td>
<td>9</td>
<td>27%</td>
</tr>
<tr>
<td>NCCIH</td>
<td>14</td>
<td>5</td>
<td>36%</td>
</tr>
<tr>
<td>NIMHD</td>
<td>16</td>
<td>10</td>
<td>62%</td>
</tr>
<tr>
<td>NINDS</td>
<td>53</td>
<td>11</td>
<td>21%</td>
</tr>
<tr>
<td>NIA</td>
<td>65</td>
<td>24</td>
<td>37%</td>
</tr>
<tr>
<td>NIAMS</td>
<td>34</td>
<td>16</td>
<td>47%</td>
</tr>
<tr>
<td>NICHD</td>
<td>65</td>
<td>24</td>
<td>37%</td>
</tr>
<tr>
<td>NIMH</td>
<td>112</td>
<td>29</td>
<td>26%</td>
</tr>
<tr>
<td>NIDA</td>
<td>53</td>
<td>18</td>
<td>34%</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
• CDC, PCORI and AHRQ have K awards

• **K07 Academic Career Development Award.**
May be curriculum development, development of teacher scientist. Also related to research ethics.

• **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
- BIRCWH K12 (Building interdisciplinary research careers in women’s health)
- Learning health systems K12 (with KP)
- Emergency care research 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.
<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
  - Somewhat more generous research costs
  - Helps one to get established within VA

• NSF
  - Faculty Early Career Development Program (CAREER)
  - Must be Asst Prof
  - No citizenship requirements
  - 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
• $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