Incentives and Impediments to Research Integrity

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6th World Conference on Research Integrity
Hong Kong
June 3, 2019
Outline

• why and how we engage in research
• why we must have the highest standards
• factors that support good behavior
• factors that may counteract good behavior
• emerging issues
Purpose of research

• it’s fun!

• generate knowledge

• improve our lives
  • socially
  • physically
  • medically
  • environmentally

To accrue these benefits, we need to take risks
My obligations as an investigator

• follow scientific method
  • best approach to answer question
  • appropriate controls
  • adherence to protocol
  • critical evaluation of results
  • ensure congruence between raw data and presentation

• value unexpected results
  • hypotheses can be wrong
  • unexpected results can lead in exciting new directions
Benefits of integrity

• allows reproducibility
  • strong foundation for future research

• protect and enhance reputations
  • investigators
  • journals
  • institutions
  • scientific enterprise

• improved outcomes
Forces supporting integrity

• norms
  • general ethics
  • discipline-specific
• RCR education
• laboratory practices
  • clear expectations
  • ongoing discussions
• example setting
  • institutional leadership
  • PIs
  • peers
Opposing factors

• less-than-fully effective RCR education
• decentralized institutional structures
• promotion and tenure requirements
• institutional obsession with rankings
• chasing journal impact factors
• suboptimal peer review
• hierarchical social structures
• pressure to obtain the expected result
Issues to consider in the future

• life sciences dual use
• emerging technologies
• the “post-truth” era
• information hazards
  • should all results of fundamental research be freely shared?
Concluding thoughts

• incorporate ethics into *all* university programs
• don’t value dollars ahead of behavior
• expect the unexpected
• make integrity an ongoing part of the culture
  • encourage dialog
  • discourage retaliation

Our duty to society
“Acting responsibly is below my pay grade.”