Building on the Science of Teams and Applying for NCI Funding

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Outline

- Cancer prevention and control
- Linking with the science of teams
- Programmatic funding opportunities
- Resources
The Cancer Continuum

- Prevention – smoking cessation, physical activity
- Detection – mammography (colonoscopy)
- Diagnosis – biopsy
- Treatment – chemotherapy versus radiation
- Survivorship – life from time of diagnosis
Examples of Cancer Prevention and Control Teams

- Support groups (e.g., weight watchers, physical activity groups, survivors)
- Physicians – coordinated teams (e.g., physician groups, HMOs)
- Physicians- non-coordinated teams (e.g., unaffiliated docs that pt see, physician referrals)
- Social service provider groups – coordinated
- Social service provider groups – non-coordinated
- Family (e.g., intentional support efforts, caregivers)
- Advocacy groups, policy planners
- Patient-Physician
Scientific Areas Relevant to Teams

- Learning/Memory
  - Group learning and impact of dynamics on physician decisions and diagnosis
  - Shared/unshared information
- Judgment
- Decision Making
- Problem Solving
- Collaboration Processes
- Social Cohesion
- Social Influence
- Communication
- Conflict
## Examples of Group Processes and Implications

<table>
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<th>Cancer continuum</th>
<th>Example of type of process</th>
<th>Example Implications of group processes</th>
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<td>Prevention</td>
<td>Social cohesion, social influence</td>
<td>Support for lifestyle behavior change</td>
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<td>Detection</td>
<td>Judgment</td>
<td>Decision to get screened; Detection interpretations</td>
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<td>Diagnosis</td>
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<td>Treatment decisions</td>
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<tr>
<td>Survivorship</td>
<td>Social cohesion, social influence</td>
<td>Support; lifestyle changes</td>
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Funding at NCI

• NIH has 27 Institutes and Centers, each with its own research agenda

• NCI has 6 Divisions that fund research ($3.2 billion in FY 2007)
  • Division of Cancer Control and Population Sciences ($381,425,235)

http://www.cancer.gov/researchandfunding
The Behavioral Research Program initiates, supports, and evaluates a comprehensive program of behavioral research ranging from basic behavioral research to research on the development, testing, and dissemination of disease prevention and health promotion interventions in areas such as tobacco use, screening, diet, and sun protection.

**Program Branches**

- Applied Cancer Screening
- Basic and Biobehavioral
- Health Communication and Informatics
- Health Promotion
- Tobacco Control
Applying for an NIH Grant

- Where your work fits – always a health implication
- Funding mechanisms
- Grant application preparation
- Electronic application submission
- Review
- Resubmission

Your Program Director is your guide and ally
Choice of Mechanism

- How much money is available?
- How long will the project take?
- What is the purpose of the research?
- Am I eligible?
- How will the applications be reviewed?

Grant policy website

http://grants.nih.gov/grants/policy/policy.htm
Types of Funding Opportunity Announcements (FOAs)

• **Program Announcement (PA)**
  Statement of ongoing research interest by Institute/Center
  − No set-aside money (usually)
  − Reviewed by standing study section at NIH
  − If not funded, one revision permitted for resubmission

• **Request for Applications (RFA)**
  Special research initiative
  − Set-aside money
  − Specially assembled review group
  − If not funded, no resubmission
  − If not funded, can submit as NEW grant
Types of Research Funding Opportunities

- **R01** – Research Projects
- **R03** – Small Research Grants
- **R21** – Exploratory/Developmental Grants
R01: Research Project Grants

Traditional investigator-initiated grant providing support for discrete, specified research

- Generally < $500K/year
- If larger, need to request approval at least 6 to 8 weeks before submission deadline
- Up to 5 years (usually 3–5 years)
- 2 submissions—initial and 1 amended
R03: Small Research Grants

Short-term awards for testing new techniques, secondary analyses of existing data, and development of innovative projects basis for more extended research

- < $50K per year, 2-year maximum (nonrenewable)
- 2 submissions—initial and 1 amended
- Special NCI review committee
R21: Exploratory/Developmental Grants

Pilot projects, feasibility studies, and intervention studies that are creative, novel, high-risk/high-payoff, and produce innovative advances

- Up to $275K/year for 2 years (nonrenewable)
- 2 submissions—initial and 1 amended
- Only in response to Program Announcement
Typical Timeline for an R01

Three overlapping cycles per year

Submit in February (June, October)
Review in June (October, February)
Council in September (January, May)
Earliest award in December (April, July)

Cycle 1  -- -- --
Cycle 2  -- -- --
Cycle 3  -- -- --
Gateways to Information: NIH

grants1.nih.gov/grants

planning.cancer.gov
On-Line Resources

- General information on Electronic Submission and the SF424 (R&R)
  - http://era.nih.gov/ElectronicReceipt

- Grants.gov registration, submission and Pure Edge behavior questions
  - Visit http://www.grants.gov/CustomerSupport
  - Grants.gov Customer Service
    - E-mail: support@grants.gov--Phone: 1-800-518-4726

- eRA Commons registration and post submission questions on Commons functionality
  - eRA Commons Help Desk
    - E-mail: commons@od.nih.gov--Phone: 1-866-504-9552 or 301-402-7469

- Forms transition and questions on NIH’s electronic receipt plan
  - NIH Grants Information
    - E-mail: grantsinfo@nih.gov--Phone: 301-435-0714
Thank You
What is a Program Director?

• Our job is to help you (contact by email first)
• We know and help to shape NCI’s research priorities
• Help to guide you to the right mechanism and study section
• Know the current portfolio (what NCI already funds)
• Advise about research plan
• Listen to the reviews – but never say a word or even make a face!
Registration

• Grants.gov
• Be sure your organization is registered! (one time)
  – U.S. organizations obtain EIN from IRS (foreign applicants see next slide)
  – Request DUNS # from Dun & Bradstreet
  – Register with Central Contractor Registry (CCR) – identify the eBiz Point of Contact (POC)
  – Register the Authorized Organization Reps (AORs) who can officially sign the application and submit

Grants.gov registration can take up to 8 weeks for international organizations. START NOW!

http://www.grants.gov/applicants/get_registered.jsp
Grant Submission: Guide your Application

Applications are assigned to ICs based on:
– Overall mission and interests of the Institute
– Funding Opportunity Announcements (FOA)s

Write a cover letter
– Request an institute assignment
  • Consider requesting a dual assignment
– Request the right study section
  • Review the sections mission and roster
Homework before you submit

- Everything You Wanted to Know About the NCI Grants Process
- Parent Announcements (For Unsolicited or Investigator-Initiated Applications)
- Electronic Submission of Grant Applications & FAQs
- Funding Opportunities and Notices
  - http://grants.nih.gov/grants
Writing a Grant Application

Erica S. Breslau, Ph.D.
National Cancer Institute
The ‘**Big 5**’ in Proposal Writing

1. **Abstract**
   - Background
   - Rationale
   - Aims
   - Methods
   - Implications

2. **Background**
   - Problem
   - Rationale
   - Aims, hypotheses
   - Theory

3. **Preliminary Studies**
   - Team’s experiences
   - - with population
   - - with methods
   - - with theory

4. **Research Plan**
   - Study design
   - Methods
   - Analysis plan
   - Other considerations

5. **Essentials**
   - Human subjects
   - Budget
   - Bio sketches
   - Forms

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**Fundable NCI Grant Application**
Peer Review – From submission through summary

- Application receipt and assignment
- The Study section
- The summary statement (pink sheets)

About 80,000 grant applications are submitted to NIH each year, of which less than 25% are funded
• Each has 23-40 members, primarily from academia (roster publically available)

• Face-to-face meetings, 3 times a year

• 60-100 applications

• Scientific Review Officer (SRO) leads meeting, has MD, Ph.D., or ScD
Review of Research Grants

REVIEW CRITERIA:

- Significance
- Investigator
- Innovation
- Approach
- Environment
Review Criteria

• **Significance:** address an important problem? How will scientific knowledge or clinical practice be advanced?

• **Investigator:** Is the investigator appropriately trained?

• **Innovation:** Are there novel concepts or approaches? Are the aims original and innovative?

• **Approach:** Are design and methods well-developed and appropriate?
  – Is there a conceptual or theoretical framework for the research?
  – Are problem areas addressed?
  – Are design, methods, analysis clear and congruent with the aims?

• **Environment:** Does the scientific environment contribute to the probability of success? Are there unique features of the scientific environment or subject populations?

• **Human Subjects:** Are human subjects issues appropriately addressed?

Overall Evaluation & Score is Intended to Reflect Impact on Field

- new system 1-7: whole numbers
Scientific Review Group or Study Section Actions

- Discussed, Scientific Merit Rating (top 50% discussed and scored by entire panel)

- Not Discussed (scored by primary reviewers only)

- Deferral (more information needed)
Results are documented by SRO in a summary statement and forwarded to the PI and the assigned NIH Institute or Center, where a funding decision is made.

The Summary Statement Contains

- Summary of Review Discussion
- Essentially Unedited Critiques
- Budget Recommendations
- Administrative Notes
- Priority Score and Percentile Ranking

A fundable score does not mean you will be funded
New and Early Stage Investigators

- **New Investigator** is a PI who has not yet competed successfully for a substantial NIH research grant (R03, R21 do not count)

- **Early Stage Investigator** is a PI who is both a New Investigator AND is within 10 years of completing the terminal research degree

Both get shortened review cycles and more favorable pay lines
NIH and NSF Comparisons

NIH
- “Firewall” between Program and Review
- Roster of each study section publically available (although cannot know who did reviews)
- Health outcome/implication required
- One study per application

NSF
- Program participates in Review
- Names of reviewers kept more confidential
- Health outcome/implication not required
- Series of studies proposed in single application
Finding Help

- **eRA Commons Help Desk**
  Online Help Ticket: http://ithelpdesk.nih.gov/eRA/
  Phone: 301-402-7469
  Hours: Mon-Fri, 7 a.m. to 8 p.m. EST
  Support for: Commons Registration, Application Status, Post-submission questions

- **Grants.gov Contact Center**
  Toll-free: 1-800-518-4726
  Hours: Mon-Fri, 7 a.m. to 9 p.m. EST
  E-mail: support@grants.gov

  Support for: PureEdge Forms, PureEdge with a Mac, Grants.gov Registration
Online Resources

- Overview of Electronic Submission
- Frequently Asked Questions
- Avoiding Common Errors
- Training Resources, Videos, Quick Reference Materials
DCCPS funding for research

DCCPS Research Portfolio for Fiscal Year 2007

Total Grants

- Applied Research: 8.5%
- Behavioral Research: 32.9%
- Cancer Survivorship Research: 5.6%
- DCCPS Office of the Director: 1.6%
- Epidemiology and Genetics Research: 48.5%
- Surveillance Research: 2.8%

Total Dollars
Selected Areas of Programmatic Emphasis

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

TREC
Transdisciplinary Research on Energetics and Cancer Centers

Centers of Excellence in Cancer Communication Research (CECCCR) Initiative

Tobacco Control Monograph Series

BiMPED
Biological Mechanisms of Psychosocial Effects on Disease

Decision Making in Cancer Screening

Small Business Innovation Research
SBIR/STTR Grant Program

Health Behavior Theory

TTurc
Transdisciplinary Tobacco Use Research Centers

Small Grants Program in Behavioral Research

smokefree.gov
Applied Cancer Screening Research

- Social and behavioral research to promote the use of effective cancer screening tests, and

- Strategies for informed decision making when evidence is uncertain (or multiple options are available)
Research Priorities
Applied Cancer Screening

Theory and methods, for example:
- Development and testing of theories not generally applied in cancer screening, including macro-level
- Role of habit in health behavior maintenance
- Cultural relevance of existing theoretical constructs

Decision making, for example:
- Effects of attributions on attitudes towards informed decision making
- Determine how genetic risk assessment should be incorporated into screening programs
Basic and Biobehavioral Research

- Basic research in social, cognitive, and psychological processes
- Biological mechanisms of psychosocial processes related to cancer control
- Development and testing of models and theories of health behaviors
Research Priorities
Basic and Biobehavioral Research

Basic behavioral research, for example:
• Research on health-related numeracy
• Methodology and measurement in behavioral science research

Biological mechanisms of psychosocial processes:
• Influences of the physiologic stress response on tumor biology
• What biological signaling pathways mediate such influences?

Theory testing and development, for example:
• Processes and mechanisms underlying risk perception
• Mediators and moderators of adaptation and coping
• Develop seamless communication infrastructure
• Increase access to and use of cancer information
• Improve consumer understanding of cancer information
• Enhance patient/provider interaction
Research Priorities
Health Communication & Informatics

• Increase access to and use of cancer information, for example:
  – Reframe behavioral interventions for health care settings
  – Design approaches for public awareness campaigns

• Improve consumer understanding of cancer information, for example:
  – Effective risk-based messages
  – Effective approaches to communicating scientific findings
Health Promotion Research

- Promotes research on behavioral prevention: diet, physical activity, energy balance, virus exposure, and sun exposure
- Effective clinical, environmental, and community-based intervention strategies
Research Priorities
Health Promotion Research

• Promotes research on behavioral prevention: diet, physical activity, energy balance, virus exposure, and sun exposure, for example:
  Identify mechanisms linking multi-level factors

• Effective clinical, environmental, and community-based intervention strategies, for example:
  Consider influence of contextual factors in diet and communication
Tobacco Control Research

- Generates new information about factors that influence tobacco use and addiction
- Creates and evaluate tools and interventions
- Applies, promotes, and disseminates evidence-based interventions in clinical and public health practice
Research Priorities
Tobacco Control

• Generates new information about factors that influence tobacco use and addiction, for example:
  • Methods for preventing tobacco use across cultures
  • Identifying determinants of relapse

• Understand and address tobacco-related health disparities, for example:
  Establish a translation mechanism for communication and interaction among networks and community advocacy groups
Before Contacting Program Staff…
Suggested Background Reading

  - Priorities
  - Current funding announcements
  - Abstracts of active grants
  - Publicly available data sets, other research resources

- **NIH Guide for Grants and Contracts**
Mechanism Speak (Old and New)

**Old**
- Investigator-initiated
- RFA/PA

**New**
- Parent FOA
- FOA

RFA – Request for Applications
PA – Program Announcement
FOA – Funding Opportunity Announcement