# Faculty Early Career Development (CAREER) Program

Program Solicitation NSF 08-557



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FUNDING |

**AWARDS** 

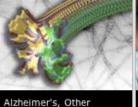
DISCOVERIES |

NEWS

PUBLICATIONS |

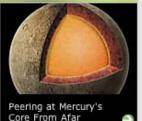
STATISTICS |





Diseases - Similar?





CAREER is X-cutting, NSF-wide

Proposal & Award Guide

How are decisions made and who makes them?





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### Support for New Investigators

- All NSF programs support new investigators as part of the regular ("core") research programs.
- About 2/3rds of new investigators are supported by the "core" programs.
- Some Directorates have special programs for young investigators (e.g., BIO Research Initiation Awards)
- Faculty Early-Career Development (CAREER)
  Program
  - Most prestigious awards to help a junior faculty member develop activities that can effectively integrate research and education within the context of his/her organization.



# Goals of the CAREER Program (Program Solicitation NSF 08-557)

- Provide stable support for five years (≥400K in most Directorates, BIO is ≥500K) to allow the career development of outstanding new teacher-scholars in the context of the mission of their organization.
- Build a foundation for a lifetime of integrated contributions to research and education.
- Increase participation of those traditionally underrepresented in science and engineering.
- Provide incentives to Universities to value the integration of research and education.

#### **CAREER** is **NSF** wide

- The program is more than 10 years old
- All Directorates participate in the program
- More than 200 Programs across these Directorates review CAREER proposals
- More than 4,500 CAREER awards have been made over the years
- More than 200 NSF Presidential Early-Career Awards in Science and Engineering (PECASE) have been awarded out of the pool of CAREER awardees



#### CAREER proposals (submitted in 2008)

- **≻ENG** 788
- **► MPS** 624
- **≻ CISE** 478
- **➢ BIO** 365
- **≻ GEO** 96
- **≻** EHR 58
- **> SBE** 111
- $\triangleright$  OPP 3

- Number of submitted CAREER proposals vary widely across NSF
- Review and Funding methods vary according to Directorate and Division practices
- CAREER Coordinating Committee members serve as liaison between the program and the Directorates

#### Investigator Eligibility Criteria

- Hold a doctoral degree in a field supported by NSF by proposal deadline
- Be untenured by Oct 1st following proposal deadline
- Be employed in a tenure-track (or equivalent) position at an eligible institution as an Assistant Professor (by Oct 1st following deadline)
- Have not previously received a CAREER award
- Have not had more than two CAREER proposals reviewed
- Untenured Associate Professors are NOT eligible



### Institutional Eligibility

- Academic institutions in the U.S., its territories or possessions, and the Commonwealth of Puerto Rico that award degrees in fields supported by NSF.
- Non-profit, non-degree-granting organizations such as museums, observatories or research labs may also be eligible to submit proposals, if the eligibility requirements of the PI's position are satisfied
- NSF encourages proposals from Community College, Minority Serving and Undergraduate Institutions

#### Should you consider the CAREER program?

- Is your Department/Organization supportive?
- Are you seriously committed to the goals of CAREER?
- Need long term independence to develop your activities in research and education?
- Would like to be considered for the Presidential Early Career Awards for Scientists and Engineers (PECASE), if eligible?
- Have discussed your ideas with mentors, fellows, program officers?

#### Success Rates and Expectations

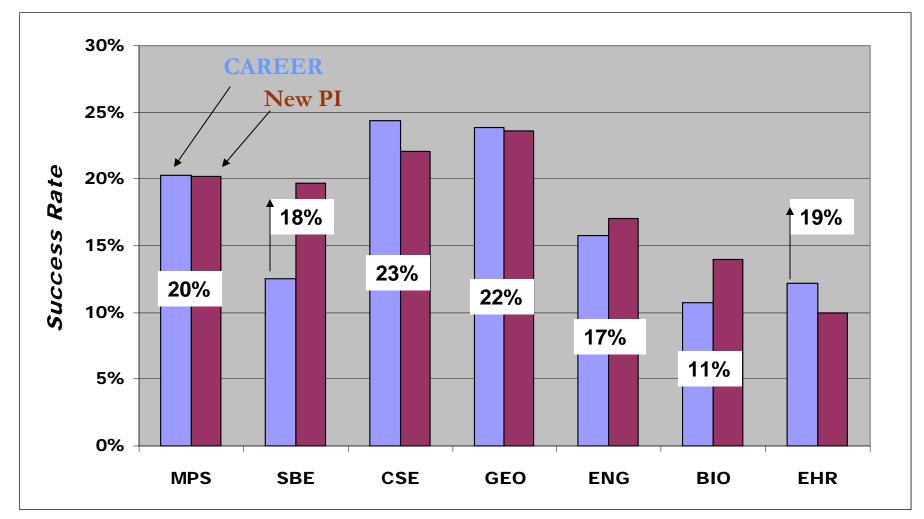
- CAREER proposals are submitted to a disciplinary unit or program
- They are reviewed according to the relevant Program guidelines - Talk to Program Officer or Division Contact for more information

(http://www.nsf.gov/crssprgm/career/contacts.jsp)

- Make sure to check on typical award sizes in your program
- Ask about expectations for scope of research and education plans
- Assessment of Departmental endorsement letter is part of the review criteria for CAREER
- Funding rates follows trend for regular proposals in the program of interest



#### Success Rates (CAREER vs. New PI) in 2006





#### What should be in a CAREER proposal?

- A compelling research plan
- Innovative but doable education plan
- A plan for the effective integration of both sets of activities (evaluation plan is a plus)

Education activities – curriculum, pedagogy, outreach, mentoring at any level, majors and non-majors, teacher preparation or enhancement, K-12 students, and/or the general public.

#### **CAREER Proposals should include:**

- A description of the proposed research, including preliminary data where appropriate, specific objectives, methods and procedures, expected significance of the results,
- A review of relevant literature,
- A description of the proposed educational activities,
- A description of how the research and educational activities are integrated,
- Results of prior NSF work if applicable,
- Letter from Department Chair supporting the PI.

#### **CAREER Education Plan**

- Activities should go beyond what is expected from any Assistant Professor in your field
- Workload should not be unreasonable
- Should be informed by what has been successful in the past - intellectual merit of the education component
- Should have a plan for assessing the ultimate success of the plan
- Check with your Program Officer or search the abstracts on the web

## What is Integration of Education and Research?

- Involving others (graduate, undergraduates, K-12, high school teachers, public) in your research using new tools, laboratory methods, field components, web outreach, cyber networks, etc...
- Partnering with those in other communities, especially those traditionally underrepresented in Sciences and Engineering
- Bringing the excitement of your research topics to help in the education of others
- Searching for new methods to deliver your research results to a broader audience than those in the immediate research community.

#### CAREER personnel and budgets

- No co-principal investigators or other senior staff are allowed
- Consultants, sub-awards are allowed
- Some programs will support buy out of academic year time (check)
- International activities are encouraged and may be supported by the Office of International Science and Engineering (OISE)
- Some Directorates prefer making more awards but at the 400 K minimum.



#### Letter from the Chair

- Support for the PIs proposed Career research and education activities
- Description of how the PIs career goals and responsibilities mesh with that of the organization and department
- Commitment to the professional development of the PI with mentoring and whatever is needed to forward the PIs efforts to integrate research and education
- Verification that the PI is eligible for the CAREER program



### Traits of Successful CAREER proposals

- CAREER proposals often need to match or exceed expectations in the disciplinary programs This is a highly competitive program!
- Written with peer reviewers (Ad Hoc and Panel) in mind -Ask your Program Officer who will be assessing your proposal
- Appropriate scope of education and research activities. It is a 5-year plan, not your whole life
- Goes outside the education box of regular research proposals in your field
- Strike a balance between doable research activities and more risky pursuits



# PECASE: Presidential Early-Career Awards for Science and Engineers

- PECASE Eligibility Be a US Citizen or US Permanent Resident by the application deadline (currently more than 30% of applicants are not eligible)
- 20 Nominees for NSF PECASE every year from the pool of CAREER awardees
- Number of nominees per Directorate are based on number of PECASE-eligible proposals submitted that year

#### Frequently-Asked Questions - NSF 08-051



#### CAREER Due Dates (2009)

- July 21, 2009
  - BIO, CISE and EHR
- July 22, 2009
  - Engineering
- July 23, 2009
  - GEO, MPS, SBE and OPP