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

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K Award Structure

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:**
  - For K eligibility purposes, individual must have a <u>full-time</u> 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

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

https://report.nih.gov/funding/nih-budget-and-spending-data-past-fiscal-years/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

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**

K01s vary by IC

NCI	2 to 5 years postdoc, diversity, disadv, disability	$100K, $50K res
NIDDK	2 to 7 years postdoc req	$90K, $25 res
NHLBI	Diversity, disadvantaged, or disability OR epidemiology, biostats, outcomes, implementation	$100K, $30K res
NHGRI	Ethical and social issues in genome science, some genome science research	No $ limit for salary, $40K res
NIA	Parent FOA	$75K, $20K res
NIAMS	Parent FOA	$75K, $20K res
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

	Applications	Successful	Percent
NCI	19	7	37%
NHLBI	105	37	35%
NIDDK	100	32	32%
NIAID	24	10	42%
NCCIH	12	4	33%
NIMHD	25	11	44%
NINDS	10	3	30%
NIA	84	46	55%
NIAMS	26	9	35%
NICHD	23	9	39%
NIMH	68	26	38%
NIDA	55	26	47%

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

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**

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**

K08-Mentored Clinical Scientist Development Award

- **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

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

K23 - Mentored Patient-Oriented Research Career

- **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

	Applications	Successful	Percent
NCI	-	-	-
NHLBI	135	51	38%
NIDDK	76	37	49%
NIAID	33	9	27%
NCCIH	14	5	36%
NIMHD	16	10	62%
NINDS	53	11	21%
NIA	65	24	37%
NIAMS	34	16	47%
NICHD	65	24	37%
NIMH	112	29	26%
NIDA	53	18	34%

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

- **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**.**

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 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.**

K to R at OHSU

	Advance to NIH RPG or equivalent	Advance to NIH R01 or equivalent
Overall (2009-20)	101/129 (78%)	84/129 (65%)
K01	13/16 (81%)	10/16 (62%)
K08	24/29 (83%)	18/29 (62%)
K23	29/39 (74%)	25/39 (64%)
K25	3/3 (100%)	2/3 (67%)
VA CDA	25/31 (81%)	24/31 (77%)
Foundation CDA	7/11 (64%)	5/11 (45%)

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)
- $\leq$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)
- $\leq$10 years after terminal degree

Local Foundations

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

Local Foundations

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**