### **Overview of Funding at NIH**

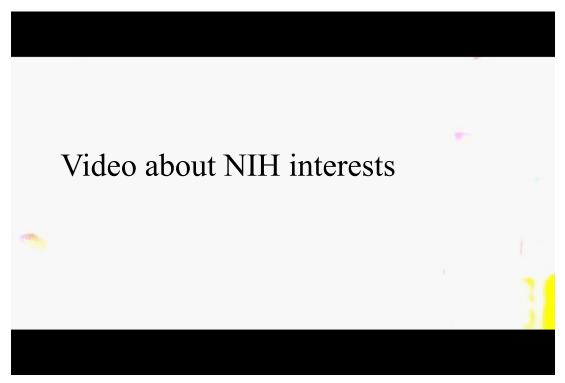


Michelle C. Dunn

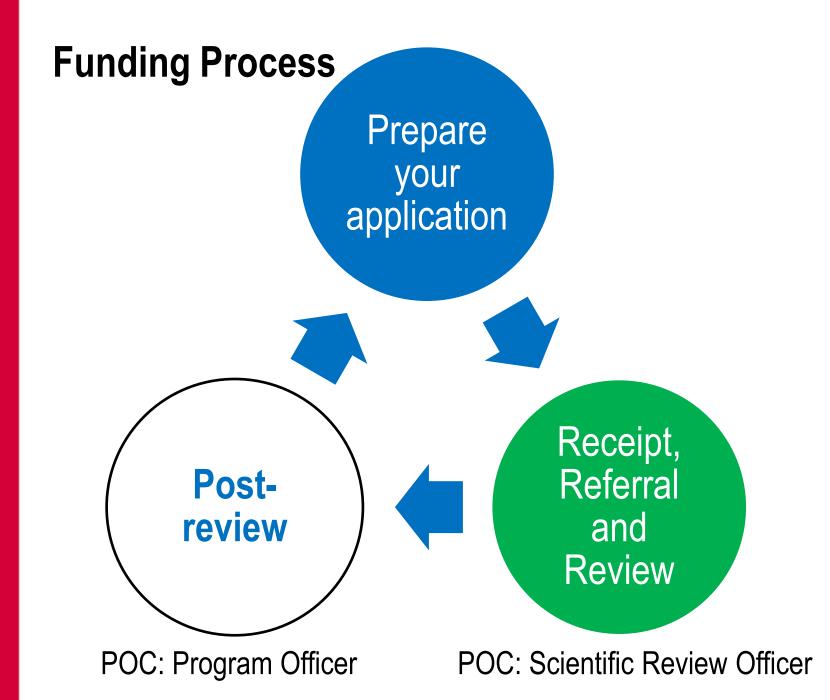
Program Director, National Cancer Institute JSM 2010, July 28 – Aug 5



# What is NIH interested in funding?



- Health research, which can be
  - Basic, clinical, or translational
  - Medical or behavioral
- (including) Statistical methodology or applications that contribute to health research



#### Preparing your application

STEP ]

Decide on your MECHANISM and FUNDING OPPORTUNITY Announcement

STEP 2

Refine your
RESEARCH
PLAN

 $_{\rm STEP}3$ 

Write your COVER LETTER

#### **STEP 1: Common Research Grant Mechanisms**

	Description	Duration	Direct costs	page limit
R01	Traditional Research Project Grant	Typically 3-5 yrs	Typically ≤\$250k/yr	12
R03	Small Research Grant	≤2 yrs	\$50k/yr	6
R21	<ul><li>Exploratory/Development Grant</li><li>Pilot or feasibility studies</li><li>high risk/high return</li></ul>	≤2 yrs	\$275k over 2 yrs	6
R15	<ul> <li>AREA Grant</li> <li>Supports research at institutions receiving little NIH funding</li> <li>Strengthens the research environment</li> <li>Exposes students to research</li> </ul>	≤3 yrs	\$300k over 3 yrs	12

# **STEP 1: Common Training Grant Mechanisms**

	Description	length	Career level	eligibility
K25	Mentored Quantitative Research Development Award •Statistics, math, CS, engineering, physics •Little or no background in biomedicine •Must identify a mentor	3-5 yrs	Any w/ full-time appt	US citizens or PR
K99/ R00	<ul> <li>Pathway to Independence Award</li> <li>Within 5 yrs of terminal degree</li> <li>Mentored + independent support</li> </ul>	1-2 yrs + 3 yrs	early	any
T32	Ruth Kirschstein National Research Service Award •Institutional award •Supports training •Stipends, tuition, travel, health insurance		pre and post doc	US citizens or PR

# **STEP 1: Funding Opportunity Announcements**

Announcement Type	Description
Omnibus/Parent	<ul> <li>formerly called unsolicited research grants</li> <li>exist for most grant mechanisms (but NCI doesn't participate in R03 and R21 omnibus)</li> </ul>
RFA	Has a set-aside pot of money
PA	<ul> <li>Statement of interest by the institute</li> <li>Important at funding but not necessarily at review</li> <li>A separate review may occur</li> </ul>
Other	<ul><li>SBIR contracts</li><li>ARRA initiatives</li></ul>

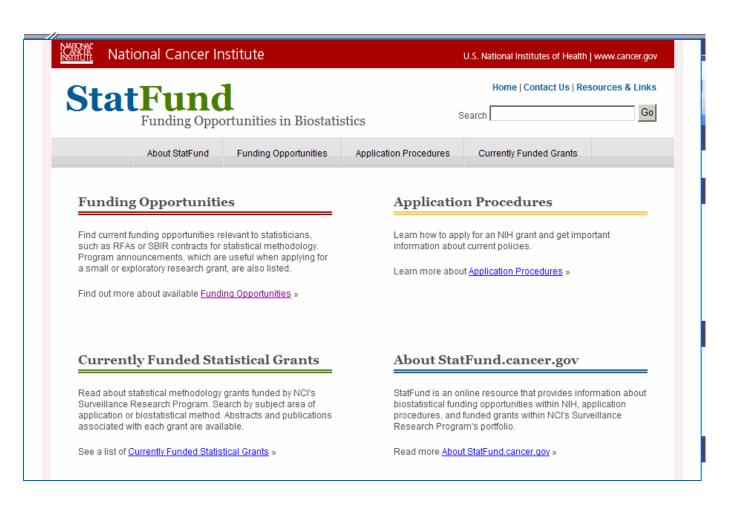
# STEP 2: Refine your Research Plan

Seek Collaborators – bench scientists, clinicians, other



### **STEP 2: Refine your Research Plan**

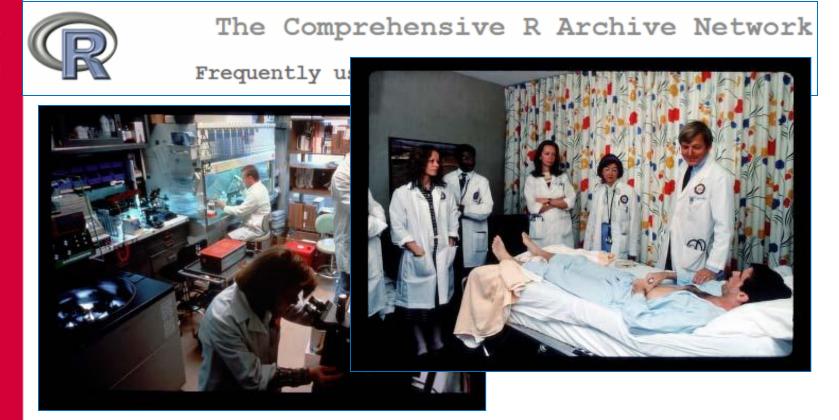
Seek advice from mentors and resources such as websites



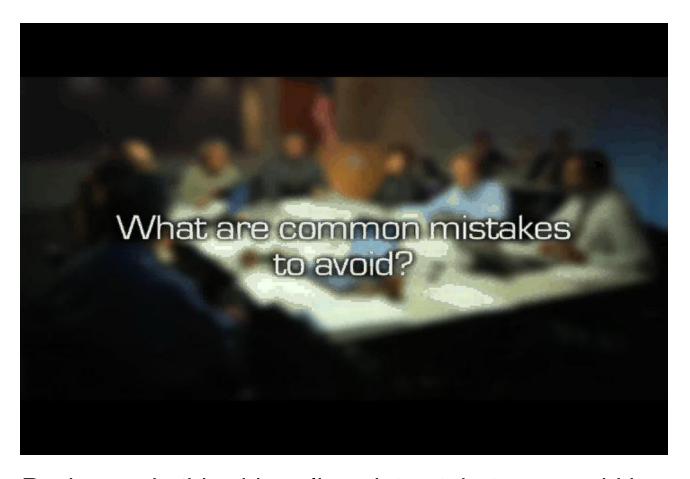
# **STEP 2: Refine your Research Plan**

#### Think about dissemination and impact

- Will you hire programming assistance?
- How will your research to be useful at the bench or at the bedside?



#### **STEP 2: Common Mistakes to Avoid**



Reviewers in this video clip point out that over-ambitiousness and lack of clarity are two mistakes to avoid.

#### **3: Preparing Your Cover Letter**

Suggest a study section

- BMRD
- EPIC, ACE, GCAT

Suggest a funding institute

- NCI, NIGMS, NIAID, NHLBI,...
- Primary and secondary

Do NOT name reviewers

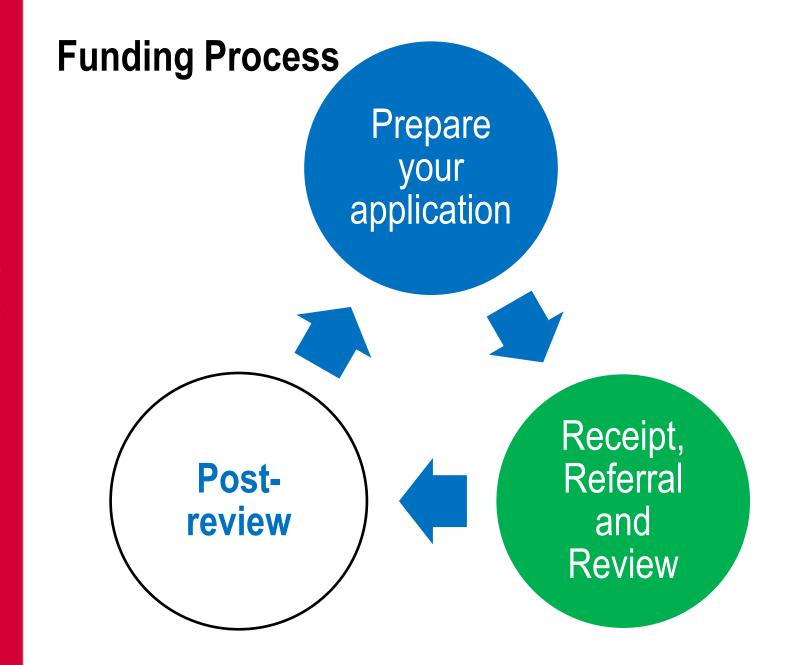
T. BayesR. Fisher

Other

 Cite continuous submission eligibility

#### **Submission Due Dates**

- Standard due dates occur 3 times per year (Feb, June, October for new R01 submissions)
- Your institution may set earlier due dates (technically the institution is the applicant)
- RFAs, PAs can have non-standard due dates
- Exceptions for study section members and new investigators



#### **CSR:** Receipt, Referral, and Review

- Most applications go to CSR, which does referral and review for all of NIH
- Scientific Merit Review: Study Section Meeting
- To view a mock review: search "peer review revealed"

### What does the study section look for?

significance, investigator, innovation, approach, and environment

- Is there enough preliminary work to show that there is a high probability of success?
- If this research is successful, how will it change the state of science?
- Is this approach reasonable and innovative?

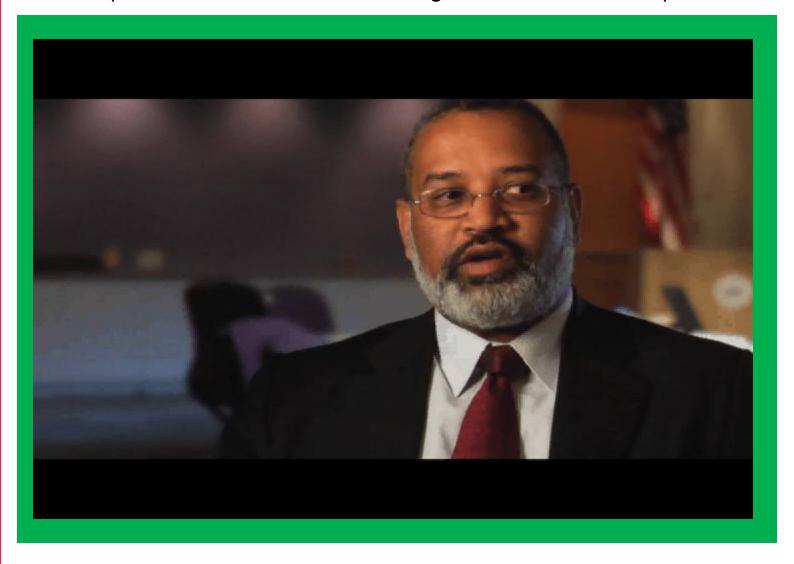
### What makes a good grant proposal?

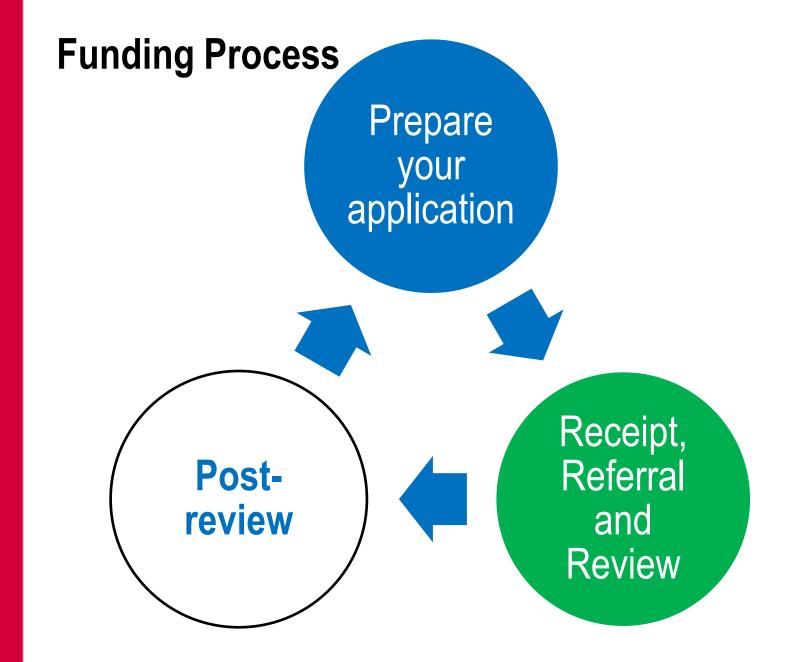
(Videos where two reviewers give opinions)

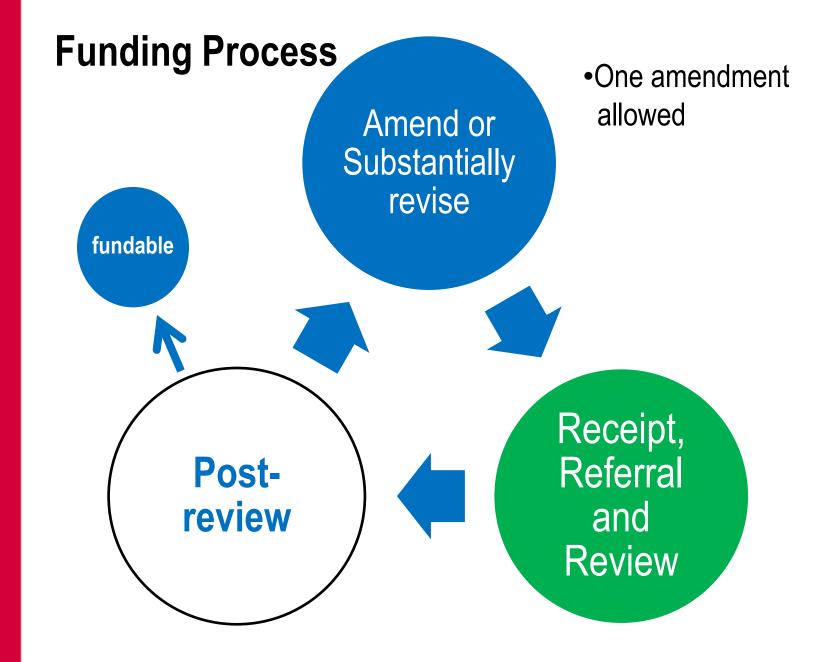


### What makes a good grant proposal?

(Information about accessing videos on slide 29)







### **Funding Decisions**

- Two levels of review:
  - 1) Scientific Review by the study section
  - 2) Institute's Council
- Decisions based on
  - 1) Institute priority
  - 2) Availability of funds
  - 3) Scientific Merit

# **Payline**

- A "cut-off" raw score or percentile
  - separates applications into those likely or unlikely to be funded
  - an approximation of roughly where funding will be
  - not a guarantee of funding or of non-funding
- R01 and other mechanisms (depending on the Institute) are percentiled
  - Percentiling is done for each study section by ranking the overall impact scores for a given round and the two previous rounds
  - > Removes the "tough study section" effect
  - In a given round, study sections which review a larger number of applications will have a larger number fall below a payline

# **Payline Facts**

- 1) Varies by Institute
- 2) Varies by amendment status (at some Institutes)
- 3) Same for all study sections
- 4) Different for new or early stage investigator R01s

### **New Investigators**

- Has not previously received a significant NIH award
- New category: Early Stage Investigator (ESI)



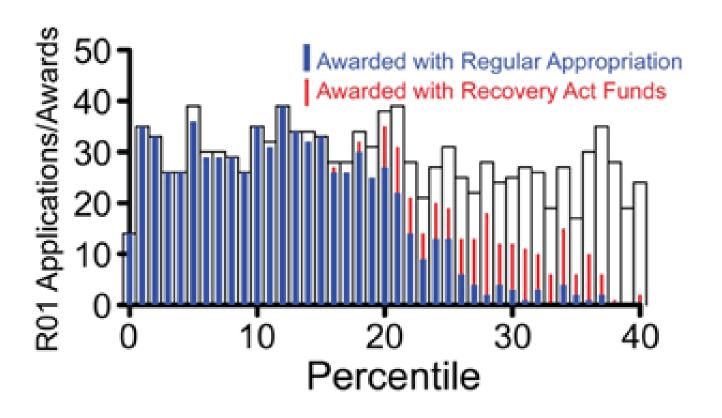
- New Investigator R01 (called \*R01):
  - grouped at review
  - special (better) NI/ESI payline
  - Some Institutes, such as NHLBI, have a better R01 payline for ESI only

<sup>\*</sup> less than 10 years since a terminal research degree or medical residency

# **Paylines for Large Institutes (FY 2010)**

Institute	R01 (%ile)	*R01 (%ile)	R21 (varies)	R03 (varies)	R15 (raw)
NCI	15	20	15%ile	30 raw	29
NIAID	11	16	31 raw	31 raw	22
NHLBI	16 for A0 12 for A1 10 for A2	+5 (for ESI only)	16%ile	16%ile	30
NIGMS	Does not	publish	paylines		

### **NIGMS FY09 R01 Applications**



Applications reviewed (open rectangles) and funded (solid bars).

Blue bars: supported using regular appropriated funds.

Red: supported using Recovery Act funds (2-year awards).

From the NIGMS Feedback Loop post December 10, 2009.

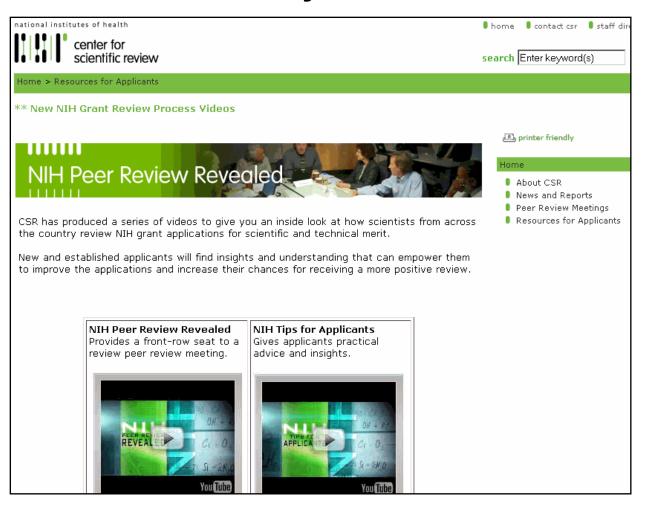
# **Once Selected for Funding**

- Just-In-Time: updated other support, IRB approvals
  - Often automatically requested by eCommons
  - Does not necessarily imply funding
- Progress Reports: due yearly
  - Publications must be submitted to Pub Med Central
- Supplements
  - Two types: administrative, competitive
  - Ask about minority or re-integration administrative supplements
- Competitive Renewal (every 3-5 years)

# More info: www.statfund.cancer.gov

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Surveillance	t statistical methodology e Research Program. Se or biostatistical method. with each grant are avai	arch by subject area of Abstracts and publications	biostatistical fun	nline resource that provides informat ding opportunities within NIH, applica funded grants within NCI's Surveilla am's portfolio.	ation	

### More info: mock study section videos



- •For videos from which clips were taken for this presentation cms.csr.nih.gov/ResourcesforApplicants/InsidetheNIHGrantReviewProcessVideo.htm
- Find videos by searching "NIH grant process revealed"

### More info: Program Officials/Directors

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- NIAID: Misrak Gezmu <u>mgezmu@niaid.nih.gov</u>
- For contacts at other institutes, email Michelle