Ethics of Technology and Science

- Seminar 1
- Group 4
- 2014-10-24
- Reference
  
  ‘Good Research Practice’

Birger Marcusson
Deepak Elamalayil Soman
Jinxing Huo
Seung Hee Jeong &
Shiuli Pujari
Making research results useful

• What is research?
• Interpretations of ‘usefulness’ of research
• Research funding
  • Necessary; creates possibilities
  • ties and control from external funding
• Problems and pitfalls
  • Quick publication and transferal to practical use
  • amateurishness, attitude problem, slow publication processes, lack of risk capital
  • handling situations involving profit motive
Research ethics from a dynamic perspective

• The landscape of research ethics is changing
  • Declaration of Helsinki

WORLD MEDICAL ASSOCIATION DECLARATION OF HELSINKI
Ethical Principles for Medical Research Involving Human Subjects

Adopted by the 18th WMA General Assembly, Helsinki, Finland, June 1964, and amended by the:
  29th WMA General Assembly, Tokyo, Japan, October 1975
  35th WMA General Assembly, Venice, Italy, October 1983
  41st WMA General Assembly, Hong Kong, September 1989
  48th WMA General Assembly, Somerset West, Republic of South Africa, October 1996
  52nd WMA General Assembly, Edinburgh, Scotland, October 2000
  53rd WMA General Assembly, Washington 2002 (Note of Clarification on paragraph 29 added)
  55th WMA General Assembly, Tokyo 2004 (Note of Clarification on Paragraph 30 added)
  59th WMA General Assembly, Seoul, October 2008

• New methods and research bring up new ethical issues
Chapter 3

• Ethical Review of Research Involving Humans went into effect Jan 1, 2004.
  • Addresses which factors and conditions a research project should be under review

• Animal Ethics:
  • We use in vivo animal models to understand how the human body works, and to contribute to improvements in human medicine
    • Cost vs. benefit
    • “weighing the expected importance of the experiment against the expected suffering of the animals”

• Alternatives to using Animals:
  • Animal suffering
  • Cost
  • Results not very transferable to humans

• Development of in vitro and computer systems
Handling of Research Material

• Background and Problems

- Public access, openness and transparency &
- Protect research subjects and informants’ personal integrity

- Case 1: Göteborg 2010 – Neuropsychiatric disabilities

- Declaration of Helsinki adopted by World Medical Association
  - Swedish law
Handling of Research Material

• Four concepts
  2. Professional Secrecy – Law and Ethical rules (Eg. Doctor patient interactions data)
  3. Anonymity - De-identifying, eliminating connections (Eg. Questionnaire answers and the individual)
  4. Confidentiality – Unauthorized access prevention

• Researchers promise
  - Be aware of the rules and act accordingly
Research Collaboration

- Public funds oriented projects
- Relations with fellow researchers
  - Specialist, access to tools, working hours, clear ideas, timetable, rewards, property ownership
- Interaction with funding
  - Monitoring
- Commercial aspect
  - Patent right, co-funded situation
- Responsibility
Chapter 6

• Publishing is a central part of research
  • Transmission of new knowledge to society
  • Build on ideas and develop practical applications
  • Assessing the worth of the results

• Open Access:
  • Electronic publishing
  • Excellent way to present results and text easily accessible
  • Makes publications available to departments that cannot afford to subscribe to expensive journals

• Authorship:
  • Based on contributions to the idea, design, data, analysis
  • Drafting and revising the article
  • Final approval of the article
Other role of the researchers

• Supervision
  • Tasks of supervisor; suitable project, contribution, discussion, criticism
  • Idea ownership
  • Thesis and presentation
  • Responsibility for ethical compliance

• Teaching
  • Responsibility on student, position of power

• Assessment of applications and proposals
  • Conflict of interest

• Review of manuscripts for publications
  • Abusing and stealing ideas, allowance of use of data

• Committee work
  • Equal and fair attitude, delegation, honest communication with results
Research Misconduct

Definition:
Actions and omissions in research which consciously or by carelessness lead to fabricated, falsified or plagiarized texts, ideas, results, data etc.

Prevention of research misconduct can be facilitated by

• an open research environment

• information about ethical rules, possible sanctions against offenders and consequences for them and the society
Investigation and evaluation of research misconduct

In case of suspected research misconduct in a Swedish university or college the vice-chancellor must by law (Higher Education Ordinance, SFS 1993:100) take the responsibility for investigation but can get help from an external expert group.

If the suspect is found guilty the vice-chancellor must determine sanctions.
Consequences of research misconduct for the offender

The offender may
• be transferred to another job
• lose his or her job
• be barred from a laboratory
• lose positions of trust
• lose funding
• get a bad reputation that obstructs a continued scientific career and damages personal relationships
Why research misconduct should be avoided

Decisions are based on results from scientific research. Research is built on previous research. For development of technologies and methods it is therefore important that published research results are correct and trustworthy.

The earth and its life can be harmed as a result of research misconduct.
Thank you

•Questions ?