

# Peer review: Do it well.

William Ghali -- Scientific Director, IPH

Panel: - Melanie Rock, Lynn McIntyre, and  
Tom Stelfox

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# The grant funding game:

Strategies that might help your funding applications

William Ghali

Scientific Director, IPH

# Overview

- Generic points
- Dos and don'ts
- Types of reviews
  - Manuscripts
  - Grants
    - External
    - Panel member
  - Promotion and tenure
  - Internal peer review
- Trends



Image source: <http://bit.ly/x2pms8>

# Wise men...

- It has been said that *democracy* is the worst form of government...



# Wise men...

- It has been said that *democracy* is the worst form of government except for all the others that have been tried.

*Sir Winston Churchill*



Wise men...



# Wise men...

- It has been said that *peer review* is the worst way to judge excellence except for all the others that have been tried.

~~Sir~~ James Kellner



# The history of the peer-review process

Ray Spier

**The peer-review process is a turf battle with the ultimate prize of the knowledge, science or doctrine being published. On the one side, we have the writers and originators of ideas, on the other, we have the editors and critics. But it was not always so.**

Published online: 31 May 2002

The medical school on the island of Cos, Greece, contained the manuscripts of the medico-philosopher Hippocrates (460–377 BCE\*) as they were written. Aristotle's (384–322 BCE) *Biology* describes and comments on the organisms that he and his colleagues found in their world. They observed and they wrote and these writings, unsullied by the meddling of others, have been passed on to us. Indeed,

Gutenberg invented the printing press, and so what was printed could now be distributed and affect otherwise docile citizens or subjects. It therefore became important to regulate that which was set before the public. Copernicus was allowed his heliocentric revolutionary ideas, because he was a Canon of the Frombork Cathedral, Poland, and his work was published on the last day of his life in 1543. Nevertheless, it was later declared to be heretical by the Spanish Inquisition – a form of retroactive rejection. But others were not so fortunate. Servetus, a Spanish physician (1509–1553), was burned at the stake by John Calvin, a 16th Century theologian, in Geneva because he suggested that, in addition to other doctrinal differences, blood passed from

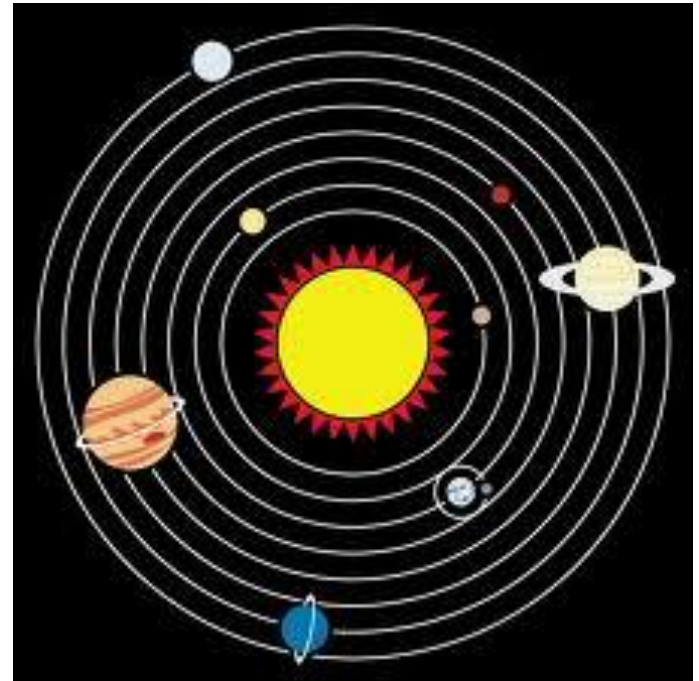
for improving Natural Knowledge. By 1665, the Society had its own journal, *Philosophical Transactions*, edited by Henry Oldenburg. At that time, what was published in the journal was largely a matter for the editor and those whose help he might, or might not have sought.

*Seeking the help of peers*

And so it was for the next ~100 years until, in 1752 the Society took over the editorial responsibility for the production of the *Philosophical Transactions*, at which time it adopted a review procedure that had been used previously by the Royal Society of Edinburgh as early as 1731. Materials sent to the Society for publication were now subject to inspection by a select group of members who were knowledgeable in

# Peer review...

- Writings of Hippocrates and Aristotle -- none
- Biblical texts -- some
- Galileo – heliocentrism
- John Snow – miasma theory
- Royal Society – Darwin
- Journals (JAMA, Science) – 1940s
- Peer review congress (1990s)



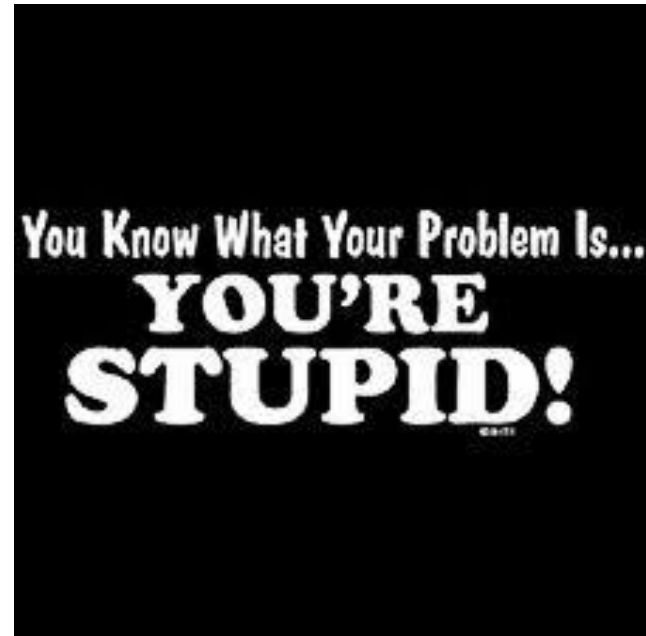
# Peer review

- Social transaction
- A scientific duty
- A generous act
- Also a burden...
- But rewarding
  - You learn
  - You get noticed
  - You get invitations



# Peer review

- A good review
  - Constructive (and NOT insulting)
  - “your office neighbour”
  - Separate major vs. minor comments
  - Separate fixable vs. non-fixable things
  - Strive to help



## Review for BMJ:

al.

This manuscript describes the process of conducting two [redacted] in two neighbouring [redacted] cities, and presents the qualitative and quantitative findings from this interesting work.

### Global Comments:

The paper is generally quite interesting, and the notion of citizen juries is a fascinating one. For those reasons, I find myself favourably inclined to seeing work of this type [redacted] Such juries are both a promising and viable tool for confronting the challenging resource allocation decisions health care systems face.

There are, however, several aspects of the paper that need attention:

First, I will pose a global question: Is the process of creating citizen juries here simply about creating juries for the sake of creating juries? Or were the juries created to tackle a meaningful and challenging resource allocation question that health care systems face? In justice systems, juries are formed because there is a significant issue that needs to be addressed --- i.e. a crime, and the crime is the issue at hand. For this paper, though, the emphasis is entirely on the juries and the process of creating them, with minimal attention to the resource allocation issues that they are asked to assess. These are neither

decision-makers receptive to such juries? Can they be struck quickly enough to inform decisions in a timely manner? Are there jurisdictions that have dabbled with these? (Addressing such questions would make the paper quite compelling for a major journal, I think, given the generally interesting topic that the authors' are studying.)

### **Other specific comments:**

- The authors should visit the EQUATOR website that provides reporting guidelines for various study types, including qualitative studies. (I found it difficult to read their presentation of qualitative data, and they would find the information on the EQUATOR website to be informative in this regard.)
- It took a lot of reading to realize that the authors were using a combination of qualitative and quantitative approaches in this research. Mention of this very early in the paper, and perhaps even in the title (e.g., "A mixed methods study") would be valuable.
- [REDACTED] are mentioned on a few occasions as the cities where this work was conducted. While appropriate to do so at least once, the authors need to recognize that local specificity of the work comes at the expense of making the paper less relevant to the BMJ's global readership. Bearing this in mind, the authors should think of deemphasizing the [REDACTED] focus and making this more of a generic focus on the application of citizen juries.

# Peer review for journals

- Journal context
  - Acceptance rate
  - Audience
  - Impact
- Process
  - Editor review (intercept?)
  - 2-3 peer reviews
  - Deliberation
  - Decision



# Peer review for journals

- Your role:
  - Critique paper
  - Make a recommendation
  - But NOT a decision
  - Separate:
    - Comments to authors
    - Comments to editors
  - Sometimes:
    - Answer direct questions
    - Give numerical scores



# Grant reviews

- Different types:
  - Panel member
  - External reviewer
- Some aspects generic
- Need to explain (and sometimes DEFEND)
- Nuances of scoring
- Relativity considerations
- Conflict of interest



# Promotion and tenure reviews

- Tricky
- Reviewing people's files
- Quite personal
- Institutional context
- Historical precedents
- My experience:
  - Almost always thumbs up
  - But an opportunity for constructive feedback
  - Academic duty



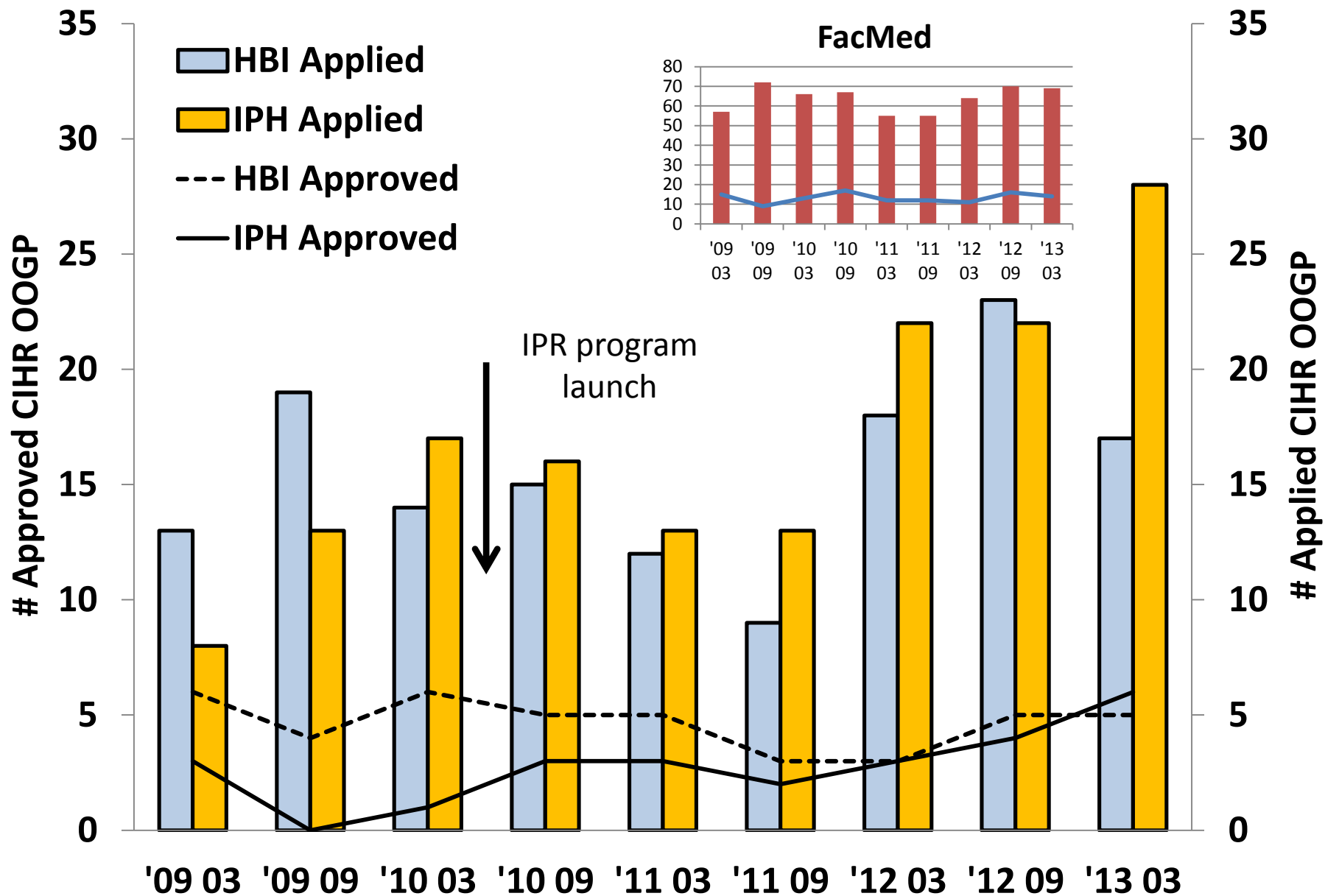
# Internal Peer Review

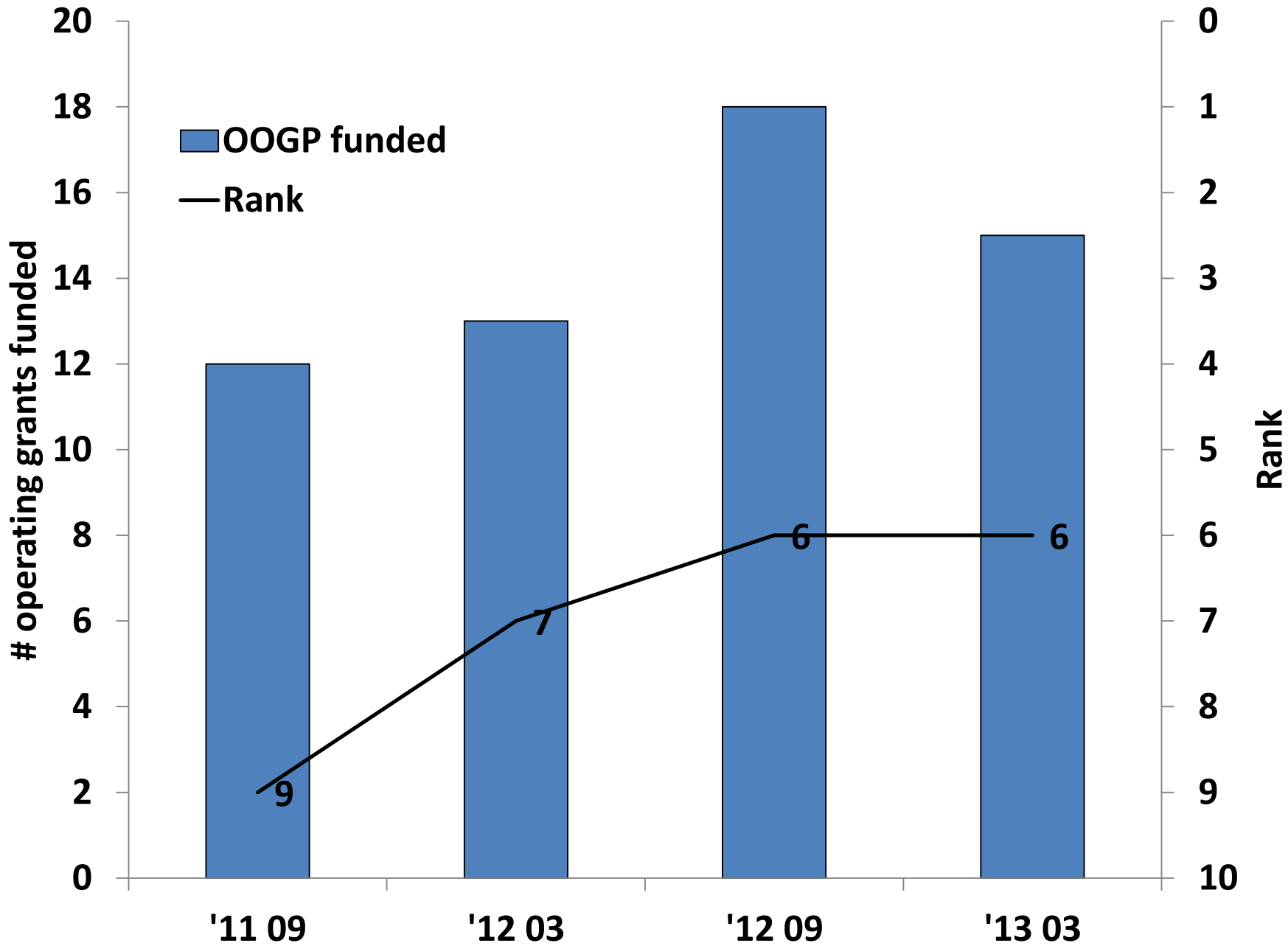
- IPH signature program
- Key element of Eyes High strategy
- Creates ‘community’
- “yes”
- Less rigid:
  - Can be tailored
  - Can be iterative
  - Can be phased
- Expected...



Image source: <http://bit.ly/x2pms8>

# CIHR OOGP - IPH comparison





# Peer review science



SEVENTH INTERNATIONAL CONGRESS ON  
PEER REVIEW AND  
BIOMEDICAL PUBLICATION

September 8-10, 2013, Chicago, Illinois

- Evolving science:
  - Research into peer review
  - Research into:
    - Non-anonymized review
    - Reliability/reproducibility
    - Biases and conflict of interest
    - Impact/relevance of fast-track reviews
    - Burden of peer review
    - Alternative models
    - etc

