Funding Opportunities for Early Stage Investigators

NCURA Region II
May 2011

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The NIH mission is to seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce the burdens of illness and disability.

- World’s largest source of funding for biomedical research
- Support more than 300,000 research personnel at over 3,000 universities and research institutions
- 27 Institutes and Centers (ICs) with specific research agendas
R01: The Gold Standard

The R01 Research Project Grant is the original and historically oldest grant mechanism used by NIH.

The R01 provides support for health-related research and development based on the mission of the NIH.

R01s can be investigator-initiated or in response to a Funding Opportunity Announcement (FOA).

The R01 is a grant award made to support a discrete, specified, circumscribed project to be performed by the named investigator(s) in an area representing the investigator's specific interest and competencies, based on the mission of the NIH.

The NIH awards R01 grants to organizations of all types. Although the Project Director/Principal Investigator writes the grant application and is responsible for conducting the research, the applicant is the research organization.
Who is a New Investigator?

A Program Director or Principal Investigator (PD/PI) is considered a New Investigator if he/she has not previously competed successfully as a PD/PI for a significant independent NIH research grant.
Significant independent NIH research grant: Any NIH research project grant other than the following small or early stage research grants:

- Pathway to Independence Award-Research Phase (R00)
- Dissertation Award (R36)
- Small Grant (R03)
- Academic Research Enhancement Award (R15)
- Exploratory/Developmental Grant (R21)
- Research Education Grants (R25, R90, RL9, RL5)
- Clinical Trial Planning Grant (R34)
- Small Business Technology Transfer Grant-Phase I (R41)
- Small Business Innovation Research Grant-Phase I (R43)
- Shannon Award (R55)
- NIH High Priority, Short-Term Project Award (R56)
- Competitive Research Pilot Projects (SC2, SC3)

Also, the PD/PI is not excluded from consideration as a New Investigator if he/she has been the PD/PI of, or received, any of the following awards:

- **Training-Related and Mentored Career Awards**
  - All Fellowships (F awards)
  - All individual and institutional career awards (Ks)
  - Loan repayment contracts (L30, L32, L40, L50, L60)
  - All training grants (T32, T34, T35, T90, D43)

- **Instrumentation, Construction, Education, Health Disparity Endowment Grants, or Meeting Award**
  - G07, G08, G11, G13, G20 S10, S15, S21, S22 R13

**Multiple PD/PI Applications:** all PD/PIs must meet the definition of New Investigator for the application to be a New Investigator application (“yes” to the checkbox)
NIH New Investigators

NIH First Time R01-Equivalent Awardees
FY 1985-2008

Number of Awardees

Fiscal Year

FY 2006
New Investigator Goals

• Goals based on rolling average for previous 5 years
• Numeric Goal for FY 2007 and 2008
• For 2009 and 2010 ICs directed to maintain comparable success rates for:
  • Established Investigators submitting new (Type 1) grant applications and New Investigators
• And, a majority of New Investigators will be Early Stage Investigators (ESIs)
Early Stage Investigators

ESI category designed to accelerate the early transition of new scientists to research independence by receiving their first R01 earlier.

Definition: An individual who is classified as a New or First-Time investigator and is within 10 years of completing his/her terminal research degree or is within 10 years of completing medical residency (or the equivalent).

NOT-OD-08-121
Implementation of ESI Definition

PD/PIs update their personal profile in the eRA Commons in order to be considered for the ESI classification. Investigators who enter degree and residency completion dates will be notified of their ESI status by email.

Process in place for requesting an extension of the period of ESI eligibility to accommodate individuals with medical concerns, disability, pressing family care responsibilities, or active duty military service (apply through eRA Commons).

NOT-OD-09-034
Applications from ESIs and New Investigators are identified to reviewers for appropriate consideration of career stage during review.

Applications from ESIs and New Investigators are clustered to enable evaluation as a group and distinguish from established investigators.

A multiple PI application is identified for consideration of ESI/NI status only if all of the listed PIs qualify as New Investigators.

NIH staff are apprised of ESI and New Investigator status and this factor is considered when applications are selected for award.

New Investigators are eligible for submissions that shorten the review cycle for R01 applications reviewed in Center for Scientific Review (CSR) recurring Study Sections (NOT-OD-07-083).
NIH Exceeds New Investigator Goals since FY 2007

NIH First Time R01-Equivalent Awardees
FY 1985-2008

- Used the rolling average of the previous 5 years
- Used equalized success rates between new and established

R01-Equivalent awards include R01, R23, R29, and R37 grants.
New and Experienced Investigators on R01 Equivalent Grants and New Investigators as a Percentage of All Competing R01 Awardees
(FY 1962 - 2010)
R01-Equivalent grants, New (Type 1)
Success rates, by career stage of investigator
Age at First R01 Equivalent Award from NIH
FY 1980 to 2010

Fiscal Year

Age at First R01 Award

- MD-PhD
- MD Only
- PhD Only

Funding Opportunities for Early Career Scientists

• Director’s New Innovator Award
• Early Independence Award
• Pathway to Independence Award
• NRSA Individual Fellowship Awards
• Career Development Awards
Seeking exceptionally creative early stage investigators proposing bold, risky ideas

Flexibility in pursuing research objectives

Generous funding: up to $1.5M in direct costs for up to 5 years

10 page essay required in lieu of Research Strategy

Approx. 33 awards to be issued in FY11

DP2 PA: RFA-RM-10-009
**Director’s Early Independence Award (EIA)**

“For the most creative of young scientists, nothing can equal the chance to have a lab of one's own.”  
Dr. Francis Collins

- Allows exceptional young investigators to skip the post-doc phase
- Inspired by programs at Carnegie, Whitehead, UCSF, and other institutions showing that exceptional individuals do not require a post-doc phase to undertake pioneering research
- Soliciting and incorporating input from research community
- Current year is a pilot (~10 awards) to test ideas and process, but may be scaled up in subsequent years
**Director’s Early Independence Award (EIA)**

New PhD or MD locates an institution willing to host

- Must be within 12 months before or after graduation
- Must demonstrate exceptional creativity, maturity, management skills
- Research relevant to NIH mission
- Strong letters of recommendation

Institution may actively recruit eligible EIA candidates

- Institution ensures independent lab space/supplies/staff space/staff/equipment
- Appointment up to 5 years
- Protected research time for development as researcher
- Proposed research complements and enhances institution’s programs
- Institution may choose to retain candidate
Pathway to Independence Award
K99/R00

• Facilitates timely transition from mentored postdoc research position to a stable independent research position

• Long term goal to increase and maintain strong cohort of new and talented independent investigators

• Up to 5 years of support in two phases:
  • Initial phase (K99): 1-2 years of mentored support for highly promising, postdoctoral research scientists.
  • 2nd Phase (R00): Up to 3 years of independent support contingent on securing an independent research position.

• No citizenship requirement
• 150-200 competing awards issued each FY
• Current PA-11-197
NRSA Individual Fellowships and Career Development Awards
Approx. Stage of Research Training/Career

- **Pre-Bac**
  - Pre-Bac Institutional Training Grant (T34)

- **Graduate/Medical Student**
  - Predoctoral Institutional Training Grant (T32)
  - Predoctoral Individual NRSA (F31)
  - Predoctoral Individual MD/PhD NRSA (F30)

- **Post Doctoral**
  - Postdoctoral Institutional Training Grant (T32)
  - Postdoctoral Individual NRSA (F32)
  - NIH Pathway to Independence (PI) Award (K99/R00)
  - Mentored Research Scientist Development Award (K01)
  - Mentored Clinical Scientist Development Award (K08)
  - Mentored Patient-Oriented RCDA (K23)
  - Mentored Quantitative RCDA (K25)

- **Career**
  - Independent Scientist Award (K02)
  - Midcareer Investigator Award in Patient-Oriented Research (K24)

- **Senior**
  - Senior Scientist Award (K05)
Individual Fellowship Overview

- Awarded to pre- and postdoctoral trainees working with mentors.
- Training may be at domestic or foreign institution.
- Opportunities in basic and clinical research.
- Open to any scientific area within the NIH scientific mission.
- PhDs and MD/PhDs receive most fellowship awards.
- Generally 5 - 6 month period from receipt to earliest possible award.
- Citizenship or permanent residence at time of award.

Review

Overall Impact Score

5 scored criteria:

1. Fellowship Applicant – What is your academic and research training? Publications? Awards and achievements?
2. Sponsors, Collaborators, and Consultants
3. Research Training Plan
4. References
5. Institutional Environment & Commitment to Training

http://grants.nih.gov/training/F_files_nrsa.htm
F30 and F31 Predoctoral Fellowships

- Support graduate researchers
- Fellows may not change the scope, move fellowship, or change mentor without prior NIH approval
- F31 is limited to 5 years total. Some ICs only support diversity F31s.

Benefits

- **Tuition**: 60% of requested tuition, capped at $16,000 ($21,000 for MD/PhD programs)
- **Stipend**: $21,180 stipend
- **Training Expenses**: $4,200 includes health insurance
- **Travel Allowance**: $400 - $1,000
F32 Postdoctoral Fellowships

- Support postdoctoral research training
- Fellows may not change the scope, move fellowship, or switch mentor without prior NIH approval
- NRSA support for up to 3 years total. Awardees incur two years of payback
  - Repay the 1st year by staying in research a 2nd year

Benefits

- **Stipends**: $37,740 (Level 0) to $52,068 (Level 7)
- **Training Expenses**: $7,850 including health insurance
- **Travel Allowance**: $400 - $1,000
### Postdoctoral F32 Recipients’ Success

Within 10 years of completing fellowship:*

<table>
<thead>
<tr>
<th></th>
<th>Applying for NIH Research Awards</th>
<th>Receiving NIH Research Awards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Former NRSA Fellows</td>
<td>45.5%</td>
<td>30.6%</td>
</tr>
<tr>
<td>Other Postdoctoral Fellows</td>
<td>28.6%</td>
<td>16.9%</td>
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*1998-2008*
Career Development (K) Awards

PURPOSE: To provide protected time for individuals to further develop their research expertise.
Career Development Award Overview

• Opportunities for basic and clinical investigators
• Mix of mentored and independent mechanisms
• Early, mid-, or senior career levels
• Some designed as awards for faculty investigators
• Newer programs (K22 and K99/R00) are transition awards for MDs and PhDs
• Citizenship or permanent resident at time of award

Review
Overall Impact Score
5 scored criteria:
1. Candidate
2. Career Development Plan; Career Goals & Objectives and Plan to Provide Mentoring
3. Research Plan
4. Mentor(s), Consultants(s) and Collaborator(s)
5. Environment and Institutional Commitment to the Candidate

http://grants.nih.gov/training/careerdevelopmentawards.htm
Mentored K Awards – early career stage

- K01: Mentored **Research Scientist** Development Award for **Laboratory Research**
- 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**
**K01 Mentored Research Scientist Development Award**

- Supports development experiences leading to research independence & training in a new field
  - May also be awarded following a research hiatus (varies by IC).
  - Some ICs use K01 for junior faculty development. Other ICs use K01s for other purposes.

- Opportunities for MDs and PhDs.
- Salary Cap varies by IC and fringe benefits (determined by your institution; generally at 28% level)

**Benefits**

- **Term**: 3 to 5 years
- **Research Support**: up to $50,000/year (varies by IC)
- **F&A = 8%**

K08 Mentored Clinical Scientist Development Award
K23 Mentored Patient-Oriented Research Career Development Award

- K08 supports relevant coursework and mentored research for individuals doing basic research projects
- K23 focuses on clinical/patient-oriented projects
- Majority of awardees are MDs and MD-PhDs
- Salary cap varies by IC + fringe benefits

Benefits
- **Term**: 3 to 5 years (varies by IC)
- **Research Support**: Up to $50,000/yr (varies by IC)
- **F&A = 8%**

For IC contacts and policies
K22 Research Scholar Development Award

- Transition award for postdocs moving to assistant professor positions
- Types vary. Some require NIH intramural experience
- Offered by NCI, NHLBI, NIAID, NIEHS, NIAAA and NINR

Two-Phase Application

- Phase 1
  - Scientific merit
  - No institution yet
  - Applicants with fundable scores have a year to find a position as an assistant professor.

- Phase 2
  - Assistant professor with own lab and little to no teaching and administrative responsibilities
  - Significant start-up funds

  F&S = 8%
K25 Mentored Quantitative Research Development Award

- For individuals from a quantitative background who want to apply their expertise to a biomedical problem
  - Individual must not currently work in health research
- Salary cap varies by IC + fringe benefits

Benefits
- **Term**: 3 to 5 years
- **Research Support**: $20,000 - $50,000 (varies by IC)
- **Facilities & Administrative Allowances** = 8%

For IC contacts and policies

Highlighted CDA Policies

- Must have full time appointment
- Minimum level of effort (75%)
- Temporary reductions in appointment status and level of effort (may not be requested simultaneously and require prior approval)
- Permanently reducing effort with concurrent support
- Costs vary across ICs (salary/fringe benefits and research development costs)
- Ancillary personnel support generally not allowed
- F&A = 8%

See new chapter in Grants Policy Statement, section 12:
Fellowship and K Applications

• Submitted electronically through Grants.gov using Application Package found with the FOA

• Reference letters submitted separately, through the NIH eRA Commons system
  – NEW: reference letters must be received by the application due date
  – Effective April 8, 2011 due dates for Fellowship applications
  – Effective June 12, 2011 due dates for Individual Career Development (K) applications

Electronic Research Administration
ERA Commons
Sponsored by National Institutes of Health
Research Supplements to Promote Diversity

• Administrative supplements to improve diversity of the research workforce by supporting students, postdocs, and eligible investigators from underrepresented groups

• Submit request to Program Official: PA-08-190

• 3 classes of candidates
  • Racial and ethnic underrepresentation in health related sciences
  • Individuals with disabilities
  • Individuals from disadvantaged backgrounds

• Proposed research experience must be integral part of approved, ongoing research of the parent grant with potential to contribute significantly to the research career development of the candidate.

• Usually a parent grant supports only one individual
Take Home Advice

Many directions and opportunities at the NIH

• **Learn** the NIH application and review process
• **Review** IC priorities and goals. Each IC has a research training & career development program
• **Identify** the grant programs offered by each IC
• **Make** early contact with program officers
• **Find** innovative, well-respected mentors and collaborators
• **Study** successful grant applications- talk to your mentor
• **Use** the OER resources
• **Propose** your best and most creative ideas
• **Apply** (the only way to receive an award!)
Thank you