

Overview of NIH Funding Mechanisms

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Course Objectives

- Provide an overview of NIH funding mechanisms:
 - Research Awards ("R" Awards)
 - Training / Fellowship Grants
 - Research Program Projects and Centers ("P" Awards)
 - Career Development Awards ("K" Awards)
 - Resource Programs & Diversity Supplements
- Highlight most commonly used mechanisms at CUSON
- Emphasize recent changes to NIH application guidelines

NIH Grant Room on Deadline Date



- The NIH has over 100 types of research mechanisms
- In FY 2003, the NIH reviewed over 34,000 research project applications, granting over 10,000 awards with a total budget of over \$3.5 billion – a 30% funding rate!

Common Acronyms

- NIH – National Institutes of Health
- NINR – National Institute of Nursing Research
- RFA – Request for Applications
 - Very specific invitations for proposals, issued by an institute of the NIH, in well-defined areas of research
 - High priority and expedited funding time frame
- PA – Program Announcement
 - A call for proposals in a specified area of research interest
 - Many NIH institutes participate
 - Not as high priority as an RFA, but higher than an investigator-initiated proposal
- PHS 398 – Name for the Public Health Service Grant application kit used by the NIH and other agencies

NIH Research Award Mechanisms – “R” Awards

- R01 – Research Project Grant Programs
- R21 – Exploratory/Developmental Research Grant
- R03 – Small Grant Program
- R13 – Conference Grants
- R15 – Academic Research Enhancement Award (AREA)
- R56 – High Priority, Short-Term Project *new*

R01: Research Project Grant Program

GENERAL INFORMATION:

- The “Basic Research Grant” – original and oldest NIH grant mechanism; provides support for health-related research and development
- Can be investigator-initiated or in response to a PA or RFA (preferable)
- Investigator-initiated award:
 - “...supports a discrete, specified project to be performed by investigators in an area representing their specific interest and competencies, based on the mission of the NIH”
- PI writes the grant and is responsible for conducting the research – but the *applicant* is the research organization (e.g. Columbia University)

R01: Research Project Grant Program

RULES/REQUIREMENTS:

- Need to show expertise & preliminary work
- Use PHS 398 application kit
- Items a-d of Research Plan cannot exceed 25 pages
- All institutes and most Centers at NIH support the R01 mechanism
- Supplements and amendments are allowed
- Only 2 revisions of a previously reviewed R01 can be submitted

R01: Research Project Grant Program

RULES/REQUIREMENTS:

- Costs are allowable in standard NIH budget categories: salary & fringe, consultants, equipment, supplies, alterations & renovations, travel, "other" (e.g. publication costs), subcontracts, and indirect costs
- Unless otherwise specified in a PA or RFA, R01s:
 - Follow the standard NIH receipt dates – February 1, June 1, and October 1; AIDS-related grant deadlines are May 1, September 1, and January 2
 - Generally awarded for 1-5 budget periods, normally 1 year each
 - Are not limited in funds requested, but modular applications are most prevalent with \$25,000 modules to a modular limit of \$250,000 per year
 - Require advanced permission for budgets exceeding \$500,000/year
 - Are eligible for a competing renewal

R21: Exploratory/Developmental Research Grant

GENERAL INFORMATION:

- Intended to “encourage new, exploratory and developmental research projects by providing support for the early stages of their development.” Specifically:
 - Assess the feasibility of a novel area of investigation or a new experimental system that has the potential to enhance health-related research
 - Studies may involve considerable risk, but may lead to a breakthrough in the field
 - Should describe projects distinct from those supported through the R01 mechanism (e.g. long-term projects in a well-established area should not be submitted as R21)
- “Innovation” and “Novelty” are stressed

R21: Exploratory/Developmental Research Grant

RULES/REQUIREMENTS:

- **Must** be submitted in response to a PA or RFA (recent change in policy)
- Unless otherwise specified in a PA or RFA, R21s:
 - Project period of up to 2 years
 - Budgets should be modular with a combined total in direct costs of \$275,000
 - Are NOT eligible for a competing renewal
- Use the PHS 398 application kit
- Items a-d of Research Plan cannot exceed 15 pages
- Only 2 revisions of a previously reviewed R21 can be submitted
- No preliminary data required, but may be included if available

R03: Small Grant Program

GENERAL INFORMATION:

- Intended to “provide research support specifically limited in time and amount.” Specifically:
 - Provide flexibility for initiating studies for preliminary short-term projects
 - Have limited resources
 - Are non-renewable
 - Have the potential to lead to a future R01 application
- Examples of R03s:
 - Pilot or feasibility studies
 - Secondary analysis of existing data
 - Small, self-contained research projects
 - Development of research methodology or new research technology

R03: Small Grant Program

RULES/REQUIREMENTS:

- **Must** be submitted in response to a PA or RFA (recent change in policy)
- Unless otherwise specified in a PA or RFA, R03s:
 - Project period of up to 2 years
 - Budgets should be modular with direct costs of \$50,000 per year
 - CANNOT be renewed by competing for an additional project period
- May not be used for thesis or dissertation research
- Items a-d of Research Plan cannot exceed 10 pages
- Only 1 revision of a previously reviewed R03 can be submitted
- Current NINR PA for R03:
<http://grants1.nih.gov/grants/guide/pa-files/PA-02-120.html>

R13: Support for Conferences and Scientific Meetings

- An R13 is an investigator-initiated Conference Grant submitted to a particular Institute or Center of the NIH
- Intended to “support scientific meetings that are relevant to its scientific mission and to the public health.”
- Highly contingent on the scientific interests and priorities of the individual Institutes and Centers of the NIH
- Letter from the appropriate NIH staff person documenting advance permission required
- Receipt deadlines are April 15, August 15, and December 15

R15: Academic Research Enhancement Award (AREA) Grant

- AREA grants “support individual research projects in the biomedical and behavioral sciences conducted by faculty, and involving their undergraduate students”
- Support for small-scale research projects including:
 - feasibility studies
 - pilot studies
 - secondary analysis studies
 - other small-scale research programs
- Students will benefit from exposure to and participation in research
- Applicant organization CANNOT have previously been a “major recipient of NIH research grant funds” (based on NIH definition, School of Nursing is currently eligible for AREA grants; list is updated annually)

R15: Academic Research Enhancement Award (AREA)

- For submission to the NINR, an AREA grant must be related to 1 of the following 8 broad areas of research interest:
 - chronic illness
 - cultural/ethnic considerations in health/illness
 - palliative or end of life care
 - health promotion/disease prevention
 - implications of genetic advances
 - quality of life and quality of life care
 - symptom management of illness and treatment
 - telehealth interventions/monitoring
- A maximum of \$150,000 in direct costs (plus full indirects) may be awarded for a period of up to 3 years
- Receipt deadlines are January 25, May 25, and September 25
- Current NINR PA for R15:
<http://grants1.nih.gov/grants/guide/pa-files/PA-03-053.html>

R56: High Priority, Short-Term Project

- R56 is new in Fiscal Year 2005
- Purpose: To fund for 1-2 years high-priority new or competing renewal R01s with priority scores or percentiles that fall just outside funding limits.
- Investigators may NOT apply for R56 grants
- The NIH Institute or Center which reviews the applications must nominate applications for conversion to an R56 from the pool of R01 applications pending award for the current fiscal year (nominees will be in top 50 percentile of priority scores)
- R56 awardees are then encouraged to submit a revision of their original application at the earliest convenient date to be considered for future funding
- Of note, NINR is NOT a participating Institute, but NCI, NCCAM, NIDDK, and NLM do participate

NIH Training / Fellowship Mechanisms

- F31 – National Research Service Award (NRSA) Predoctoral Fellowship
- F32 – NRSA Postdoctoral Fellowship
- T32 – NRSA Institutional Research Training Grant

F31: NRSA Predoctoral Fellowship

- Purpose (within the NINR):
 - Support promising nursing applicants enrolled in doctoral programs
 - Increase the number of doctorally-prepared nurses
- Must propose a research training program and dissertation research that is consistent with NINR scientific mission
- Candidates must pursue research training on full-time basis
- Up to 5 years of support; once degree is obtained, fellowship terminated. NOTE: Any unused funds must be returned to NINR!
- Candidate must identify a sponsor for supervision who is an active investigator in the area of the proposed research
- Annual award is formula-driven:
 - Tuition/fees/insurance at 100% of first \$3,000; 60% of rest
 - Stipend is currently \$20,772
- Current NINR PA for F31:
<http://grants1.nih.gov/grants/guide/pa-files/PAR-02-019.html>

F32: NRSA Postdoctoral Fellowship

- Proposed Postdoctoral Training must:
 - Be within biomedical, behavioral, or clinical research
 - Offer an opportunity to enhance understanding of the health-related sciences and extend potential for a productive research career
- Candidates must pursue research training on full-time basis
- Must have received a PhD, DrPH, DNS, etc., or equivalent doctoral degree; Up to 3 years of support provided
- Candidate must identify a sponsor for supervision who is an active investigator in the area of the proposed research
- Annual award is formula-driven:
 - Tuition/fees/insurance at 100% of first \$3,000; 60% of rest
 - Stipend starts at \$35,568 and is normally increased annually
- Current NINR PA for F32:
<http://grants2.nih.gov/grants/guide/pa-files/PA-03-067.html>

T32: NRSA Institutional Research Training Grant

- Purpose:
 - To develop or enhance research training opportunities for individuals (predocs & postdocs) for careers in areas of biomedical, behavioral, and clinical research
- T32 supports predoctoral, postdoctoral, and short-term research training experiences
 - Predocs: training must lead to a PhD or comparable research doctoral degree
 - Postdocs: training must be specialized
- CUSON has 5-year T32 (PI: Dr. Bakken), "Reducing Health Disparities Through Informatics;" supports 2 predocs & 1 postdoc
- Current NINR PA for T32:
<http://grants2.nih.gov/grants/guide/notice-files/NOT-NR-01-001.html>

NIH Research Program Projects & Centers – “P” Awards

- P01 – Program Project Grant (currently no NINR PA for a P01)
- NINR currently funds 2 types of “P” Awards:
 - P20 – Exploratory Center Grants
 - Target less-experienced schools of nursing, helping to expand their beginning research efforts and centralize resources
 - P30 – Center Core Grants
 - Go to interdisciplinary, collaborative nursing research programs at well-established institutional settings
 - Bring together a core of nurse investigators to pursue specific areas of basic and/or clinical nursing research
- Approximately 5% of total annual NINR funds support Center Grants

P01: Program Project Grants

- Provide support for a broadly-based multidisciplinary research program with a well-defined central research focus or objective
- Available to a group of several investigators with differing areas of expertise who wish to collaborate in research by pooling their talents and resources
- Represent synergistic research programs designed to achieve results not attainable by investigators working independently
- More complex in scope and budget than the individual basic research (R01) grant

P20: Exploratory Center Grants

- Purpose of the P20 is to support:
 - Planning for new programs
 - Expansion or modification of existing resources
 - Feasibility studies to explore various approaches to the development of interdisciplinary programs that offer potential solutions to problems
- Are of special significance to the mission of the NIH and/or to individual Institutes and Centers
- Support faculty, staff (administrative), students (GRAs), pilot projects
- Normally only submitted in response to an Institute's PA or RFA; specialized/individualized guidelines for each announcement
- CUSON has 2 active P20 grants, "Center for Evidence-based Practice in the Underserved" from NINR (CEBP; PI: Dr. Bakken) and "Center for Interdisciplinary Research on Antimicrobial Resistance" from NCRR (CIRAR; PI: Dr. Larson)

NIH Career Development Awards – “K” Awards

- K01 – Mentored Research Scientist Development Award
- K22 – NINR Career Transition Award
- K23 – Mentored Patient-Oriented Research Career Development Award
- K Kiosk - Information about NIH Career Development Awards
<http://grants1.nih.gov/training/careerdevelopmentawards.htm>

K01: Mentored Research Scientist Development Award

- Purpose:
 - Provide mentored research experience to enhance the candidate's research career or gain expertise in a new research area
 - Lead the applicant to independence as a researcher
- Candidate must identify a mentor with extensive research experience
- NINR K01 rules:
 - Maximum 3 year period of support
 - Applicants must be doctorally-prepared registered nurses
 - \$50,000 salary + fringe w/research expenses of \$20,000
- 75% of professional time is devoted to goals of the award; remainder may be devoted to clinical, teaching, or other research pursuits consistent with objectives of the award
- Current NINR PA for K01:
<http://grants1.nih.gov/grants/guide/pa-files/PA-00-019.html>

K22: NINR Career Transition Award

- To support an individual postdoctoral fellow in transition to a faculty position.
- NINR encourages applications from recently graduated doctorally prepared nurse scientists.
- Lasts up to 5 years; consists of 2 phases:
 - **Intramural** support phase (up to 3 years support)
 - Takes place at the NINR Intramural Research Laboratories (Bethesda campus)
 - Candidate must obtain commitment from an NINR intramural scientist as a mentor/sponsor before applying
 - Up to \$125,000/year provided (salary “commensurate with experience level” plus research expenses)
 - **Extramural** support phase (up to 2 years support)
 - Takes place at institution to which candidate is recruited (e.g. CUSON)
 - Up to \$50,000/year salary + research funds up to \$75,000/year
 - Minimum effort of 75%
- NOTE: Approval of transition to the extramural phase based on the success of the awardee’s research program during intramural phase (determined by NINR)
- Current NINR PA for K22:
<http://grants1.nih.gov/grants/guide/pa-files/PAR-04-143.html>

K23: Mentored Patient-Oriented Research Career Development Award

- Purpose:
 - Support the career development of investigators for 3-5 years of supervised study focusing on patient-oriented research (directly interacts with human subjects)
 - Increase the pool of clinical researchers who can conduct patient-oriented studies
- Areas of research include mechanisms of human disease; therapeutic interventions; clinical trials; and development of new technologies
- Former recipients of R01s are ineligible; R03s and R21s are eligible
- Candidate must have a clinical doctoral degree or its equivalent
- 75% of professional time must be devoted to goals of this award; up to \$75,000 provided for full-time salary support
- Current NINR PA for K23:
<http://grants.nih.gov/grants/guide/pa-files/PA-00-004.html>

NIH Resource Programs – “G” Awards

- Mechanism of note: G08 – Resources Project Grant (NLM)
- G08 – To improve the organization and management of health related information using computers and networks
- Currently CUSON has 2 G08 applications submitted to the NLM under review:
 - “Information Resources for Evidence- & Competency-based Clinical Nursing Doctorate” (PI: Roberts)
 - “APN Access to Electronic Resources for Safety & Quality” (PI: Bakken)
- Mechanism useful for the School’s Informatics strengths

Diversity Supplements

- Research supplements “to improve the diversity of the research workforce by supporting and recruiting students, postdoctorates, and eligible investigators from underrepresented groups in science”
- Must be a supplement to an awarded and eligible NIH grant (R01s and P20s are eligible). R03, R15 and R21 awards are sometimes eligible
- Purpose: to promote diversity in the biomedical, behavioral, clinical, and social sciences research workforce in order to (1) balance and broaden the perspective in setting research priorities; (2) improve the ability to recruit subjects from diverse backgrounds into research protocols; and (3) improve the Nation’s capacity to address and eliminate health disparities
- Direct costs for administrative supplements vary from <\$5,000 to >\$75,000 (full indirect costs provided)