

VA Summer Epidemiology Session Developing Scientific Research Proposals (Grant Writing)

Session 1 (Readings)

NIH Institute and Center Examples

Many R01's funded on resubmission (2 resubmissions allowed)

Agency	% Funded	Average \$	Agency	% Funded	Average \$
NCCAM (n=11)	91.7	381K	NEI (n=258)	41.3	271K
NIA (n=215)	24.8	349K	NHLBI (n=859)	34.6	298K
NCI (n=902)	29.8	260K	NIDDK (n=555)	30.2	264K

AHRQ

- In 1999 AHRQ funded ~8% of R01's - reason for low award level
- Strategize your 'research portfolio' – if you plan an academic career

Award Type					
<u>R01</u>	—————→				
<u>Career Development</u>	—————→				
<u>Small Project</u>					
<u>Other</u>	————→				
Year	2002	2003	2004	2005	2006
Funded %	50%	80%	70%	50%	50%
Goal %	50%	50%	50%	50%	50%

Research Funding Sources and Opportunities

Federal Resources for Research

Federal Obligations for Health R&D, by Source or Performer			
Fiscal Years 1997-1999 (millions of dollars)			
	1997	1998(est)	1999(est)
Total	15,080.8	16,236.9	17,243.6
By Source of Funds			
DHHS, Total	12,676.0	13,579.6	14,656.9
Nat'l Insts of Health	11,993.0	12,866.9	13,915.0
Other Public Health Svc	638.7	661.4	691.9
ADAMHA	0.0	0.0	0.0
CDC	323.0	358.5	365.2
FDA	158.6	142.9	141.2
HRSA	13.1	13.5	14.4
OASH/AHCPR	144.0	146.5	171.0
Other DHHS (HCFA, OASH, OIH)	44.3	51.2	50.0
Other Agencies, Total	2,404.8	2,657.3	2,586.7
Dept of Agriculture	127.2	140.4	148.1
Dept of Defense	1,094.2	1,249.2	1,072.1
Dept of Education (NIDRR)	24.1	29.1	29.1
Dept of Energy (EROA,AEC)	318.8	367.6	409.5
Envir Protection Agency	123.5	166.5	145.8
Agency for Int'l Devel (AID)	32.1	29.1	33.1
Nat'l Aero & Space Admin	179.4	165.7	212.1
Nat'l Science Foundation	81.1	73.5	97.5
Veterans Administration	259.9	299.7	300.0
All other Depts & Agencies	164.6	136.4	139.4
Labor	4.2	3.1	3.6
CPSC	0.1	0.0	0.1
Commerce (Total)	71.5	57.4	52.3
Transportation (Total)	9.0	9.9	9.8
Interior (Total)	79.8	66.0	73.6

NIH Institutes and Centers

The mission of the National Institutes for Health (NIH) is to acquire new knowledge to help prevent, detect, diagnose and treat disease and disability that will lead to better health for the population. NIH consists of a confederation of 25 different Institutes with different policies, priorities and types of awards available in these Institutes. Components of the NIH (includes the National Library of Medicine). Institutes/centers can make extramural awards. Institutes/centers include:

AA--National Institute on Alcohol Abuse and Alcoholism (NIAAA)

AG--National Institute on Aging (NIA)

AI-- National Institute of Allergy and Infectious Diseases (NIAID)

**AR--National Institute of Arthritis and Musculoskeletal and Skin Diseases
(NIAMS)**

AT--National Center for Complementary and Alternative Medicine (NCCAM)

CA--National Cancer Institute (NCI)

CL--Warren Grant Magnuson Clinical Center (CC)*

CT--Center for Information Technology (CIT)

DA--National Institute on Drug Abuse (NIDA)

DC--National Institute on Deafness and Other Communication Disorders (NIDCD)

DE--National Institute of Dental and Craniofacial Research (NIDCR)

DK--National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

DS--Division of Safety (DS)*

ES--National Institute of Environmental Health Sciences (NIEHS)

EY--National Eye Institute (NEI)

GM--National Institute of General Medical Sciences (NIGMS)

HD--National Institute of Child Health and Human Development (NICHD)

HG--National Human Genome Research Institute (NHGRI)

HL--National Heart, Lung, and Blood Institute (NHLBI)

LM--National Library of Medicine (NLM)

MH--National Institute of Mental Health (NIMH)

NR--National Institute of Nursing Research (NINR)

NS--National Institute of Neurological Disorders and Stroke (NINDS)

OD--Office of the Director (NIH)

RG--Center for Scientific Review (CSR)

RR--National Center for Research Resources (NCRR)

TW--John E. Fogarty International Center (FIC)

WH--Office of Research on Women's Health (ORWH)

* Does not make Extramural Awards

VA investigator initiated research. VA Research has 4 services: Medical Research, Health Services Research and Development (HSR&D), Rehabilitation Research and Development (RR&D), and the Cooperative Studies Program (CSP). Requests for funding can be made to any of the services. Funding for epidemiology merit reviews and career development is under General Medical Research.

The R01 (investigator initiated research) is common to all NIH Institutes and Centers. The PHS 398 is uniformly used for R01's, Career Development Awards and Institutional National Research Service Awards. The NIH Center for Scientific Review (CSR) receives 45,000 grants per year to distribute to Agencies and Institutes.

The Agency for Healthcare Research and Quality (AHRQ). The AHRQ mission is 1) to conduct and support research that develops and presents scientific evidence on all aspects of health care and 2) to synthesize and disseminate available scientific evidence for use by patients, consumers, practitioners, providers, purchasers, policy makers and educators. It is separate and apart from NIH – they too use the PHS 398 for their R01's. Grants submitted to AHRQ and NIH go to the same clearinghouse [Center for Scientific Review - (CSR)] for distribution. These agencies may cooperate to fund good research when funding in one Institute or Agency is limited.

Table 1. Individual Peer Review Research Grants for VA, NIH, AHRQ

Agency	VA	NIH	AHRQ
WWW site	http://vaww.va.gov/resdev	http://grants.nih.gov/grants	http://www.ahrq.gov/fund
Award types/ format	Investigator initiated 1313 series forms	R series – not all awards in all Institutes & Centers; 398 forms	R 01, R 03, R 18, U 18 398 forms
Who is eligible?	5/8 time or applying for eligibility, Health Professionals, PhD's	Health Professionals, PhD's	Health Professionals, PhD's
Require LOI?	HSR&D – Yes Med Res – Yes EPI – Yes RR&D – Yes	No	No
Time & Award Amount	HSR&D – 4 yr; no cap Med Res –5 yrs; 150K/yr plus PhD salary and equipment RR&D 3 yr; no cap	Up to 5 yrs but average (by law) is 4 yrs. If > 500K – must have institute pre- approval, Modular awards for up to 250K	Up to 5 years No cap
Turnaround time	Results known at 3-4 months	Results known at 5-6 months; can resubmit in next cycle at 8 months	Results available 1-4 mo
Review process	Some local External Peer Review	External Peer Review	External Peer Review
Percent Funded	HSR&D ~25% Med Res ~ 25%	~ 30% overall 20% resubmit	8% due to current research commitments
Other	Co-Operative Studies Program also available but ~ 2 yrs until project starts.	301-435-0714	Mable L. Lam 301-594-1844

Table 2. Career Development and Transition Awards

Agency	VA	NIH	AHQR
Types of awards	Career Development, Career Scientists	12 K series awards	K 02, K 08
Who is eligible?	5/8 time or applying for eligibility, Health Professionals, PhDs	Health Professionals, PhDs, US Citizen, Not prior PI	Health Professionals, PhDs, US Citizen
Require LOI?	Yes	No	No
Time & Award Amount	3 years	3-5 years; renewable for more senior awards	3-5 years; must be employed by public or private agency
Application process	HSR&D – 1313 Series Med Res – 1313 Series EPI – 1313 Series RR&D – 1313 Series 2 X year	398 Regular submission dates 3 x year	398; Regular submission dates 3 x year
Turnaround time	4-6 months	5-6 months	4-5 months
Review Process	Local review for HSR&D, National Peer Review	Regular Peer Review	Study Section a little "softer"
Percent funded	HSR&D – 30% Med Res – 30% EPI – New RR&D – New	~35%	~50%
Other	3 year MD awards; (not >5 years from end of clinical training; not > 2 yrs after post doc for Med Res); 5 yr PhD awards	Generally 75% effort	Generally 75% research effort 1-800-358-9295, or Mable L. Lam 301-594-1844

The NIH K Kiosk for career development training is an incredible resource! Visit it at <http://grants.nih.gov/training/careerdevelopmentawards.htm>

Table 3. Dissertation Awards at VA, NIH, AHRQ

	VA	NIH		AHRQ	
		Contact Institute of Interest first - if no satisfaction Walter Shaffer, Director of Training 301-435-2687		Contact Karen Rudzinski 301-594-3602	
Types of Awards	Pre-Doc RR&D only	Pre-Doc (F-31) Minority Disability in all Institutes	(F-31) National Research Service Awards (NRSA) for Individual Predoctoral Fellowship; Available in Alcohol, Deafness, Drug, Mental Health and Neuro, Nursing Institutes	Health Services Research Dissertation Award (R03); dissertation; must examine some aspect of health care system.	Minority pre-doc (F-31) Check with agency for details
Who is eligible?	US Citizen doing VA relevant rehab research	US citizen, non-citizen national of US, permanent residence I-151 or I-551	US citizen, non-citizen national of US, permanent residence I-151 or I-551	US Citizen; Non US citizen without permanent resident visa may apply via a public or private nonprofit institution – not as an individual.	Check with Agency
Requirements?	All but dissertation	BS degree – in doctoral program	All PhD requirements complete but dissertation	All PhD requirements complete but dissertation	BS degree – in doctoral program
Time & Award Amount	Usually 1 yr; ~ 18 K	Up to 5 years	Up to 5 years	\$30,000 total; requires full time dissertation research	Up to 5 years
Apply	1313 Series	398 Application due May 1, Nov 15	398 Application due April 5, Aug 5, Dec 5	398; Note instructions in program announcement; Apply May 15, Sept 15, Jan 15	Applications due May 1, Nov 15
Turn around time	3-4 months	5 months	5-6 months	3 months	3 months
Review process	National	Study Section Review	Study Section	AHRQ Study Section Review – a little "softer" review	AHRQ Study Section Review – a little "softer" review
Percent funded	High	High Percent No resubmissions	30%	10%; about 30 awards/year	No resubmissions!

For NIH - Go to NIH training web page - training advisory committee roster, select Institute(s) of interest, contact person listed.

Awards based on 1) merit, 2) relevance to agency mission and 3) availability of funds

Table 4. Small Grant Awards at VA, NIH, AHRQ

	VA	NIH	AHRQ
Types of Awards	RR&D and Seattle ERIC Pilots HSR&D and Med Res – not available	R03 R21 Only available in 50% of NIH Institute & Centers	R03
Who is eligible?	5/8 time or applying for eligibility	Health Professionals, PhDs US Citizen	Health Professionals, PhDs, US Citizen Usually a beginner award
Require LOI?	Epi – yes RR&D – yes	No	No
Time & Award Amount	Both = 1 year maximum duration; EPI \leq 25,000 RR&D \leq 50K	Usually 1 year 50-150K	Up to 1 year; 100K; no travel or payment to a federal employee
Application Process	ERIC/Seattle – 6 pages – funding 1 yr RR&D – 1313 Series, funding 1 year	398 Regular NIH review cycle	398; Accepted ongoing basis Study Section review
Turnaround time	3-4 months	4-6 months	3 months
Review process	ERIC/Seattle RR&D – National	Study Section Review	Study Section Review – a little "softer" review; riskier ideas OK
Percent funded	ERIC –20-30% RR&D – 30-40%	~ 30%	10%; about 30 awards/year

Table 5. Advantages and Disadvantages of Research Funding Types

	Advantages	Disadvantages	Considerations
Federal Agencies	Established mechanisms; peer review system best available	Lots of bureaucracy	Time, patience and coordination needed
Pharmaceutical	Short application and time to funding	? Credibility of Research Investigator role in pharmacy designed research	Strings, who owns data, control of publications, conflict of interest
Private Industry	Short application and time to funding	? Credibility of Research Rigor	Strings, who owns data, control of publications, conflict of interest, Venture capital abounds!
Voluntary	Short application and time to funding; good range of funding opportunities	? Credibility of Research Rigor	Strings, who owns data, control of publications, conflict of interest

Research Funding Mechanisms at NIH

Types of Awards and the Key to Crack the Code

Examples:

R01 = Investigator Initiated

R21 = Exploratory/Developmental Grant

R03 = Small Project

P01 = Research Program Project,

U01 = Research Project Cooperative Agreement

Information for Management, Planning, Analysis and Coordination (IMPAC) Used by NIH and DHHS for Extramural Programs

A	(Training Programs)
C	(Research Coordination)
D	(Training Projects)
E	(Health Professions)
F	(Fellowship)
G	(Resource)
H	(Community Service)
K	(Research Career)
M	(Gen. Clinical Research Centers)
N	(Research Contracts) NIH only
P	(Research Programs and Centers)
R	(Research Projects)
S	(Research-Related Programs)
T	(Training Programs)
U	(Cooperative Agreements)
Y	(Inter-/Intra-Agency Agreements)

For a complete listing – go to the NIH web site and search on IMPAC.

Definitions:

Program Announcement (PA) - formal expression of an institute's ongoing interest in funding a particular area of science. Applications go through the regular R01 mechanisms, may be submitted for any review cycle and may cite the PA.

Request for Application (RFA) - solicits grants or cooperative agreements on a specific topic with a specified receipt data and set-aside funds. The RFA number needs to be cited on the application for appropriate consideration. These applications are usually reviewed by a special peer review group organized by the Center for Scientific Review and the sponsoring Institute(s).

Request for Proposal (RFP) – solicits contract offers for bids and proposals on a designated scope of work to be conducted providing deliverables in a specified time frame.

Cooperative Agreement – a support mechanism with substantial Federal scientific and/or program involvement. It is anticipated there will be extensive inter-agency interaction after the granting the award in the conduct of the research.

**U.S. Department of Health and Human Services
Public Health Service Grant Application (PHS 398)**

Section 1C, Number 8: Research Plan

http://grants1.nih.gov/grants/funding/phs398/section_1.html#8_research

Department of Veterans Affairs Merit Review Program

www.va.gov/publ/direc/health/manual/030204.html