Developing, Sharing and Promoting Best Practices
KEJUJURAN

Plenary III, 23 July 9:00 a.m. – 10:30 a.m. Room: “Pacific 3”

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ORI’s Mission

To promote the integrity of PHS-supported extramural and intramural research programs

Institutional Assurances & ORI Responsibilities:

• Respond effectively to allegations of research misconduct (FFP)
• Promote responsible conduct of research (RCR)
  – ORI has been providing these resources on responsible practices for more than two decades
RCR Core Instructional Areas

1. Research misconduct
2. Human Subjects
3. Animal Welfare
4. Mentor/Trainee Responsibilities
5. Data Acquisition, Management, Sharing, & Ownership
6. Publication Practices & Responsible Authorship
7. Peer Review
8. Conflict of Interest and Commitment
9. Collaborative Science
Questionable Research Practices?
Questionable research practices far more common than outright misconduct.
A Desirable Shift in the Curve?

Questionable research practices far more common than outright misconduct
Reasons for RCR Instruction

- To Prevent *scientific misconduct (FFP)*
- To reduce *questionable research practices (QRP)*
- Required for trainees and human-subject researchers in US
- Required for NSF funded students & scholars
- To enhance compliance with regulations
- To reduced litigation costs
- To reduce sanctions
- To earn and maintain the public trust
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Importance of Researchers

The vitality of our world’s people and economy depends on researchers who are innovative and act responsibly.

Yet
Research Landscape Changing

• Research becoming more collaborative
  – Community-Based Participatory Research Teams
  – Private-Public Partnerships
  – International Research Teams
  – Mentoring Relationships
  – Research Teams in Times of Crisis

• Research is changing our world at phenomenal pace requiring attention to new ethical issues
  – Dual Use threats
  – Environmental crises
  – Personalized Medicine ethics
  – Drug Development Controversies
  – Community Based-Participatory Research

What new professional practices are needed?
Where, how, and by whom will they be taught?
Research Enterprise

- Professional Societies
- Sponsors
- Vendors
- Institutions
- Industry
- Community
- Public
- Publishers & editors
- Government
- Researcher
- Researcher
Guardians of the Trust
all members of the entire research enterprise

• Researchers (their training, conscience and internalized values of research)
• Study panels/Peer review (grant proposals, manuscripts)
• Whistleblowers
• Funding Agencies/sponsors (NIH, NSF)
• Institutions and Institutional Officials:
  – Attorneys, Auditors/Accountants, Contract analysts
  – Chairs, Deans, Mentors
  – Institutional Research Integrity Officers (RIO’s)
  – IRB/IACUC/HR/H&S/GLP Codes of Conduct
• Professional Societies
• Journal editors and publishers
• Public/Congress
• Press
• Regulators
Institutional Best Practices?

- Institutions have the responsibility to support the individual researcher’s ability to function at the leading edge of professional integrity
  - Integrity in Scientific Research: Creating an Environment that Promotes Responsible Conduct, National Academies of Science (2002)

- Institutions should establish procedures to identify and defuse stressors on researchers
Questions about Best Practices

- What are best practices?
- For what outcomes?
- For whom?
- At what level of detail?
- Over what scope of range (trans-continental, trans-institutions, trans-disciplines)?
- Who develops them and with authority?
- When are they changed?
- How is consensus reached? Is it necessary?
- What are the consequences of less than best practices? Who defines and enforces these consequences?
Best Practices for What Outcome?

• To be competent technically?
• To act responsibly?
• To be innovative?
• To be socially responsible?
• To be productive?
• To help researchers flourish?
Frameworks for Best Practices?

Best practices linked to:
- Established **rules**
- **Values**
- **Topics** commonly associated with RCR
- Acceptable **risks** of causing present and future harm
- Professional **responsibilities** of scientific inquiry (e.g., the scientific method)
- **Societal responsibilities**
- Survival **skills**
Example Broad-Scope Best" Practices

• Do no harm
• Maintain the integrity of your research
  – Minimize introduction of unwanted variation into research results
  – Enhance technique/competency
• Behave honorably (maintain trust)
• Report misconduct
  – Duty to profession and public; an honor code ("We Will Not Lie, Steal Or Cheat, Nor Tolerate Among Us Anyone Who Does“)
    - U.S. Air Force Academy Honor Code
• Be good stewards of public resources
• Speak openly (courageous conversations- a duty in the culture of science? To have a voice in important decisions that affect research outcomes)
Challenges to Developing, Sharing, and Fostering Best Practices

- Definitions
- Global applicability/
- Relevance/Stability/Timeliness (changing landscape)
- Agreement/Consensus
- Cross-boundaries (disciplines/languages/nations)
- Status quo
- infrastructural
- incentives
- Benchmarking (knowing what others are doing and when)
- Cognitive
- Motivational
- Resources (time, people, funding)
- Political
- The tension between visionaries and pragmatists