Why, What, and How We Should Be Teaching About Research Integrity

Michael Kalichman, UC San Diego

Concurrent 1: Training for Responsible Research
World Conference on Research Integrity
Singapore, July 22, 2010
Center of the Universe

*Harmonia macrocosmica* (Harmonious universe)
Amsterdam, 1661,
Andreas Celarius,
German Cartographer

Dibner Hall of the History of Science, The Huntington, San Marino, CA
Center of the Universe

Research Misconduct
Center of the Universe
Research Misconduct
(Serious, Deliberate Dishonesty)

Necessary Failures:

• Understanding of risk of Bias
• **Data Management** (incl. Recordkeeping)
• **Authorship** (Credit and Responsibility)
• Understanding of meaning of **Publication**
• **Collaboration** (Transparency, Openness)
• **Peer Review**
• **Whistleblowing** roles and responsibilities
Track 3: Training for Responsible Research

Goals:
What are we trying to accomplish?

Audiences:
Who should be taught?

Settings:
Where should this be taught?

Tools:
How can we best teach in this area?

Topics:
What should be covered in our teaching?
Goals:
What are we trying to accomplish?

Knowledge
• Ethics, rules & regulations, methods of science, resources

Skills
• Ethical decision-making, problem solving, communication

Attitudes
• Importance, responsibility

Behavior
• High standards, effective communication, no research misconduct
Audiences:
Who should be taught?

Graduate Students
Postdocs
Undergraduate Students
Staff, Administrators
Ethics Committee Members
Faculty (New, Senior)
Settings:
Where should this be taught?

Classroom
  • Dedicated
  • Across the curriculum

Internet
  • Tutorial
  • Course

Context of Research
Tools:
How can we best teach in this area?

Case Studies
Role Playing
Debates
Email Discussion
Video
Question-based lectures
Surveys

Journal Publications
Literature
Current events
Student Teaching
Guest Faculty
Textbooks
Topics:
What should be covered in our teaching?

General Topics
Data Management
Conflict of Interest and Commitment
Collaboration
Authorship
Publication
Peer Review
Mentoring
Social Responsibility
Research Misconduct
Questionable conduct of research
Asking Questions
Dispute Resolution
Whistleblowing

Specific Topics
Human Subjects
Animal Subjects
Stem Cells
Dual Use Technology
Environmental Protection
Computational Biology
Computers and Information Technology
High Energy Physics
Cultural Anthropology
Proposed Track 3 Outcomes

For possible goals, audiences, settings, tools, and topics:

• Identify areas of multi-national agreement
• Articulate areas of significant disagreement
• Identify evidence-based best practices
• Propose mechanisms for creating or facilitating multi-national collaborations to address areas of common interest

Further Information: http://research-ethics.net