Presenter disclosure information

Name: Yibin Wang, UCLA

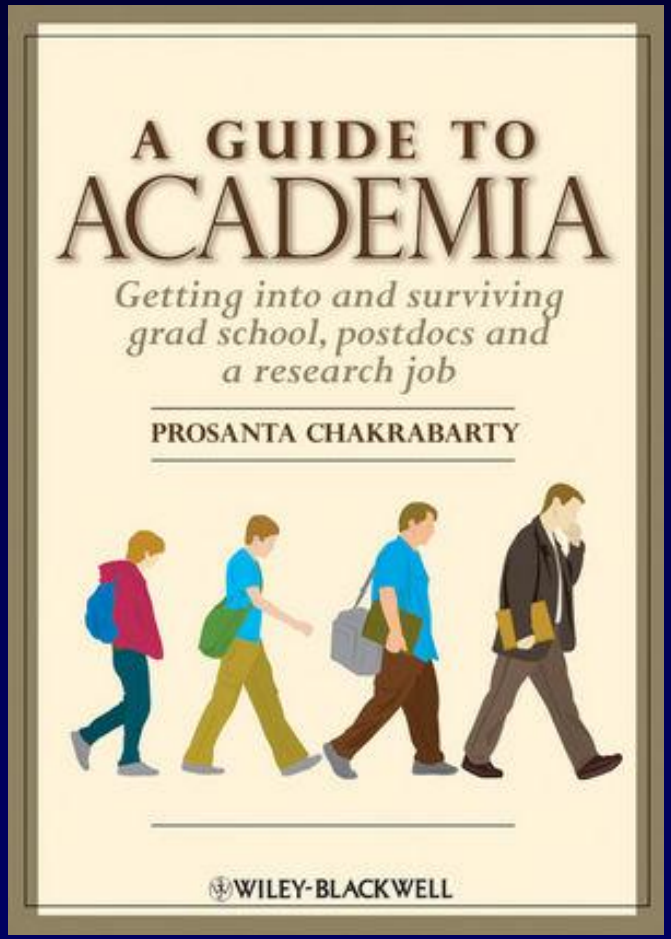
Title:

How to Survive in Academia: Getting Your 2nd RO1

- Financial disclosure:
  - I have received and continue to receive rejection from the following funding agencies: National Institute of Health, American Heart of Association, UCLA, …….
  - All my previous rejections were received without monetary compensation
- Unlabelled/unapproved use disclosure:

  My approach is unlabeled and unapproved, use at your own risk!!!

How to Succeed in Academia?



"Publications and grants are the most important thing on your CV at every stage"

NIH Research Funding Trends: FY1995-2012

Produced by

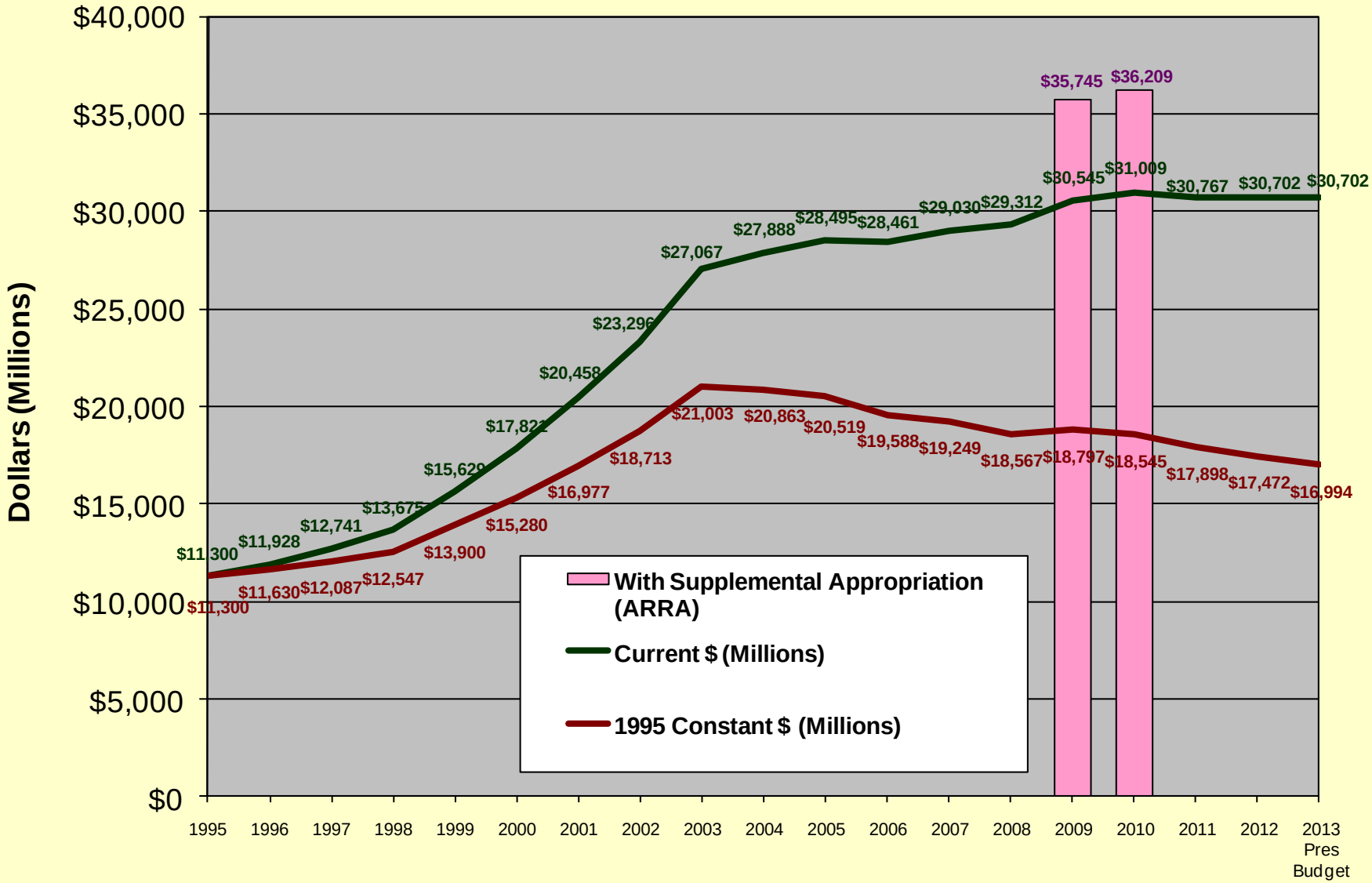
Howard H. Garrison and Kim Ngo

FASEB Office of Public Affairs

Data Sources: **NIH Office of Extramural Research**

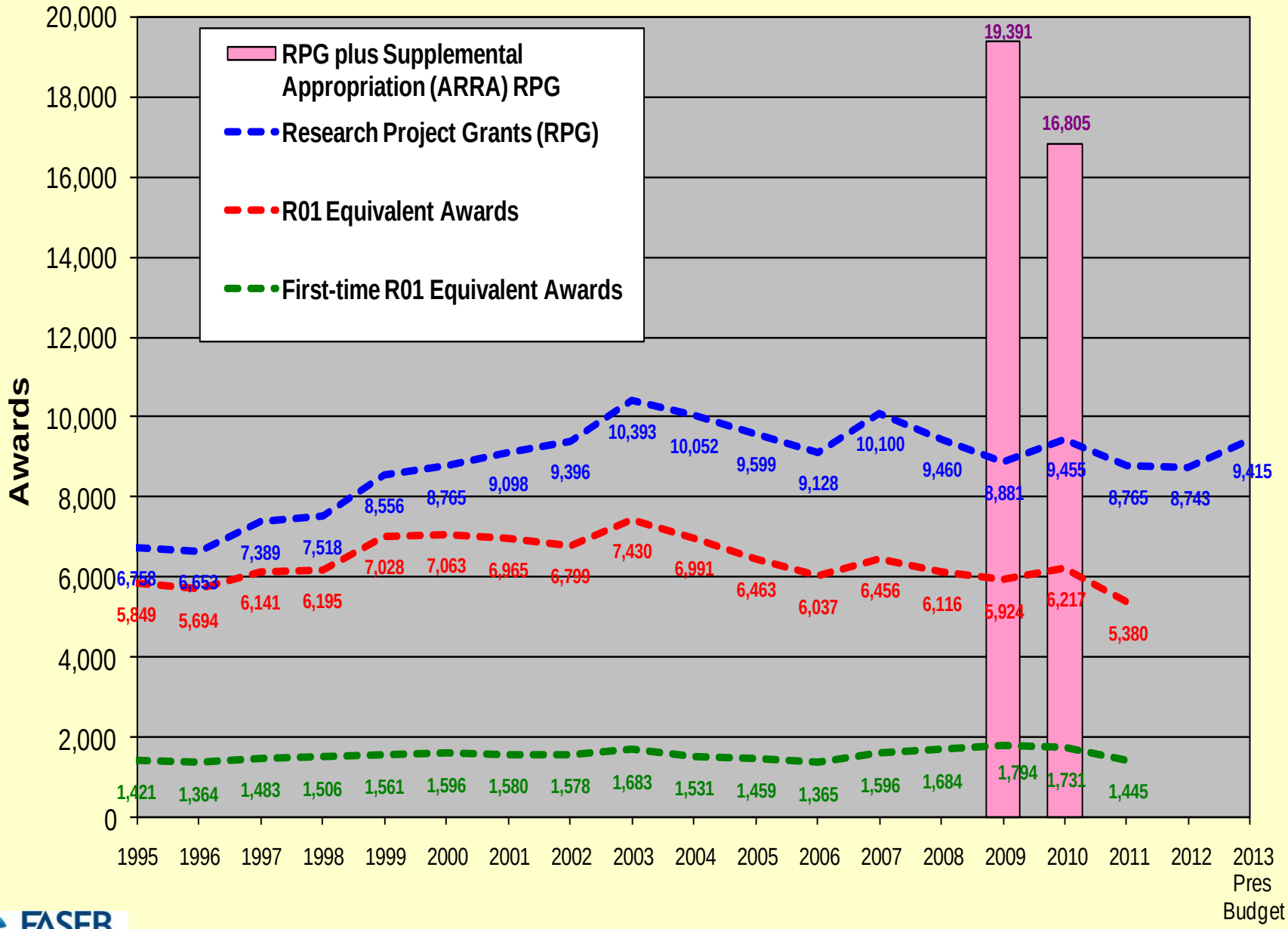
NIH FY2012 Budget Summary

NIH Appropriation in Current and Constant Dollars



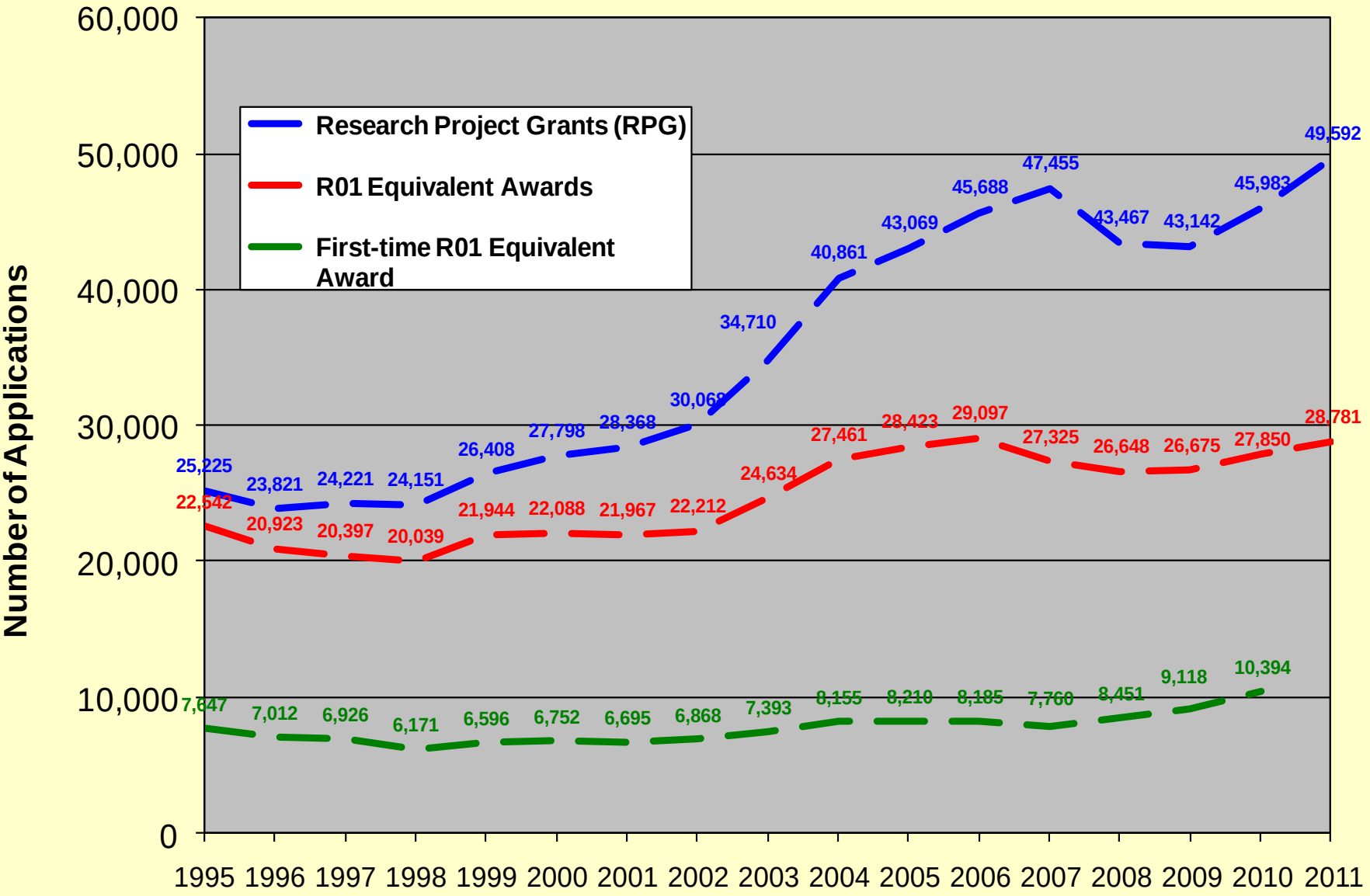
FASEB
Federation of American Societies for Experimental Biology

Number of Competing Awards (With Breakout of First-time R01)



FASEB
Federation of American Societies for Experimental Biology

Number of Applications (With Breakout of First-time R01) Exclusive of Supplemental (ARRA) Applications



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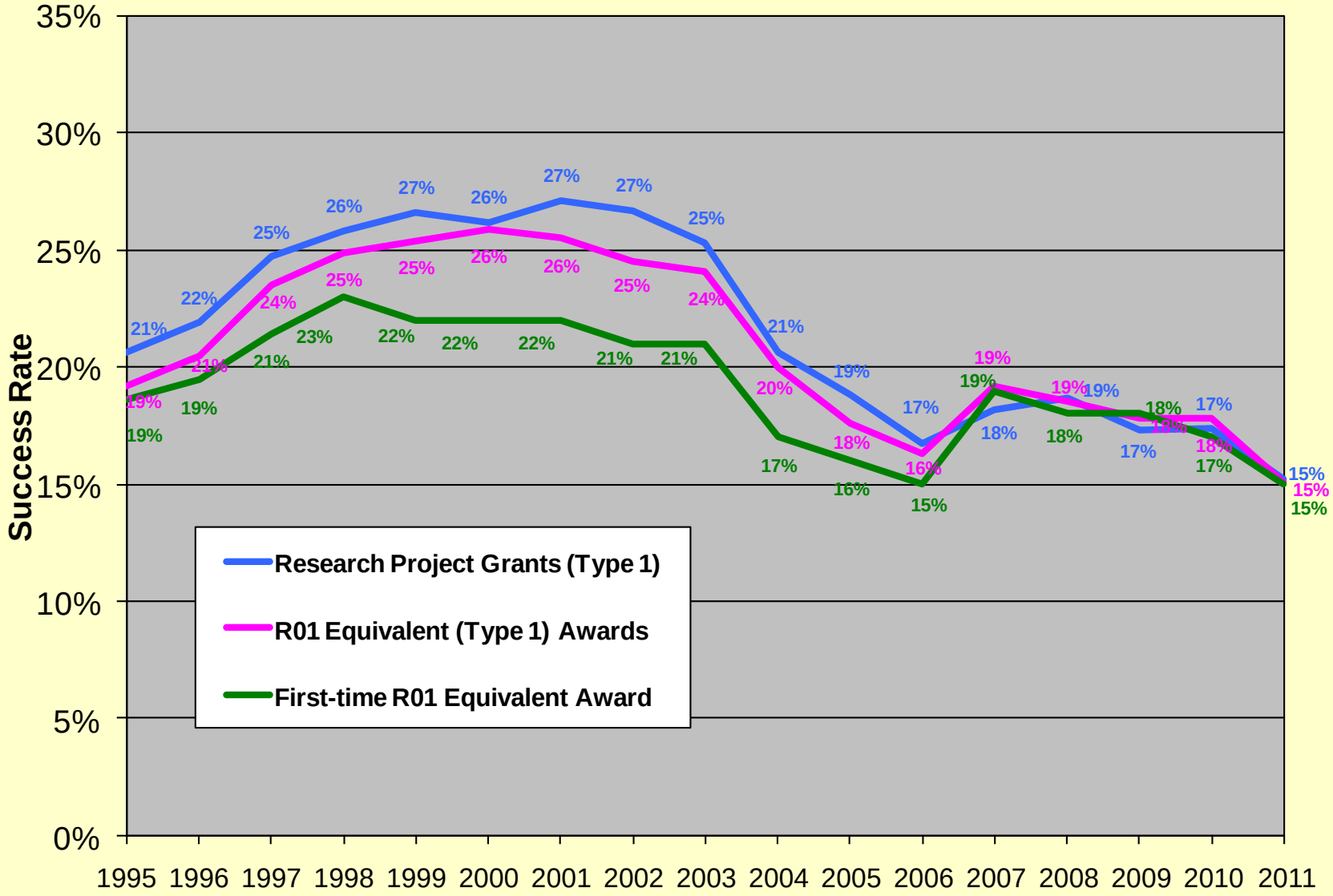
Success Rates for New (Type 1) Applications, Including First-time R01 Award



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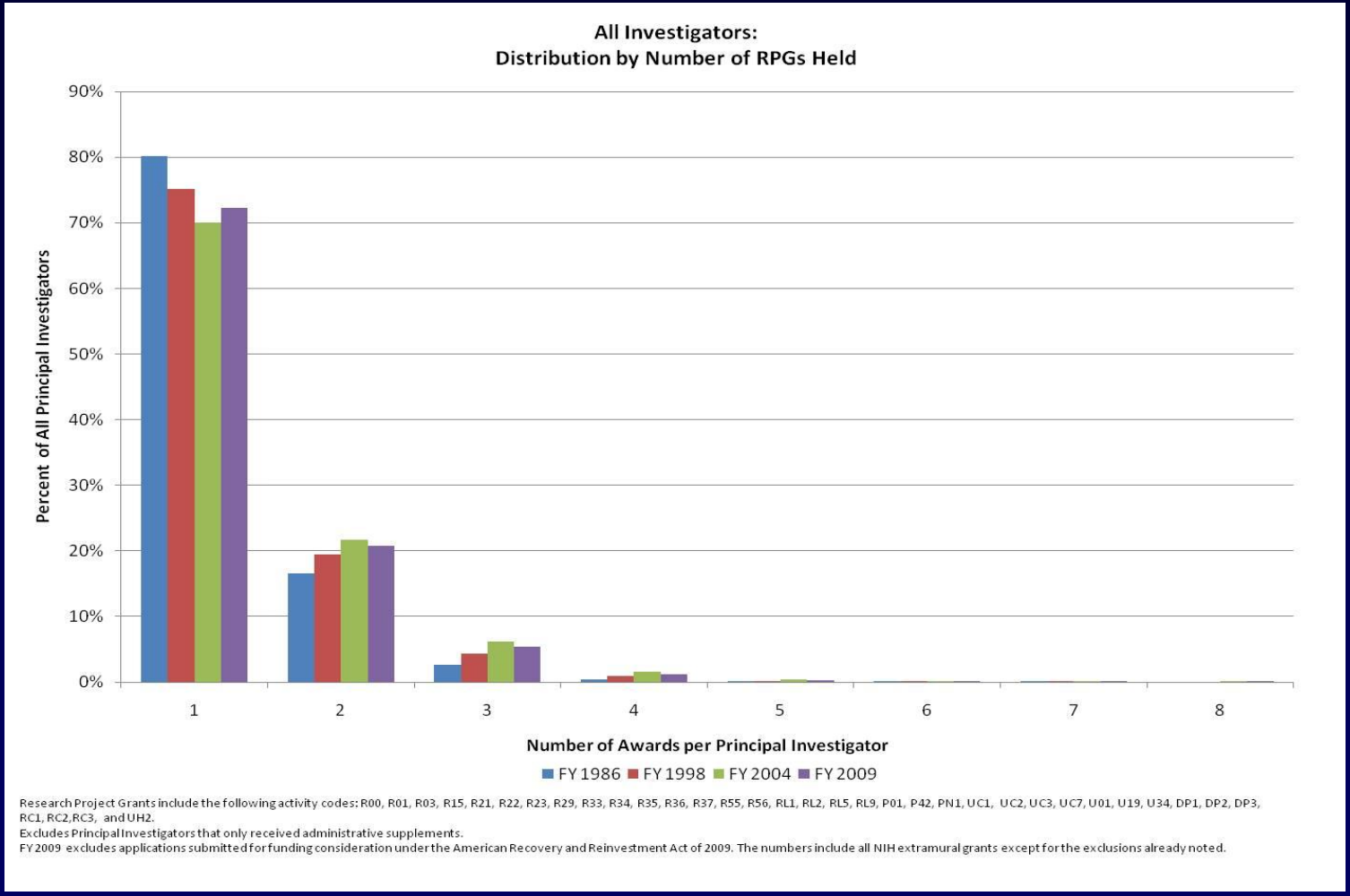
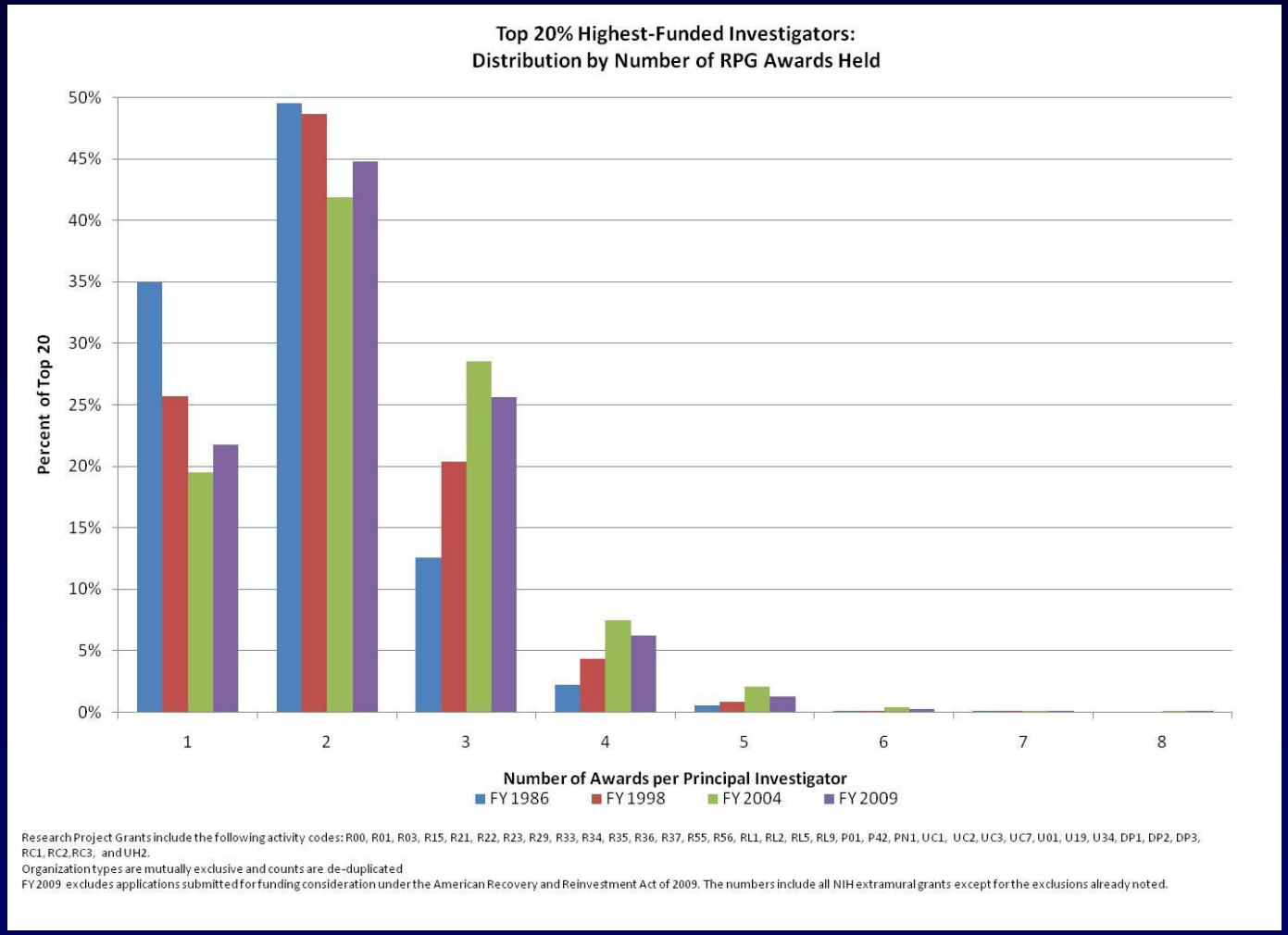
Getting Your 2nd RO1?



Update on Myth Busting: Number of Grants per Investigator
Posted on May 13, 2011 by Sally Rockey

Getting Your 2nd RO1?



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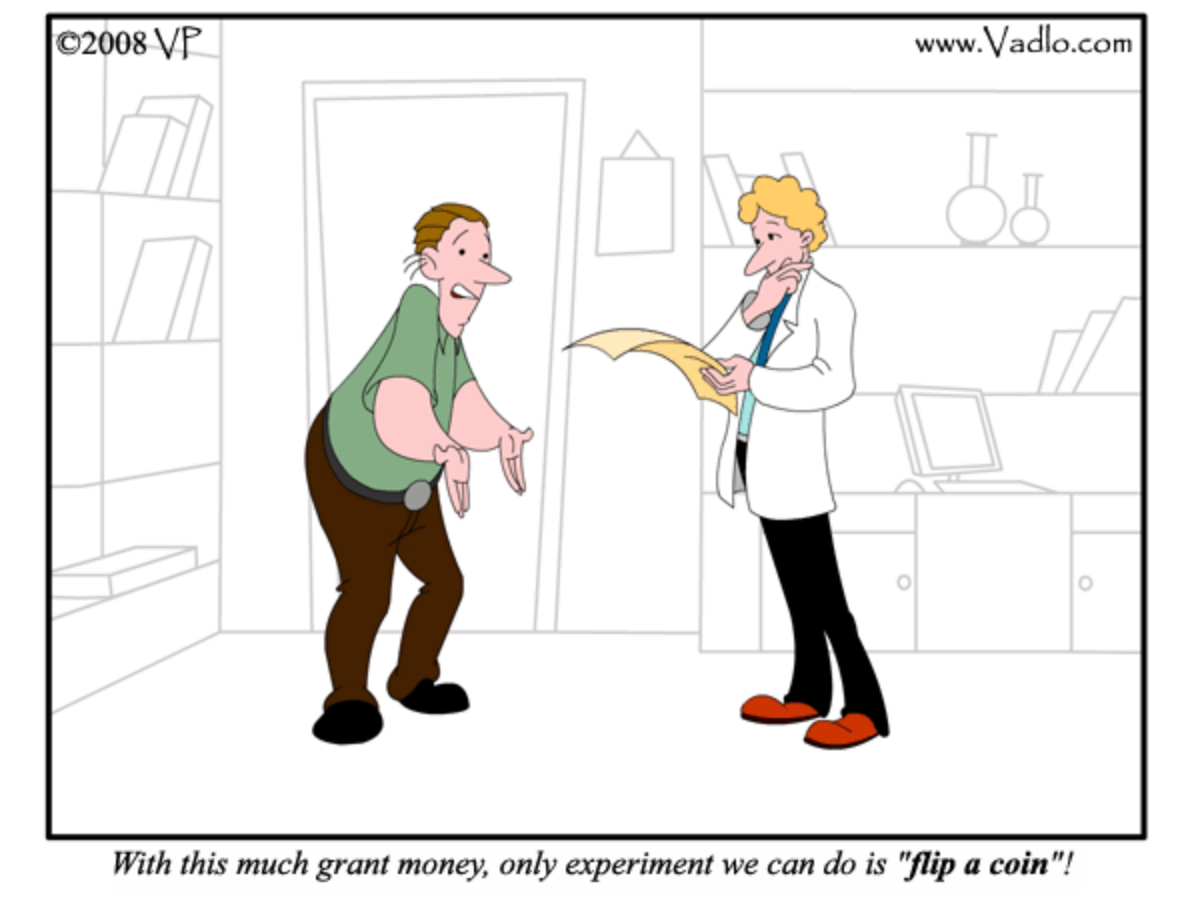


RO1: Investigator-initiated Research on a Discrete, Specified, Circumscribed Project

Project Overall Impact

- **Significance**
- **Investigator**
- **Innovation**
- **Approach**
- **Environment**

2nd RO1 = Research Longevity and Diversity

How?

Project Overall Impact

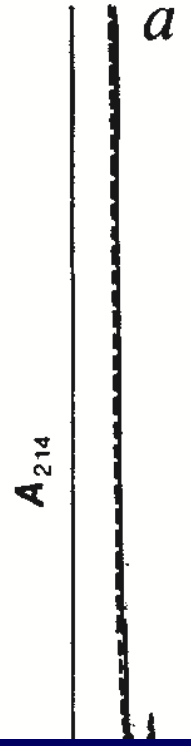
- Significance
- Investigator
- Innovation
- Approach
- Environment

Inspiration #1: Follow a Significant Question --- All the Way!

NATURE VOL. 321 1 MAY 1986

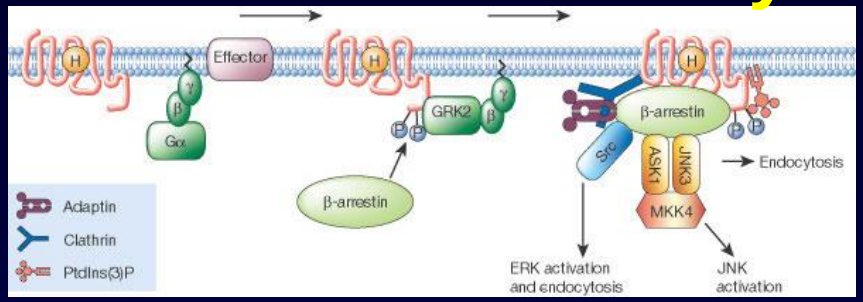
Cloning of the gene and cDNA for mammalian β-adrenergic receptor and homology with rhodopsin

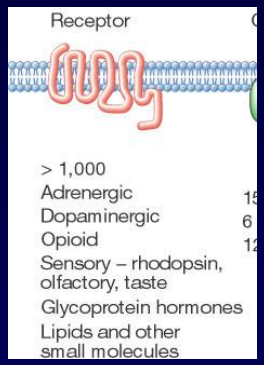
Richard A. F. Dixon*, Brian K. Kobilka†, David J. Strader‡, Jeffrey L. Benovic†, Henrik G. Dohlman†, Thomas Frielle†, Mark A. Bolanowski†, Carl D. Bennett§, Elaine Rands*, Ronald E. Diehl*, Richard A. Mumford‡, Eve E. Slater‡, Irving S. Sigal*, Marc G. Caron†, Robert J. Lefkowitz† & Catherine D. Strader‡



Inspiration #1: Follow a Significant Question --- All the Way!

Lefkowitz



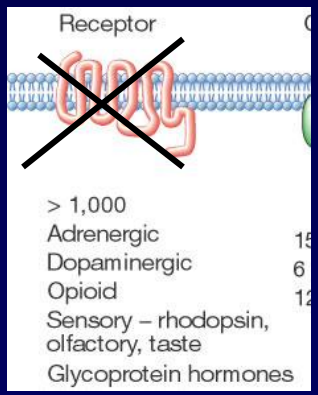


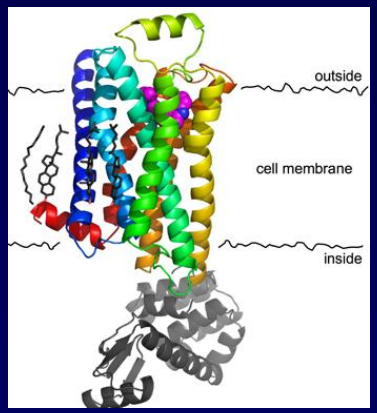
- Desensitization Mechanism
- G-protein Independent Signaling
- Biased bAR Ligands

51 NIH Grant Year

39 NIH Grant Year

Kobilka





- Physiological Role of AR Subtypes
- Structural Basis of GPCR Signaling
- Rationale Design of GPCR Ligands

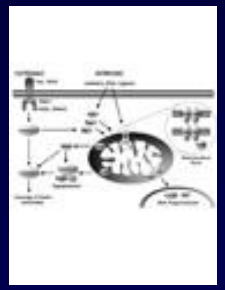
Inspiration #2: Follow a Significant Question --- Every Way!

- Transcriptional Mechanism in Muscle Development
- Transcriptional Pathways in Cardiac Hypertrophy
- miRNA in Muscle Development, Diseases, Cell Differentiation and Death Regulation, Metabolism, -----

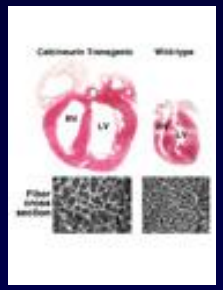
Eric Olson

103 NIH Grant Year

Inspiration #3: Taking on New Emerging Issues --- Whenever and Wherever!

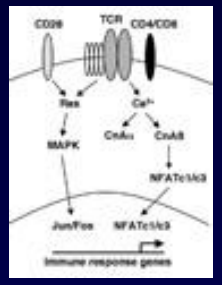


Cell Death Through the Mitochondria



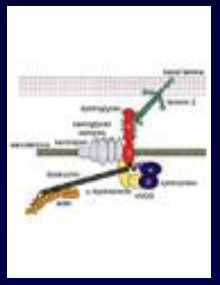
Cardiac Hypertrophy

Cardiac Development



T-lymphocyte Development

Transcription



Mechanisms of Duchenne and Miyoshi Myopathy

Skeletal Muscle Development and Hypertrophy

Jeff Molkentin
57 NIH Grant Year

2nd RO1 = Research Longevity and Diversity

- Signifi
- Investi
- Innova
- Approa
- Enviro

Project Overall Impact

Evaluating Overall Impact

Evaluating Significance:
Assuming that all the aims are successful, will the impact to the field be high (1-3), medium (4-6) or low (7-9)?

Impact	High	Medium	Low
Score	1 2 3	4 5 6	7 8 9

Evaluating Overall Impact:
Considers the significance criterion, as well as other four criteria (weighted based on reviewer's judgment)

High	Medium	Low
Applications must have a high level of significance. May have some or no technical weaknesses. Not for applications with a medium level of significance which have no technical weaknesses	Applications may have a high level of significance, but weaknesses in the other criteria bring down the overall impact to medium. Applications may have a medium level of significance with no technical weaknesses	Applications may have a high or medium level of significance, but weaknesses in other criteria bring down overall impact to low Applications may have a low level of significance with no technical weaknesses

The entire scale (1-9) should always be considered.

To Do List – For Me

- Be Critical to Your Own Science, Remain Uncomfortable
- Be Productive
- Take on New Questions/Challenges
- Have Courage to Embrace New Approaches
- Join/Form a Research/Mentor Team
- Communicate Your Work
- Have Good Mentor(s)

Reviewer's Interpretations to 2nd RO1 Applications

Project Overall Impact

Exciting? New? Important?

- **Significance**
  - Importance of the questions or issues to be addressed, significantly advanced or different from 1st RO1?
- **Investigator**
  - Publications in the past 5 yrs, major presentations in conferences
- **Innovation**
  - Concept, method, tools, model systems and approaches, different or advanced from 1st RO1
- **Approach**
  - Strong and supportive preliminary data
- **Environment**
  - Team organization, Cores

Applicant's Balance Act in 2nd RO1 Applications

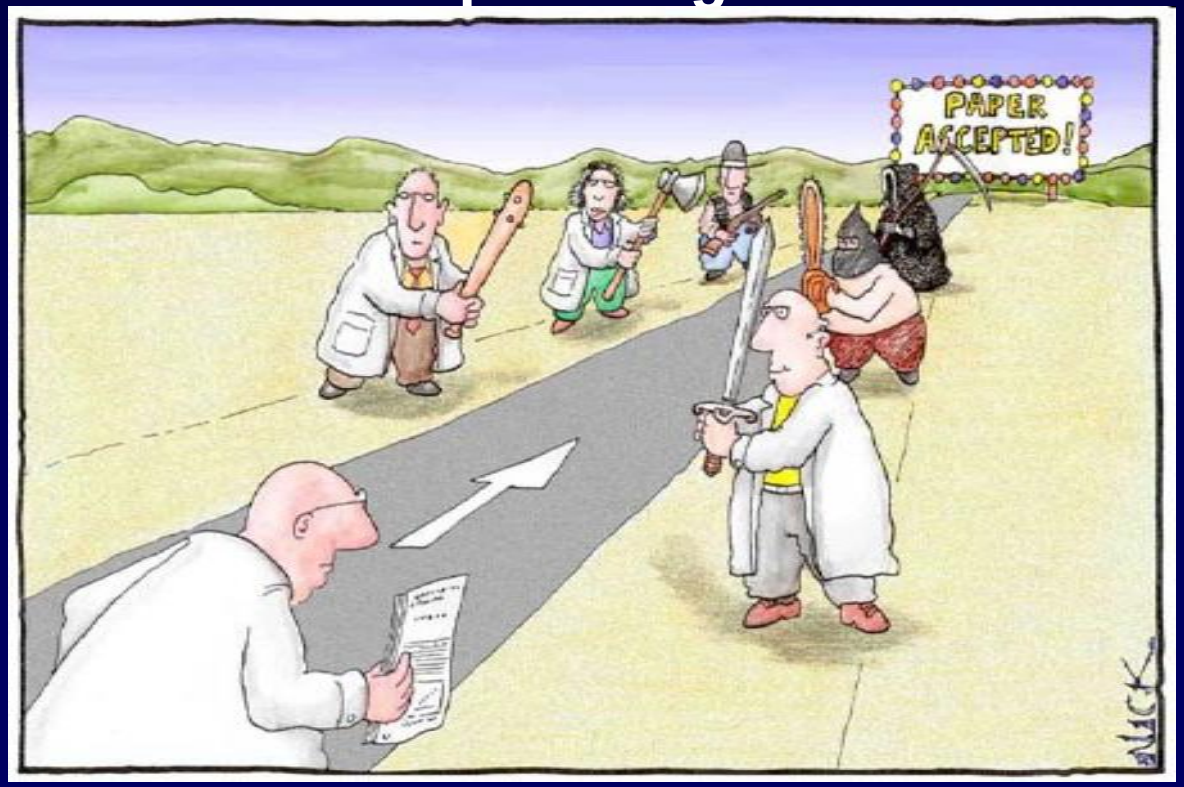
Project Overall Impact

How to highlight the impact without over-reaching

- Significance
  - Broad vs. Specific
- Investigator
  - Number vs. Quality
- Innovation
  - Novelty vs. Acceptance
- Approach
  - Preliminary Data vs. Proposed Exp
  - Feasibility vs. Design
- Environment
  - Established vs. Junior PI for Team Members

1st RO1 Success Is Just a Beginning
2nd RO1 Success is Not The End

- Stay Hungary!
- Stay Curious!
- Stay Intense!
- Keep Having Fun!



Thank You

&

Best Luck!