RESEARCH INTEGRITY CHALLENGES: NSF OIG’S PERSPECTIVE

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THE RESEARCH ENVIRONMENT

• Number of women, minorities and foreign-born dramatically increasing in research work force.
• Aging and retiring research workforce
• Science and engineering occupations are an increasing percentage of workforce (only 10% hold doctorates)
• R&D $ are continually increasing

• 75% of high school students admitted to cheating
• 61% of undergraduates admitted to cheating
• 30% of researchers admitted to “questionable practices”
INCREASING ALLEGATIONS

• From 1998-2008, NSF has observed a 3-fold increase in RM allegations
FROM THE GOVERNMENT’S PERSPECTIVE, GRANTS ARE NOT “SMALL BUSINESS”
CHANGES OVER THE PAST 20 YEARS

• Past:

• Present:
  – 24 Federal agencies conduct research (16 have policies or draft policies); dramatic changes in electronic communications, storage and data manipulation; increased international research collaborations, increased oversight, changing demographics in research community
  – NSF implements RCR training and post-doc mentoring requirements and HHS expands its RCR requirement (2010)
INTEGRITY CHALLENGES

1) How is “responsible research” defined?
2) Have the concepts of research ethics and research integrity changed?
3) Who is responsible for ensuring research integrity?
4) Is science really self-correcting?
5) What is research fraud?
6) How is government oversight / responsibility for funds related to academe / PI responsibility?
7) Do the concepts of legal / government structures and academic administration / PI freedom conflict?
8) Is university research still academia or has it become a business …… or have the two merged?
9) What is meant by responsible management of the research enterprise?
10) Do new government oversight rules change the view that institutions have full responsibility for projects?
11) How do the challenges of the global research enterprise and the digital age change the concepts of and management of integrity?
CURRENT EFFORTS TO ADDRESS THESE CHALLENGES

• There are no immediate answers to many of these challenges.

• Certain challenges should be addressed by the academic community; others by government; some by both.

• U.S. government has already taken the following approaches:
  – America COMPETES Act
    • Postdoctoral Researcher Mentoring Plan
    • Training in the Responsible and Ethical Conduct of Research
    • Data Sharing and Management
  – Data Management Plan
  – Global Considerations
    • Oversight Plans
    • Global Science Forum
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