An Overview of F31/32 Grant Opportunities

MSPH Doctoral Committee and
Office of Research Resources
Mailman School of Public Health
Columbia University

Today's Session

- Introduction
- Preparing an Application
- F31 awards: Integrating all the elements
- Review process
- Importance of grantwriting groups
- Q and A

Today's Speakers

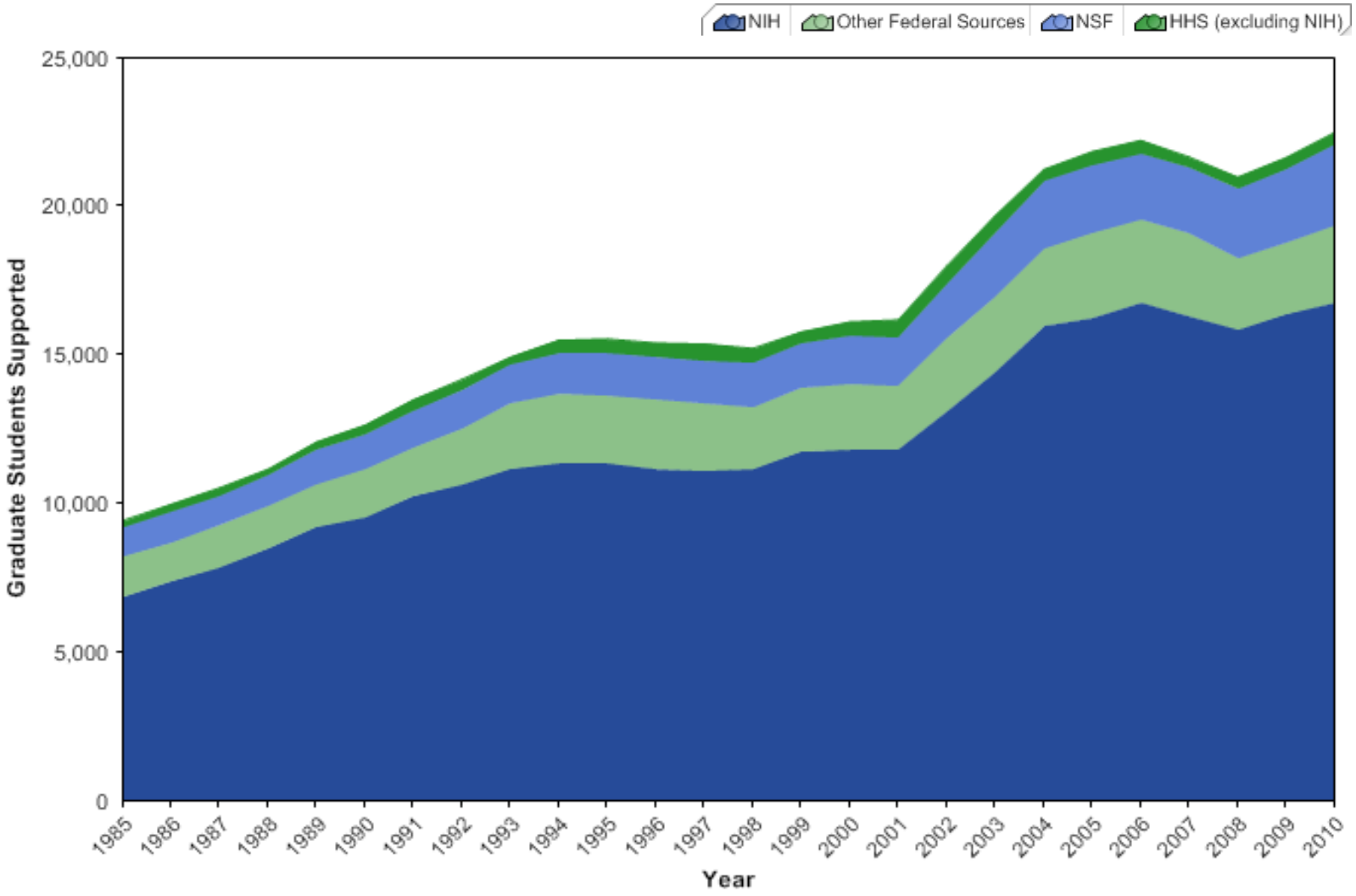
- Dr. Leslie Davidson
  - Professor of Epidemiology and Pediatrics
  - Director of Doctoral Programs in Epidemiology
- Dr. Ana Abraido-Lanza
  - Associate Professor of Sociomedical Sciences
  - Director Initiative for Maximizing Student Diversity (IMSD) Program

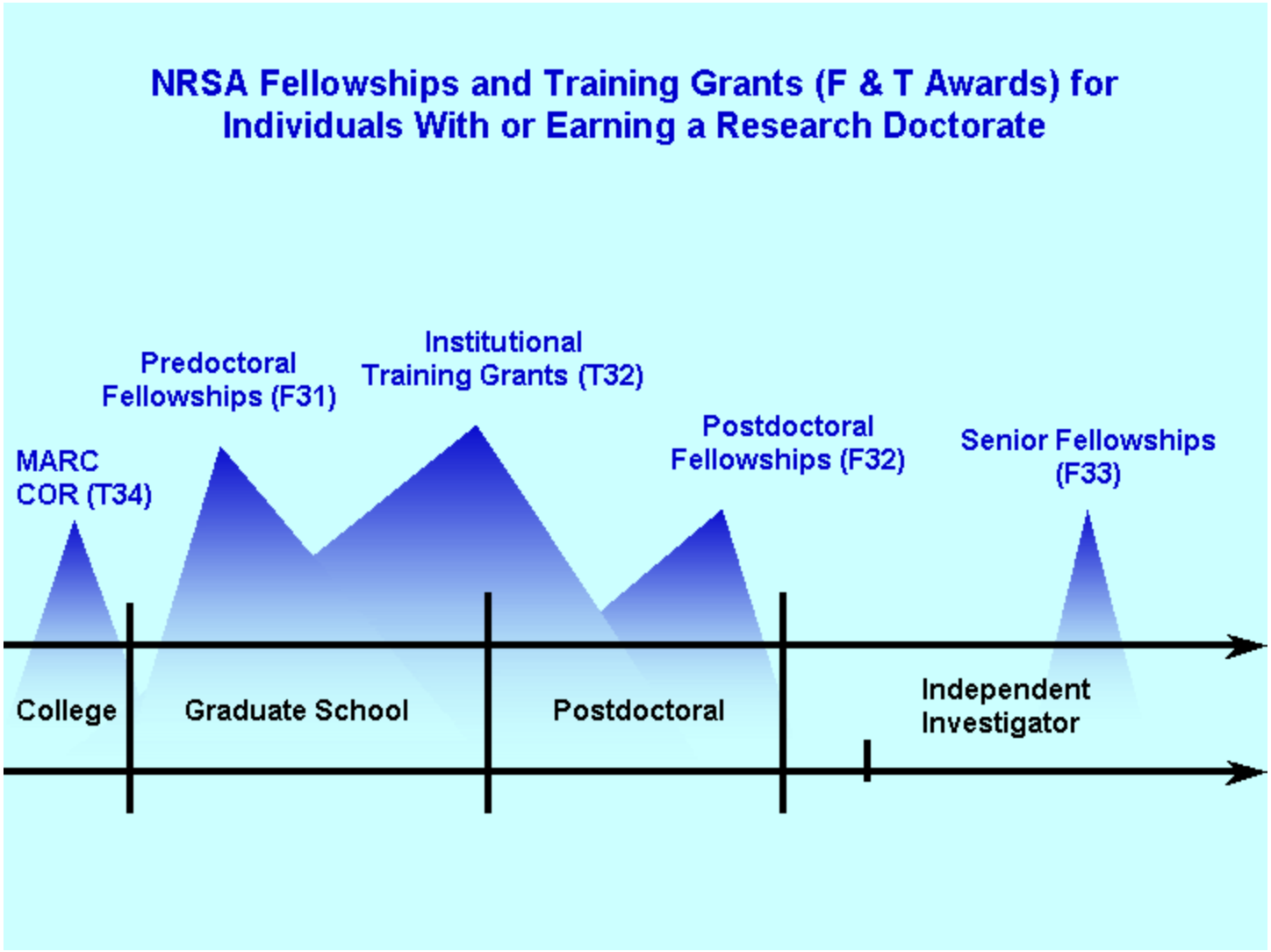
Introduction:
Dr. Pam Factor-Litvak

How to Pay for a Doctoral Degree

- Training Grants (T32)
- Personal Funds
- School Scholarships
- Other Sponsored Scholarships
- F31 Grants: Individual Predoctoral Fellows
- R36 Grants
- IMSD fellows (for students from underrepresented minorities

Primary source of federal support for full-time graduate students in the biomedical sciences




NRSA Fellowships and Training Grants (F & T Awards) for Individuals With or Earning a Research Doctorate
Predoctoral Fellowships (F31)
Institutional Training Grants (T32)
MARC COR (T34)
Postdoctoral Fellowships (F32)
Senior Fellowships (F33)
College
Graduate School
Postdoctoral
Independent Investigator

Participating Institutes (F31s- PA-11-111)

- National Cancer Institute (NCI)
  National Human Genome Research Institute (NHGRI)
  National Institute on Aging (NIA)
  National Institute on Alcohol Abuse and Alcoholism (NIAAA)
  National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)
  National Institute of Biomedical Imaging and Bioengineering (NIBIB)
  Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)
  National Institute on Deafness and Other Communication Disorders (NIDCD)
  National Institute on Dental and Craniofacial Research (NIDCR)
  National Institute on Drug Abuse (NIDA)
  National Institute of Mental Health (NIMH)
  National Institute of Neurological Disorders and Stroke (NINDS)

Participating Institutes (F31-Diversity- PA-11-112)

- National Cancer Institute (NCI)
  National Eye Institute (NEI)
  National Heart, Lung, and Blood Institute (NHLBI)
  National Human Genome Research Institute (NHGRI)
  National Institute on Aging (NIA)
  National Institute on Alcohol Abuse and Alcoholism (NIAAA)
  National Institute of Allergy and Infectious Diseases (NIAID)
  National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)
  National Institute of Biomedical Imaging and Bioengineering (NIBIB)
  Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)
  National Institute on Deafness and Other Communication Disorders (NIDCD)
  National Institute on Dental and Craniofacial Research (NIDCR)
  National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)
  National Institute on Drug Abuse (NIDA)
  National Institute of Environmental Health Sciences (NIEHS)
  National Institute of General Medical Sciences (NIGMS)
  National Institute of Mental Health (NIMH)
  National Institute of Neurological Disorders and Stroke (NINDS)
  National Institute of Nursing Research (NINR)
  National Center for Complimentary and Alternative Medicine (NCCAM)

Eligibility (F31)

- **Skills, knowledge**, and **resources** necessary to carry out the proposed research as the Project Director/Principal Investigator
- **Citizen or a non-citizen national** of the U.S. **lawfully admitted for permanent residence**
- At **dissertation research stage** of their training
- Evidence of **high academic performance** in the sciences and substantial **interest in a research area of high priority** to the participating Institutes.
- **Enrolled in a PhD or equivalent research degree** at a domestic or foreign research institution.

Preparing an Application:

F31s (Parent award)

- Link to announcement: http://grants.nih.gov/grants/guide/pa-files/PA-11-111.html (expires May 8 2014 but expect renewal)
- Up to 5 years of funding aggregate from NRSA
- Fellowship awards often limited to 2-3 years of funding
- Not all institutes participate
- Standard deadlines 3 times yearly (HIV/AIDS related are different)
- Must pursue research and training full time
- Must address priorities of the institute
- Individual eligibility: must be at dissertation research stage of doctoral career

Diversity F31s

- Link to announcement: http://grants1.nih.gov/grants/guide/pa-files/PA-11-112.html (Expires 5-8-2014, but expect renewal)
- Up to 5 years of funding aggregate from NRSA
- Fellowship often limited to 2-3 years (check Institute)
- Many institutes participate
- Standard deadlines as for parent F31s
- Requires letter on institutional stationery with official signature certifying eligibility
- Must pursue research and training full time
- Applicants do *not* need to be at the dissertation research stage of their doctoral program

Diversity Eligibility

- Individuals from underrepresented racial/ethnic groups
  - The following racial and ethnic groups have been shown to be underrepresented in biomedical research: African Americans, Hispanic Americans, American Indians, Alaska Natives, Native Hawaiians, and other Pacific Islanders. In addition, it is recognized that under-representation can vary from setting to setting and individuals from racial or ethnic groups that can be convincingly demonstrated to be underrepresented by the grantee institution are eligible for support under this program (http://www.nsf.gov/statistics/showpub.cfm?TopID=2&SubID=27).
- Individuals with disabilities
- Individuals from socially, culturally economically, or educationally disadvantaged backgrounds that have inhibited their ability to pursue a career in health-related research- *these are not usually awarded past the undergraduate level*

Success rates for F31 applications: 2000-2012

Year	# reviewed	# awarded	Success Rate (%)
2000	551	285	52
2001	698	408	59
2002	729	389	53
2003	972	414	43
2004	1227	478	39
2005	1425	446	31
2006	1651	500	30
2007	1611	552	34
2008	1500	518	35
2009	1377	499	36
2010	1561	480	31
2011	1498	487	33
2012	1770	505	29

Success rates for F31 applications by institute: 2012

NIH Institute/Center	# reviewed	# awarded	Success Rate (%)
NCI	333	95	28.5
NIA	128	40	31.3
NIAAA	51	29	56.9
NIDCD	70	29	41.4
NIDCR	31	13	41.9
NINDS	390	95	24.4
NIDA	115	38	33.0
NIMH	284	61	21.5
NICHD	37	9	24.3
NIBIB	7	1	14.3
NIAMS	11	4	36.4
NHGRI	2	2	100.0

Success rates for F31-Diversity applications by institute: 2012

NIH Institute/Center	# reviewed	# awarded	Success Rate (%)
NCCAM	17	5	29.4
NEI	13	6	46.2
NHLBI	37	11	29.7
NIAID	58	12	20.7
NIDDK	31	9	29.0
NIEHS	4	1	25.0
NIGMS	72	20	27.8
NINR	78	24	30.8

F31 Application Receipt Dates and Review Schedule

	Application Receipt Date	Initial Review Date	Council Review Date	Earliest Possible Start Date
Receipt Cycle 1	April 8 (AIDS/AIDS-related: May 7)	June/July	Sept/Oct	December
Receipt Cycle 2	August 8 (AIDS/AIDS-related: September 7)	Oct/Nov	Jan/Feb	April
Receipt Cycle 3	December 8 (AIDS/AIDS-related: December 7)	Feb/March	May/June	July

Which Institute?

- Determine which NIH institute is the best fit for your project (discuss with mentor).
  - See **Table of IC-specific Information, Requirements and Staff Contacts** in PA-11-111 or PA-11-112
- Check NIH Reporter for funded F31s by that Institute
- Contact fellowship program officer (PO) at the Institute(s) by phone to discuss proposal and fit with the Institute's scientific goals
  - Contact Info: http://grants.nih.gov/grants/guide/contacts/parent_F31.html http://grants.nih.gov/grants/guide/contacts/parent_F31_diversity.html
- Refer to the conversation and the PO by name in application Cover Letter

Talking to NIH Program Officer

Steps:

1. Find appropriate PO at your institute
2. Send brief email asking to set up a time to discuss your proposal
   - Attach a 1-page specific aims or a brief description training goals, sponsors, and research idea
3. On the phone, briefly review your project and training goals
4. Ask specific questions about your project:
   - Is research in line with the Institute's priorities? (read website first)
   - Advice about the training aims? (E.g., Do they support projects that use CBPR? Qualitative vs. quantitative approaches?)
   - Any unique issues or concerns about your project (e.g., sponsor/co-sponsor)?
   - Any other advice?

Training Goals

- Training grant F31 (not R36)
  - Training central component
- Training dictates
  - Mentors (who provide training)
  - Research project (uses the new skills, methods, literature, etc. in which you are getting trained)
- Must provide concrete areas for training.
  - For example: Methods (meta-analysis, structural equation modeling, qualitative coding, CBPR); new literatures.
- How do you obtain this training?
  - Coursework: check out summer courses (e.g., Michigan's ICPSR, Columbia's Epidemiology & Population Health Summer Institute)
  - Mentorship
  - Seminar series: CPRC, HIV Center grand rounds, etc.
- Research project must use training
  - E.g., must be a meta-analysis if you get training in that area

Training Forms

- Goals for NRSA Fellowship Training and Career – 1 page
- Activities planned under the award (e.g., research, coursework, teaching) – 1 page
  - Tables can be a good way of showing this information
- Selection of co-sponsors and institution – 1 page

Session Two

Choosing a sponsor/additional co-sponsors

- Sponsor is the Senior/Key Person 1 (Sponsor).
  - Must include: her/his information (up to 6 pages) and biosketch. You may have to assist in preparing this material.
- Sponsor must be:
  - Active investigator in area of research training
  - Committed to your training and
  - Supervising the proposed research
  - Must document availability of research support and facilities
    - These must map onto your training plan and activities as well as research
- If sponsor is a junior faculty member, you might benefit from a **Co-Sponsor** (tenured faculty member with relevant research and training experience - funded by that institute)
- May want a mentoring **team** (sponsor is the lead) to cover all training and research needs

Budget

- Budgets are straightforward. See:
  - http://grants.nih.gov/grants/guide/notice-files/NOT-OD-12-033.html [note: updated 2012, 2013 not released yet]
  - Standard NIH stipend in FY 2012 is $22,032
  - Tuition and Fees (60% of level requested up to $16,000); In other words, NIH will cover up to a maximum of $16K
  - Institutional allowance: health insurance, research supplies, equipment, books, travel to meetings ($4,200)
  - No indirect costs for the institution
  - No funds for research expenses (data collection, etc.)

Letters of Recommendation (3-5)

- NOT mentor/sponsor (since s/he writes statement about your qualifications in the grant)
- Usually the Departmental chair, cluster director (if applicable), Director of Doctoral Program, thesis committee member who is not a sponsor, or faculty research collaborator
- Choose someone who knows you well, who likes you, and for whom you have done good work
- Must use fellowship-specific form and be submitted electronically: https://commons.era.nih.gov/commons/reference/submitRefereeInformation.jsp

F31 awards:
Integrating all the elements:

Sponsor generated material
(6 pages, uploaded on SF424 in "Other Attachments")

- Research Support Available [Attach] tailor to specific needs
- Previous Trainees [Attach], want record of prior mentorship
- Training Plan, Environment & Research Facilities [Attach]
- # of Trainees Supervised During Fellowship [Attach] (not too many)
- Applicant's Qualifications and Potential for Research Career [Attach] (this is critical)

Fellow Biosketch

- 4 pages
  - Personal statement
- What goes into a personal statement
  - How does it support the goals of the research
- How do the other components support the personal statement
- Review biosketch examples from successful applicants

Sponsor/Mentor Biosketches

- 4 pages
  - Personal statement
- What goes into a personal statement
  - How does it support the goals of the research
  - How does it support the mentor role
  - Specific to application and applicant mentee
- How do the other components support the personal statement
- Review mentor biosketches

Developing the Research Strategy Section

- Feasibility of the plan
- Develop design and problem solve issues
- Outline the whole structure
  - One paragraph/major idea
- Complete the whole draft before editing
- Edit and edit – and make the format highlight the key ideas
- Don't pack the page
- Leave time to polish the writing

Specific Aims- Formatting matters

Although the binding of peperoni (Pe) to pizza (Pi) has been well established, the nature of the binding cite (BS) remains elusive, as does the relation between Pe binding and the reward experienced by ingesting food. In this study we sought to explore both of these issues. Our hypothesis is that Pe will bind to Pi and the nature of that binding will affect the reward value of the product. First, will will determine the binding characteristics of Pe and other ligands (LIG) to Pi. We will explore several variable including (a) which Pi surface is exposed, (b) the method of target preparation, and (c) nature, concentration, and size of the ligands. Second, we will use a quantitative structure-activity model and show that there is a strong relation between Pi conformation and reward value. We will use a rodent model to examine how variables explored in our first aim impact on the reward value of the product.

From Fischer BA and Zigmond MJ. An Introduction to Grant Writing. 2008

Specific Aims

Although the binding of pepperoni (Pe) to pizza (Pi) has been well established, the nature of the binding site remains elusive, as does the relation between Pe binding and the reward experienced by the individual who is ingesting the food. In this study we sought to explore both of these issues.

***Hypothesis**: Pe will bind to Pi at a single site and the affinity of that binding for a given Pi substrate will be inversely related to the reward value of the product, reward being defined in an animal model as the number of level presses an animal will make to obtain a Pe-Pi pellet*

Aim 1: To determine the binding characteristics of Pe and other ligands to Pi. We will explore several variables including (a) which Pi surface is exposed (dorsal versus ventral), (b) the method of target preparation (including baking and boiling), and (c) nature, concentration, and size of the Pe ligands.

Aim 2: To use a quantitative structure-activity model to determine the relation between Pi conformation and reward value. We will use a rodent model to examine how variables explored in Aim 1 impact on the reward value of the product, with reward defined in terms of rate of lever pressing.

Research Training Plan -1

Uploaded in Section B of Fellowship Supplemental Form

- 1. Intro (1 page, only included in resubmissions)
- 2. Specific Aims (1 page)
- 3. Research Strategy (6 pages)
  - a. Significance
  - b. Innovation (only if specified in FOA or by Institute)
  - c. Approach (Research Design & Methods)
    - Overall strategy, methodology, analyses
    - Potential problems, alternative strategies, benchmarks for success
    - If developmental, describe strategy to establish feasibility
    - Mention any hazards and discuss precautions (if applicable)
    - Include courses you plan to take to support the research training
- 4. Human Subjects and Inclusion etc.

Review process:

Review Criteria

- F31s are training, not research grants
- Reviewers focus on
  - Applicant fellow
    - Potential for a productive career
    - Need for the proposed training
  - Degree to which the research training proposal, the sponsor, and the environment will satisfy applicant's needs.

Review Criteria (cont'd)

- Fellowship applicant
- Sponsors, Collaborators, and Consultants
- Research Training Plan
- Training Potential
- Institutional Environment & Commitment to Training
- Additional criteria (among others)
  - Human subjects, budget, training in responsible conduct of research

Scoring

- Only top half of all applications are "discussed"
- All receive a score
- All receive a written critique
- Priority Score (1 to 9) (see handout)
  - 1 to 3 High Impact
  - 4 to 5 Moderate Impact Very good - good
  - 7 to 9 Low Impact
  - Note: 9-point system effective Jan 2009
- Percentile: Varies (percentile of all applications in current and two previous rounds)

The Review Group

- 10-12 Members
- "Standing" committee or Special Emphasis Panel
- Reviewers
  - Primary and Secondary: read grant, write critiques, present application to group
  - Tertiary: reads grant, writes brief critique, adds additional comments as necessary
- Discussion (all members)
- Attempt at "consensus"; dissenting opinions
- Assignment of score (all members)
- Reviewers are "blind" to final score and funding decisions

The NIH Review Process

- eRA Commons notifications via email
- Assignment to Scientific Review Group (SRG)/Study Section
- Review of applications
- Notification
  - Priority Score, percentile (not always calculated)
  - Posting of summary statement reviews (critiques) may take several weeks
- Advisory Council

Award Factors

- Scientific merit
- Program priorities
- Availability of funds
- Extremely rare to receive funding at first submission
- Resubmissions usually go to same review group, but not always to same reviewers

Other tips

- Get feedback!
- Speak to program officer
- Carefully address reviewers' comments
  - Address comments in resubmission
- Persistence pays
  - Don't get discouraged

Peer review

- NIH Mock Study Section Video
  - http://www.drg.nih.gov/Video/Video.asp

R36: a dissertation grant

- Offered by AHRQ: Health Services Research Dissertation Awards
- http://www.ahrq.gov/funding/training-grants/rsrchtng.html
- and by some other NIH institutes
- Check if your institute offers them
- This is a dissertation grant, not a training grant unlike the F31
- Time frame is shorter than F31: varies by institute
- Turnaround time is quicker
- Different deadlines

AHRQ R36

- http://grants.nih.gov/grants/guide/pa-files/PA-12-256.html
- Expires August 2 2015
- Can be from 9-17 months
- Must be ABD by the time the grant funding begins

R36's at NIH

- To support dissertation research costs of students in accredited research doctoral programs in the United States (including Puerto Rico and other U.S. territories or possessions). Dissertation awards are not renewable.

R36: NIMH example (diversity)

- 12-24 months Stipend and up to $15,000
- Expires Jan 8 2015
- http://grants.nih.gov/grants/guide/pa-files/PAR-12-103.html

Grant writing groups

What R^2 Can Do For You

- If there is enough interest, set up small grant writing groups (4-5 members)
- Members would bounce ideas and text off each other, and critique
- R^2 facilitate groups

Q & A

For Further Information

- Office of Research Resources

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