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# Science and Ethics in the Academe\*

#### **Abstract**

A definition of misconduct in research is proposed for discussion. Brief information on the Academy of Sciences of the Czech Republic is presented. Inspired by the 'ALLEA Memorandum on Scientific Integrity', the Academy issued its 'Ethical Code for Researchers of the AS CR', a binding document for all researchers within the Academy. Most cases of transgressions of the Ethical Code are handled and solved within the Institutes. Those that could not be resolved within the Institutes are submitted to the Commission for Scientific Integrity of the Academy. The most frequently occurring cases, the Commission has to deal with, concern authorship issues. A few case studies are discussed.

<sup>\*</sup> The paper is a Power point presentation delivered at the Conference.

## **Academy of Sciences of the Czech Republic**

Total staff		Researchers	Institutes
Academy	7 000	3 500	<b>57</b>
Phys. & Techn. Sci.	2 500	1 300	19
Chem. & Bio.	3 000	1 650	21
Soc. & Human.	1 000	51	<b>17</b>

Chemical & Engineering News, August 29, 2005, p. 24

The White House Office of Science & Technology Policy

Research misconduct is
falsification, fabrication, and
plagiarism
in proposing, performing,
or reviewing research,
or in reporting research results

3

# **All European Academies (ALLEA)**

Federation of 53 Academies from 40 European countries

Including the Montenegrin Academy of Sciences and Arts

Founded 1994

4

# ALLEA Standing Committee on Science & Ethics

2003 Memorandum

on Scientific Integrity

# Academy of Sciences of the CR established

# 2002

# **Committee for Scientific Integrity**

6

## **The Committee for Scienific Integrity**

#### **Inspired by**

- > The European Charter for Researchers, 2005/251/ES
- > ALLEA Memorandum on Scientific Integrity
- > Rules of Good Scientific Practice, Max Planck Society, 2000

Issued in 2006

Code of Ethics for Researchers
of the Academy of Sciences of the
Czech Republic

7

Most transgressions against the Code treated and solved within the Institutes

Unresolved cases submitted to the Committee for Scienific Integrity

Most frequent cases of dispute – authorship problems

8

# **Example 1: Significant contribution**

- > Presenting oneself as an author or co-author without having contributed to any significant extent
- > Omitting names of co-authors who have made a significant contribution

# **Chemistry:**

Multistep synthesis
of a new substance
takes many months,
even more than 1 year

Structure must be confirmed, expensive equipment needed

10

Equipment cost millions USD > available just in a few laboratories

# Operation of equipment and interpretation of results requires:

- > relevant experimental skills
- > strong theoretical background
- > highly qualified specialist

12

# **Completion of the task takes**

- months of the chemist's time
- just weeks, days or hours of the operator's time

# **Question:**

When does the operator's contribution become significant?

# The chemist gladly offers co-authorship because:

Without the operator's contribution the results are hardly publishable.

Not offering the co-authorship would apparently decrease the operator's readiness for future collaboration.

14

Evaluation of scientists:
Important criterion is
number of papers
in impacted journals
and number of citations.

Operators show high numbers of papers.

Are they really better scientists than chemists?

Discussion desirable.

16

# **Example 2: Busy professors**

Busy professors do not read carefully enough manuscripts of their students.

Sloppy texts must be revised by reviewers and editors.

Clear misconduct.

Who should initiate improvement and how?

Discussion desirable.

18

Example 3: Unaware authors

Giving the name of a person

as co-author

without requesting

his/her consent

## Recent serious case of misconduct

Nature, 21 August 2008, 922

- > Clinical trial without approval from authorities
- > Patients not informed
- > Poor study design
- > Forged results
- > Co-authorship without consent

20

# **Conclusions**

- > Misconduct in research is a matter of concern
- > Misconduct occurs (much) more frequently in politics, media, business, sports, etc.