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Overview of Funding at NIH

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Program Director, National Cancer Institute

JSM 2010, July 28 – Aug 5

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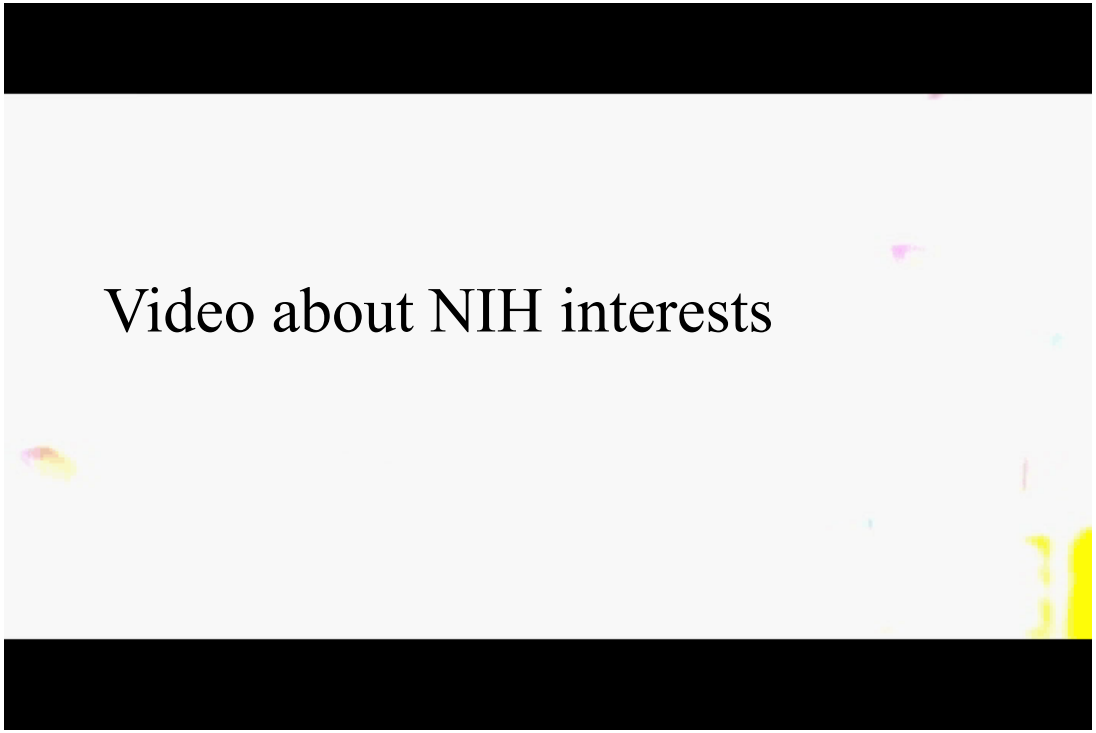
What is NIH interested in funding?



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

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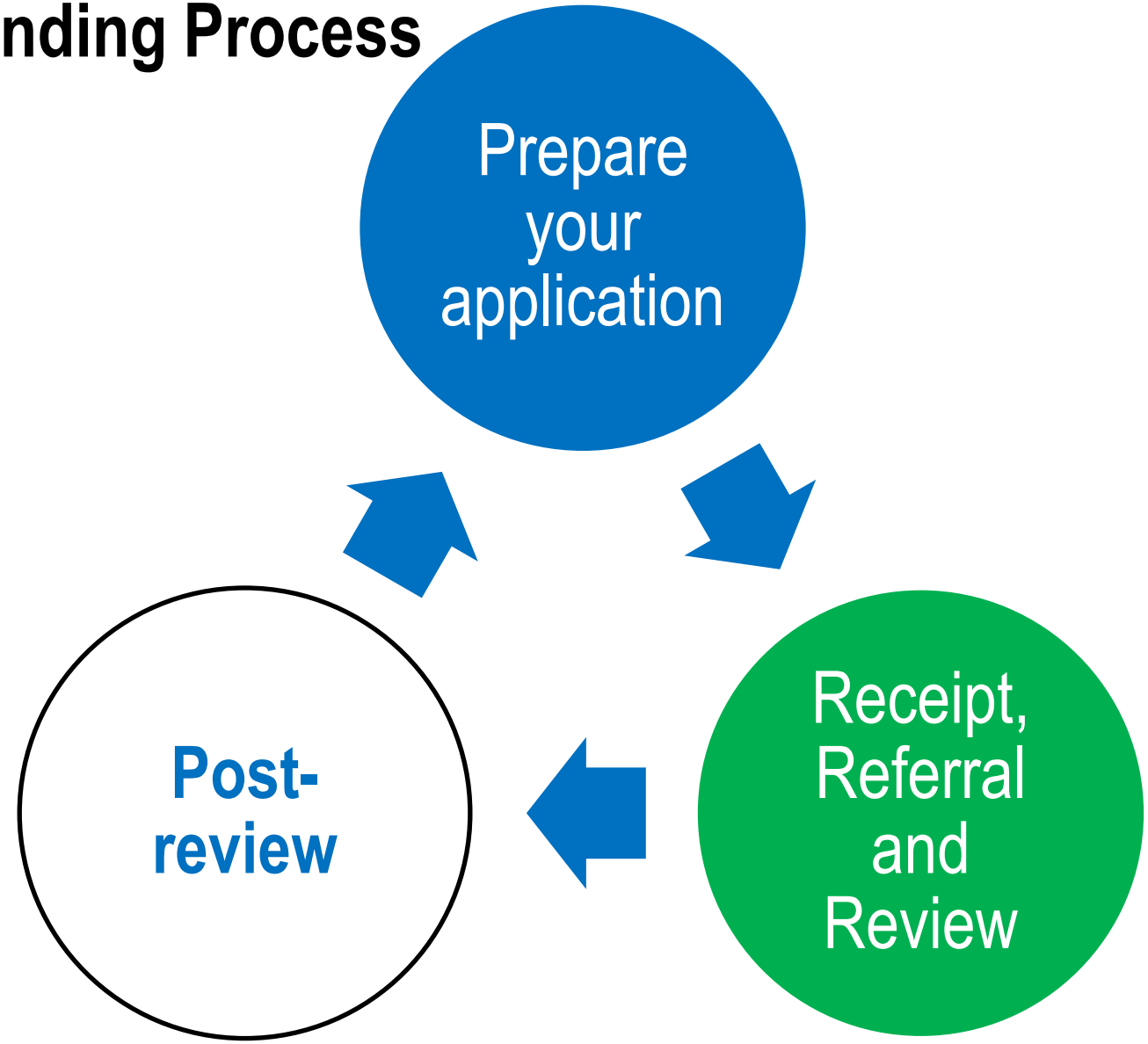
Funding Process



POC: Program Officer

POC: Scientific Review Officer

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Preparing your application

STEP 1

Decide on your MECHANISM and FUNDING OPPORTUNITY Announcement

STEP 2

Refine your RESEARCH PLAN

STEP 3

Write your COVER LETTER

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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	Exploratory/Development Grant •*Pilot or feasibility studies* •*high risk/high return*	≤2 yrs	$275k over 2 yrs	6
R15	AREA Grant •*Supports research at institutions receiving little NIH funding* •*Strengthens the research environment* •*Exposes students to research*	≤3 yrs	$300k over 3 yrs	12

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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	Pathway to Independence Award •*Within 5 yrs of terminal degree* •*Mentored + independent support*	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

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STEP 1: Funding Opportunity Announcements

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

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STEP 2: Refine your Research Plan

Seek Collaborators – bench scientists, clinicians, other statisticians

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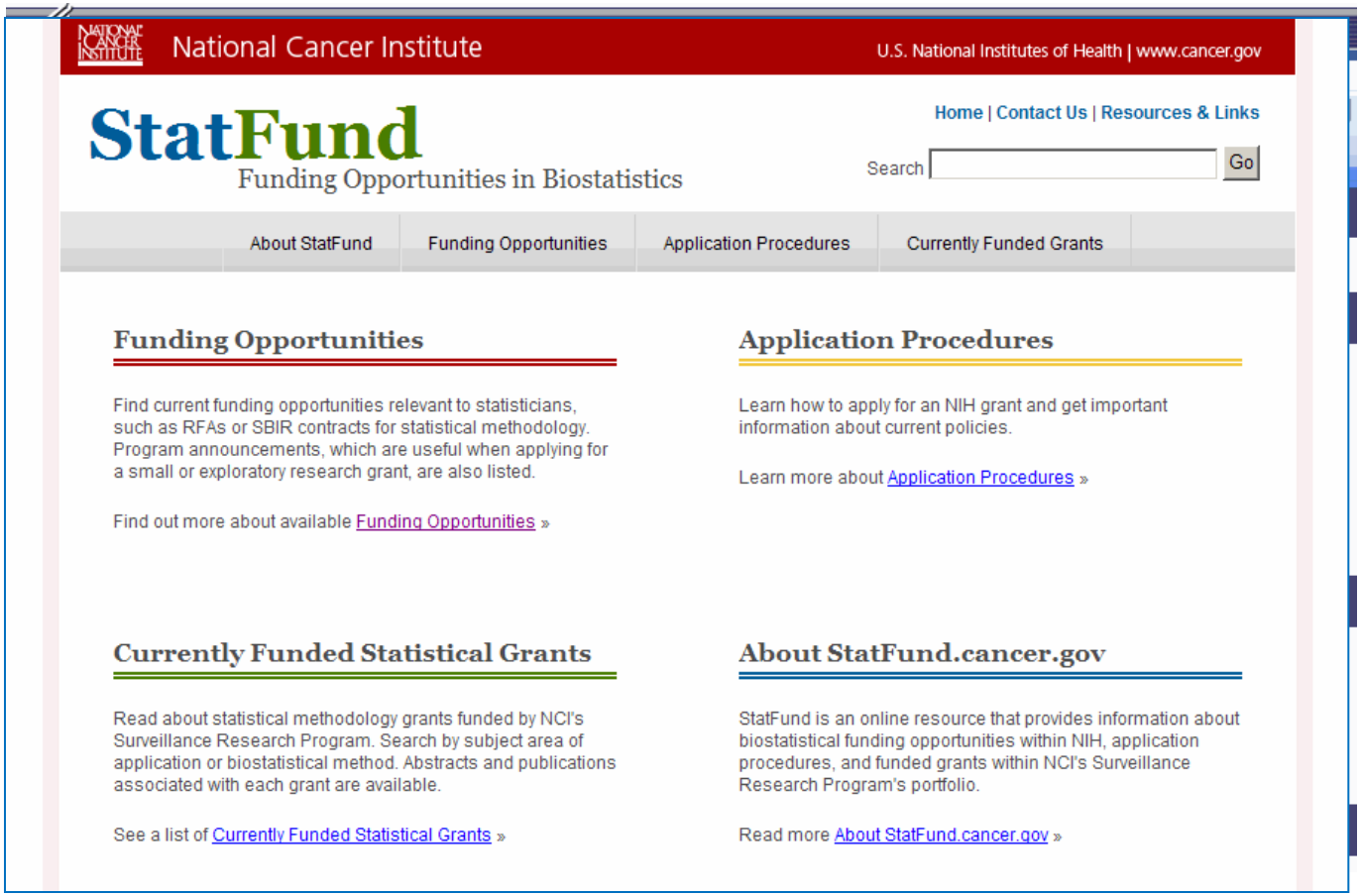
STEP 2: Refine your Research Plan

Seek advice from mentors and resources such as websites



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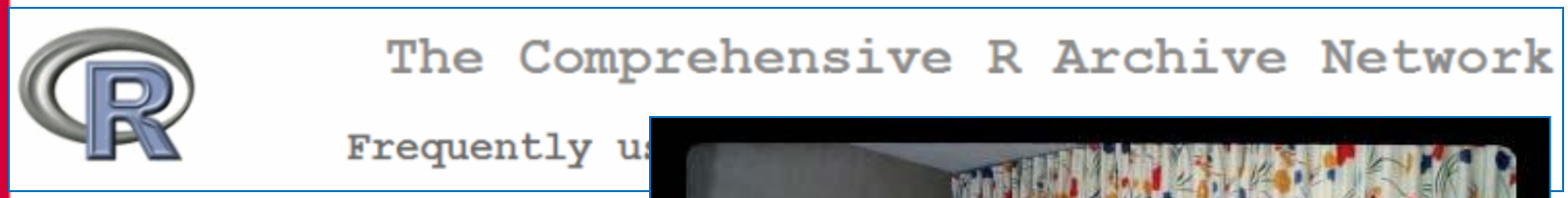
STEP 2: Refine your Research Plan

Think about dissemination and impact

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



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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.

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STEP 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. Bayes~~ • ~~R. Fisher~~
Other	• Cite continuous submission eligibility

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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

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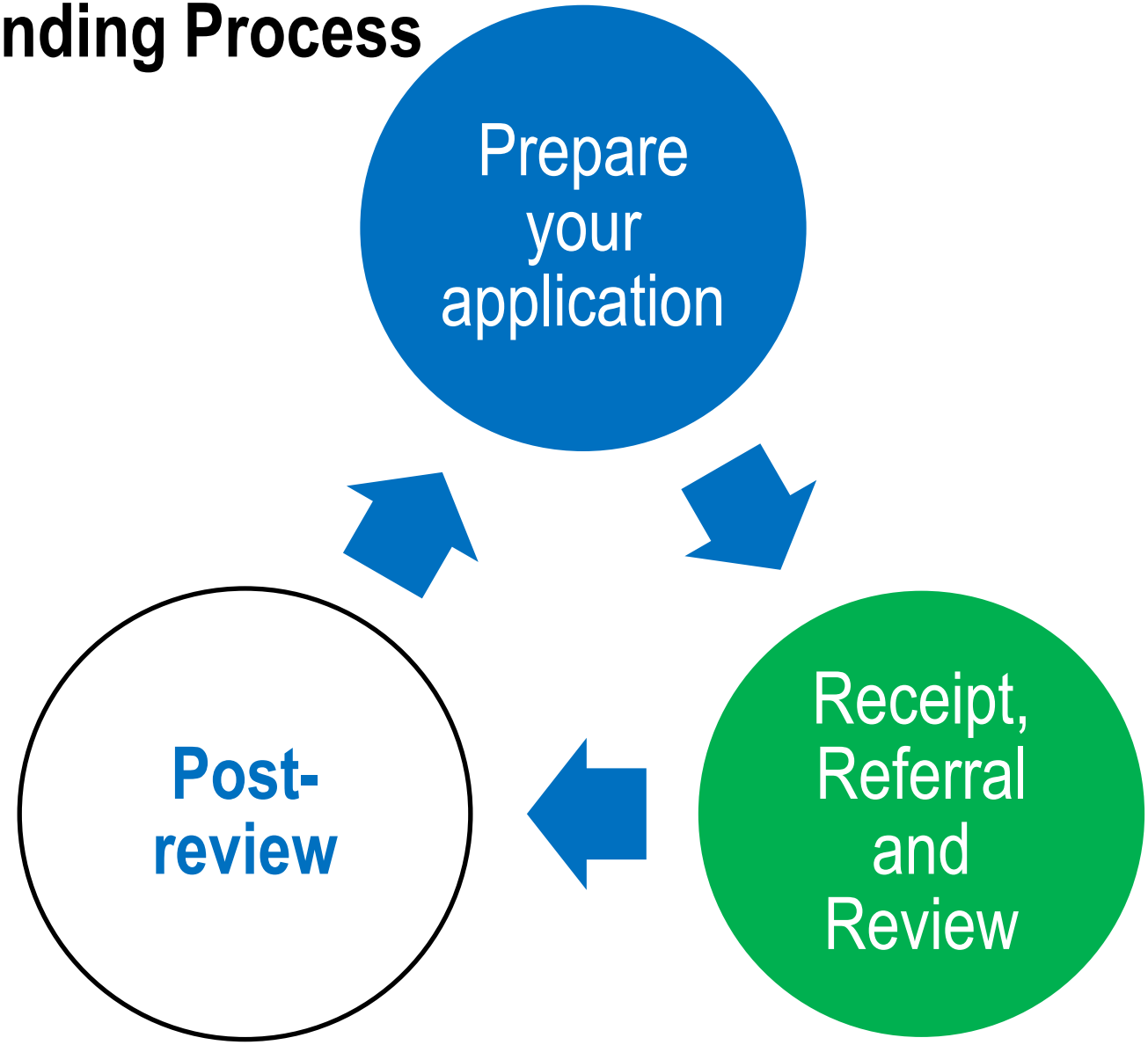
Funding Process



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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”

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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?

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What makes a good grant proposal?

(Videos where two reviewers give opinions)

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What makes a good grant proposal?

(Information about accessing videos on slide 29)

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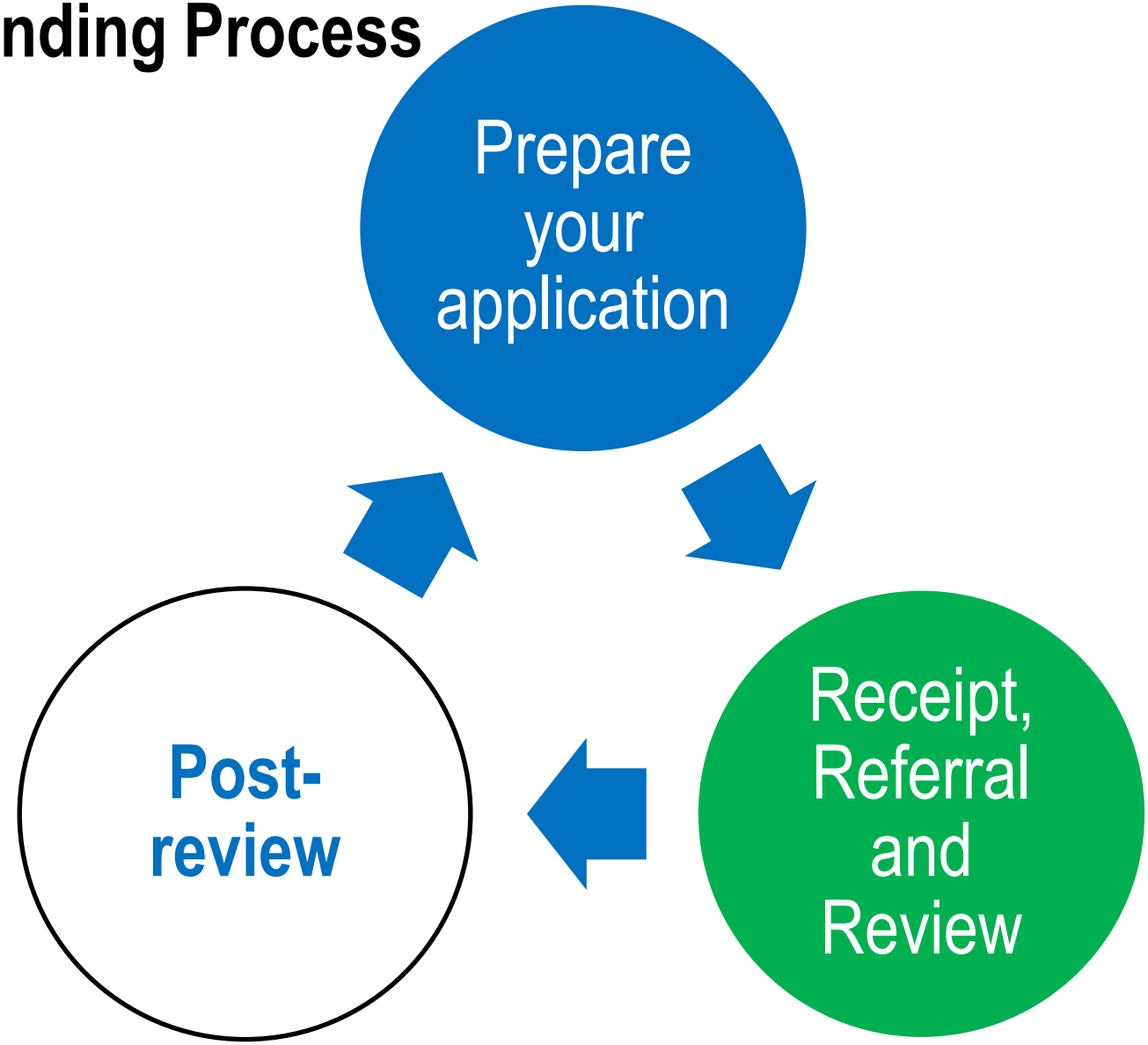

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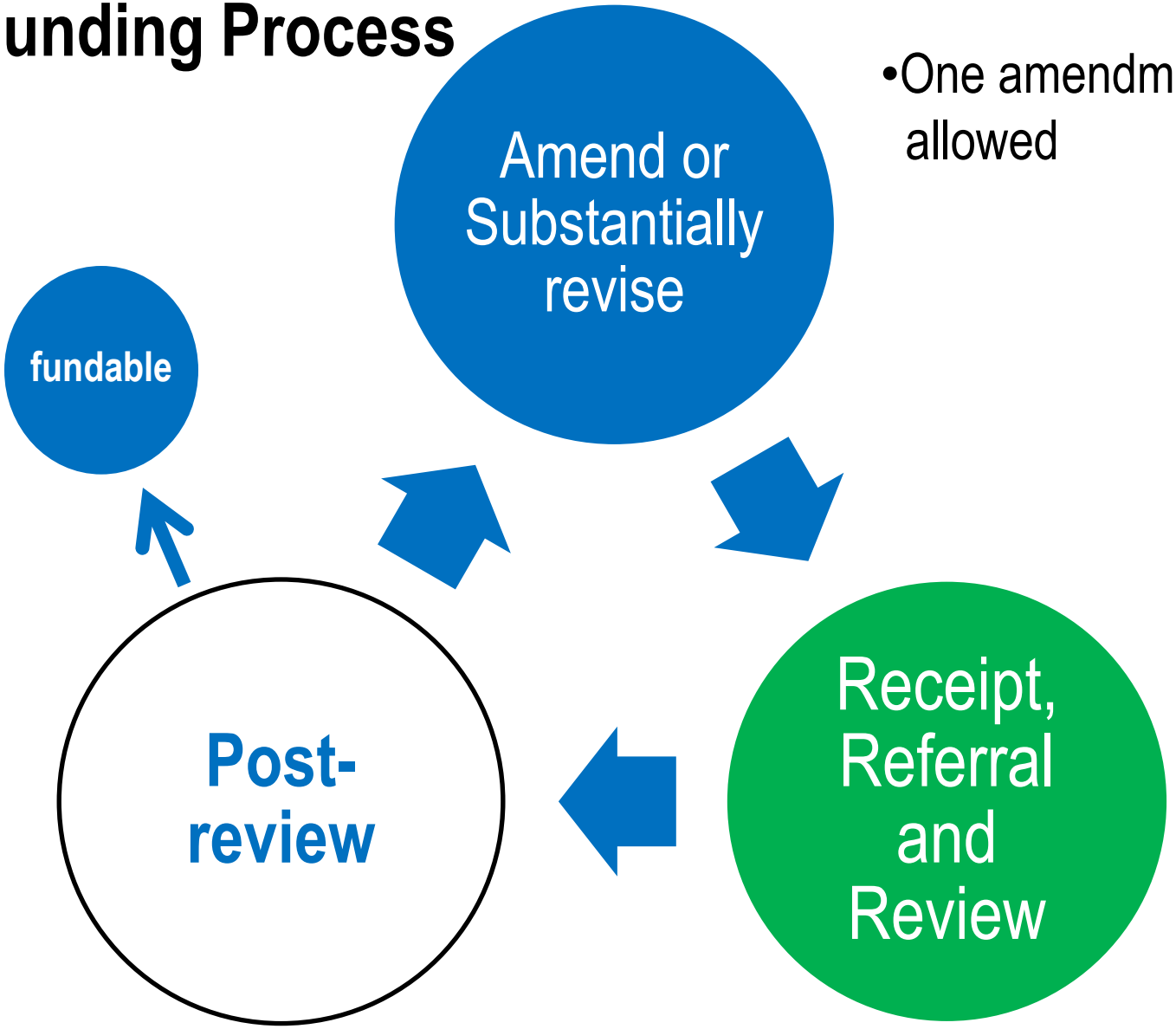
Funding Process



- One amendment allowed

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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

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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

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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

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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

* less than 10 years since a terminal research degree or medical residency

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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		
…					

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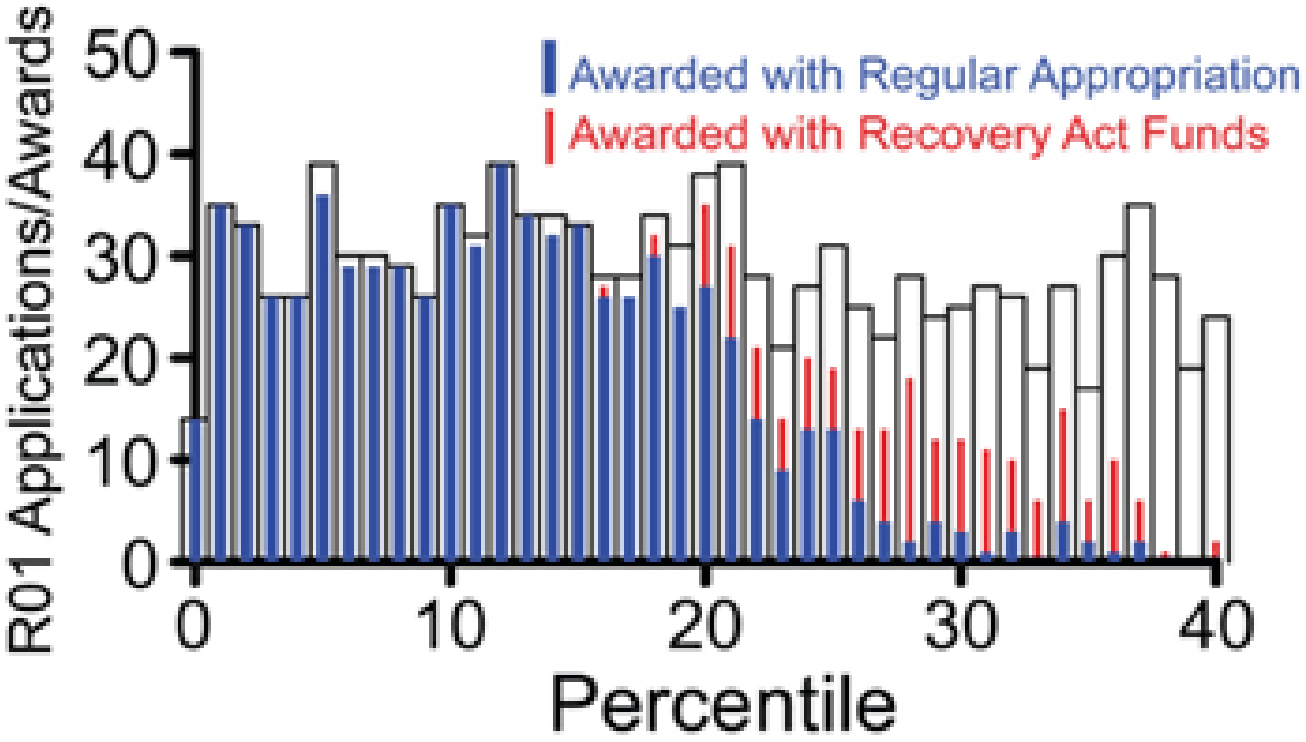
NIGMS FY09 R01 Applications



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.

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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)

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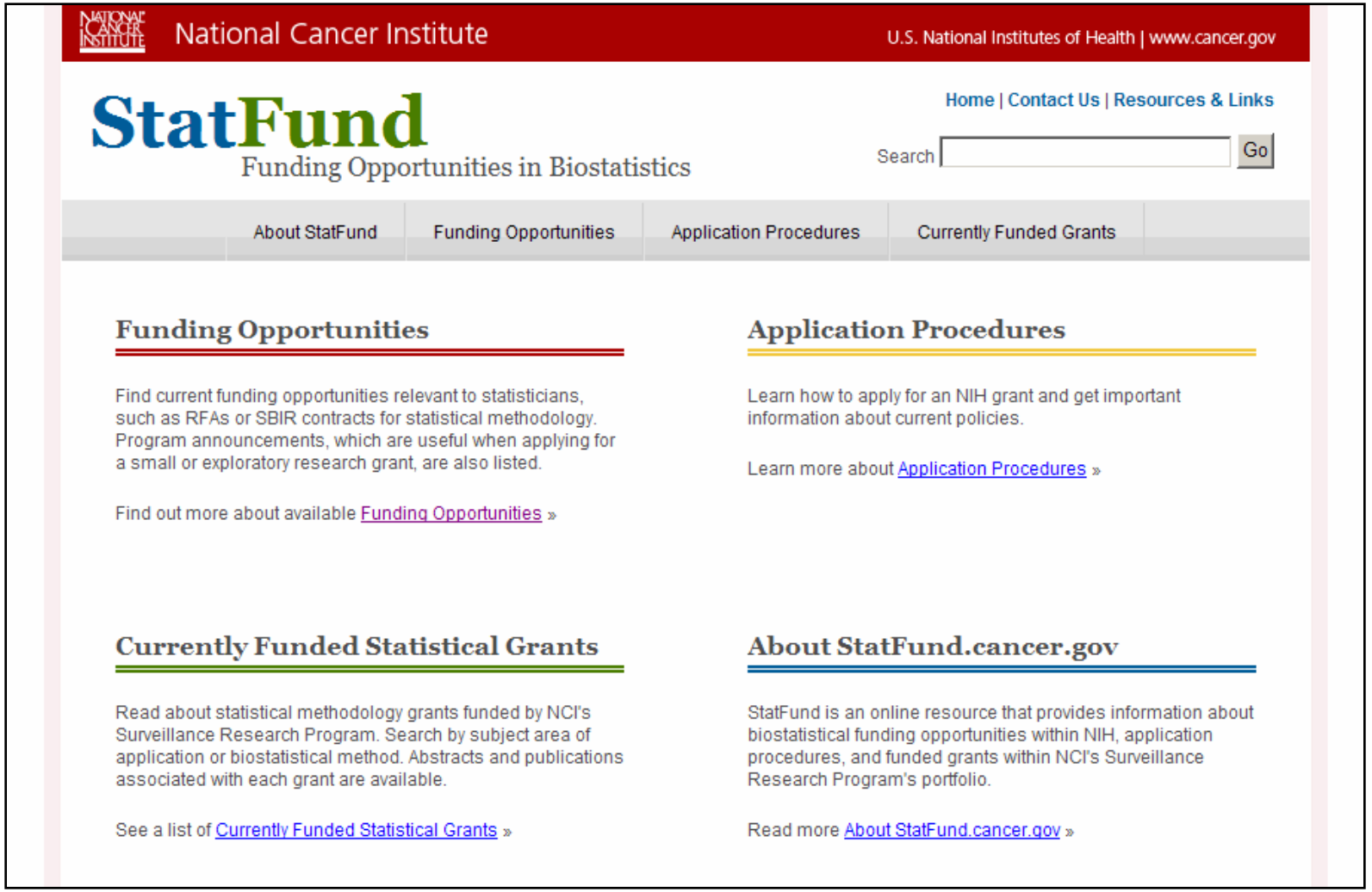
More info: www.statfund.cancer.gov



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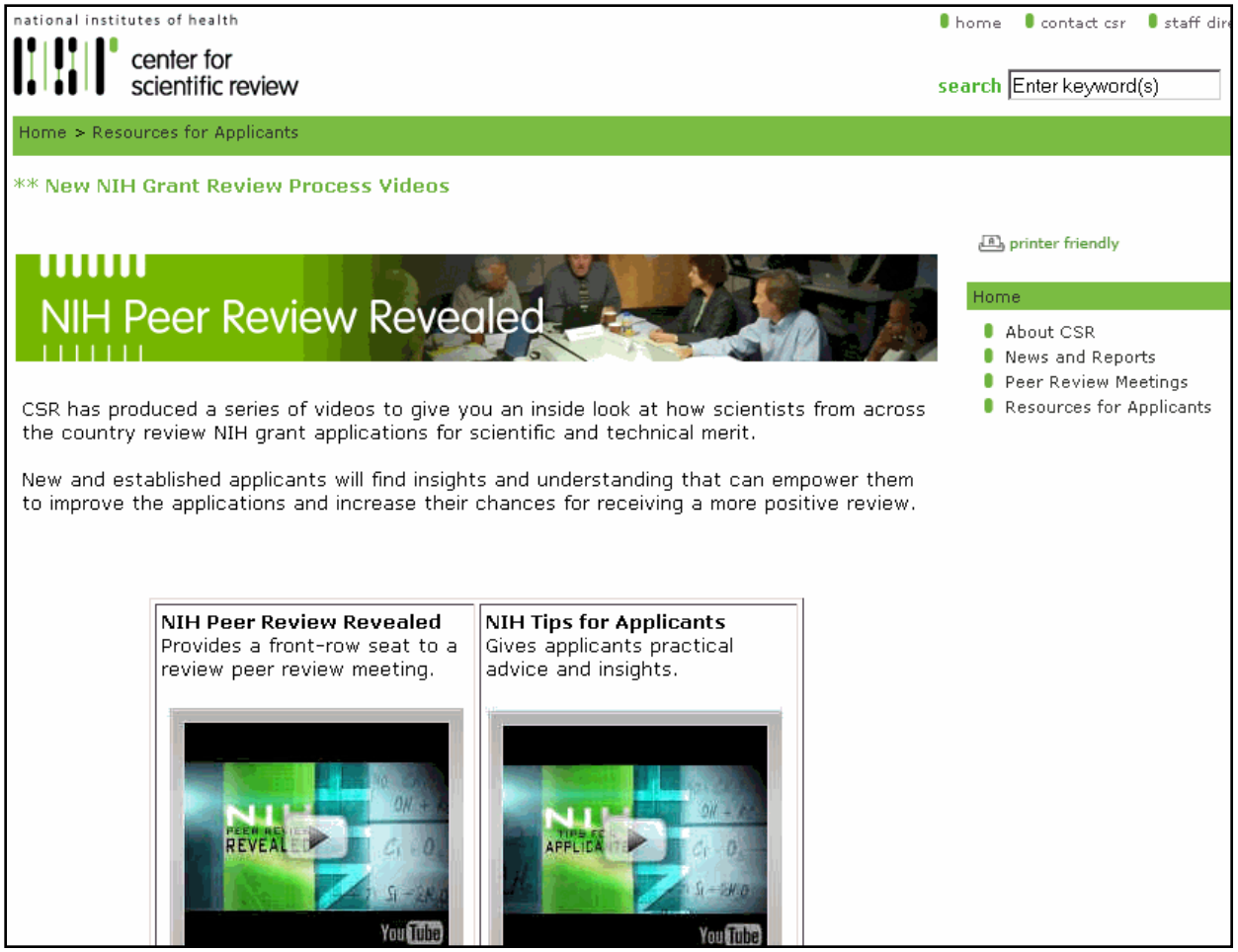
More info: mock study section videos



- 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”

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