



NATIONAL  
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ON RESEARCH ETHICS

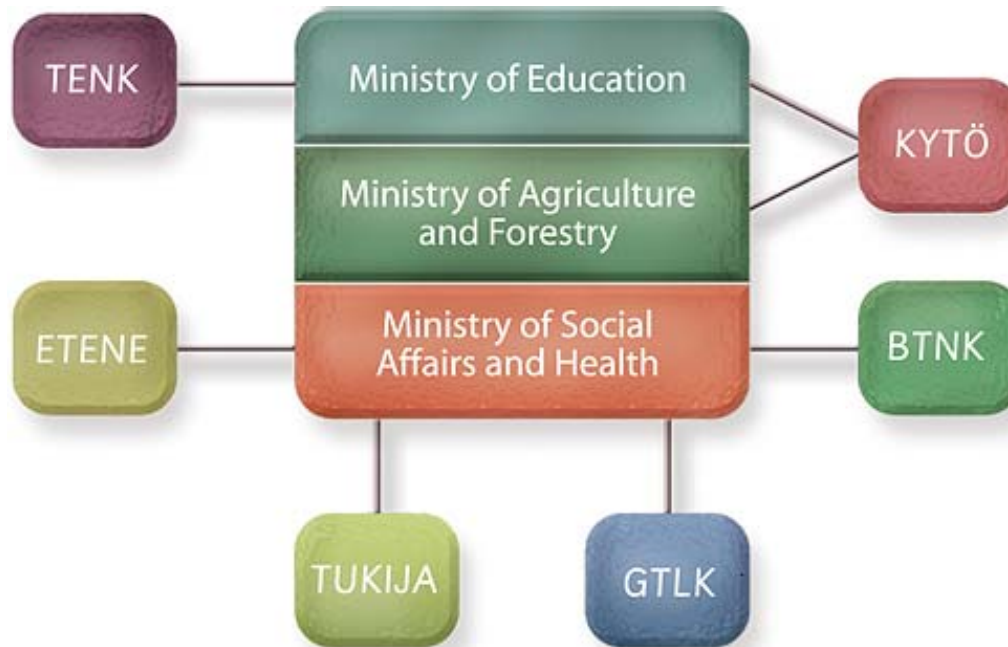
# RESEARCH ETHICS, GOOD SCIENTIFIC PRACTICE, VIOLATIONS & FRAUD

Salla Lötjönen  
Secretary General  
National Advisory Board  
on Research Ethics



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# ETHICAL EVALUATION OF RESEARCH IN FINLAND



TENK	ETENE	TUKIJA	KYTÖ	BTNK	GTLK
National Advisory Board on Research Ethics	National Advisory Board on Health Care Ethics	Sub-committee on Medical Research Ethics	Cooperation Group for Laboratory Animal Sciences	National Advisory Board on Biotechnology	Board for Gene Technology

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# NATIONAL ADVISORY BOARD ON RESEARCH ETHICS (TENK)

- Founded 1991 (Decree 1347/1991)
- Nominated by the Ministry of Education for three-year terms
- Current term 1.2.2007-31.1.2010
- Office situated at the Federation of Finnish Learned Societies



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# COMPOSITION

## **Chair**

Chancellor Eero Vuorio  
Univ. Turku

## **Vice chair**

Vice President, Prof. Riitta Keiski  
Univ. Oulu

## **Secretary General**

LLD, MA Salla Lötjönen

## **Members**

Prof. Katie Eriksson, ÅAU  
Dep. Dir. Gen. Matti Heikkilä, STAKES  
Counsellor of Legislation Markku Helin,  
Ministry of Justice  
Dir. Merja Hiltunen, TEKES  
RO, D.Soc.Sc. Arja Kuula, FSD  
Dir. Paavo Löppönen, Acad. Finland  
Vice President Sinimaaria Ranki, EVTEK  
Prof. Ari Salminen, Univ. Vaasa



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## FUNCTIONS (Decree 1347/1991)

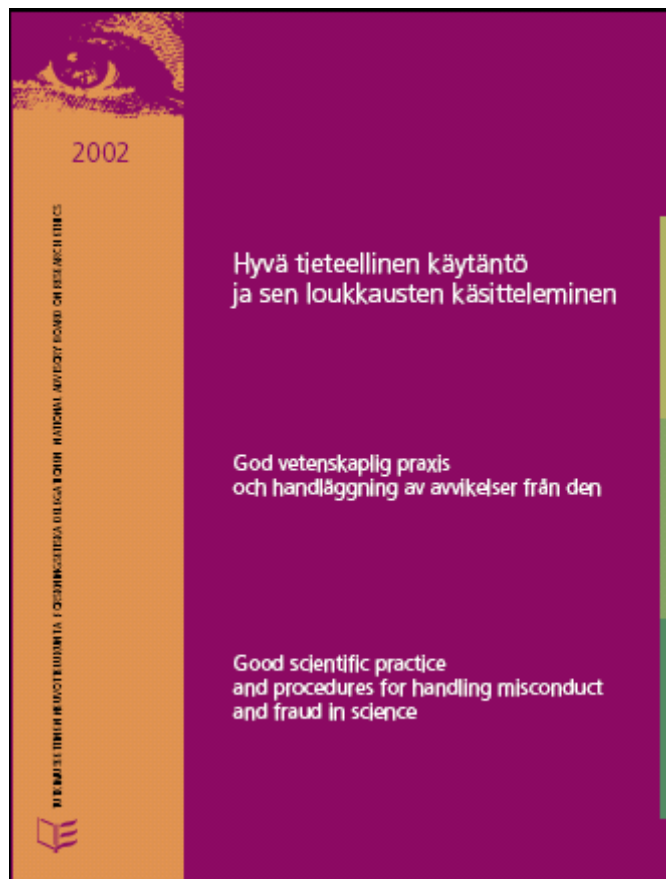
1. Makes proposals and issues statements to governmental authorities on legislative and other matters concerning research ethics
2. Acts as an expert body working towards the resolution of ethical issues relating to research
3. Takes initiative in advancing research ethics and promotes discussion concerning research ethics
4. Monitors international developments in the field and takes actively part in international cooperation
5. Informs the public about research ethics



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# GUIDELINES

- Good Scientific Practice and Procedures for Handling Misconduct and Fraud in Science(2002)  
(1994, 1998)





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## GOOD SCIENTIFIC PRACTICE (1/2)

1. Modes of action: integrity, meticulousness and accuracy (in conducting research, in recording and presenting results, and in reviewing research and its results)
2. Ethically sustainable data collection, research and evaluation methods (variation by research discipline) and openness in publishing
3. Taking due account of other researchers' work and achievements
4. Planning, conducting and reporting according to standards set for scientific knowledge



## GOOD SCIENTIFIC PRACTICE (2/2)

5. Status, rights, co-authorship, liabilities and obligations of the research team are determined
  - ownership of data
  - storage of material
  - recording what has been agreed
  - before starting research/when recruiting
6. Sources of funding and other associations are made known to those participating in research and to public
7. Good administrative practice and management of personnel and finances



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# RESPONSIBILITY OF MAINTAINING GOOD SCIENTIFIC PRACTICE

First and foremost it is the responsibility of the researcher him/herself but also:

- research team collectively
- supervisor
- head of research unit/organisation as a developer of the working environment
- learned societies and journalists as providers of information and as promoters of science
- funding organisations as actors in research policy



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# VIOLATIONS OF GOOD SCIENTIFIC PRACTICE

1. Misconduct in science
2. Fraud in science



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# MISCONDUCT IN SCIENCE

## Examples:

- Understatement of other researchers' contribution to a publication
- Negligence in referring to earlier findings
- Careless reporting of research findings and the methods used
- Negligence in recording and retaining results
- Publication of the same results several times as new
- Misleading the research community



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# FRAUD IN SCIENCE

- Fabrication
- Misrepresentation (falsification)
- Plagiarism
- Misappropriation



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# FABRICATION

Presentation of fabricated data or results to the research community

- fabricated data have not been obtained in the manner or by the methods described in the report
- presenting fabricated results in a research report



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## MISREPRESENTATION (FALSIFICATION)

Intentional alteration or presentation of original findings in a way which distorts the result

- scientifically unjustified alteration or selection of data or results
- misrepresentation to omit results or data pertinent to conclusions



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# PLAGIARISM

Presenting someone else's research plan, manuscript, article or text, or parts thereof, as one's own.



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## MISAPPROPRIATION

A researcher illicitly presents or uses in his/her own name an original research idea, plan or finding disclosed to him/her in confidence.



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# VIOLATIONS OF GOOD SCIENTIFIC PRACTICE - MOTIVES?

- Financial problems – competition between researchers
- Co-work with commercial sector – rules of the game blend
- Insufficient leadership training
- Alienation from basic rules: do not lie, do not steal



## PREVENTION

- Basis for good practices in research and data collection is set already at school
- Good scientific practice is adopted as a student by following examples and through specific courses and discussion
- Important that the researchers respect each other, although it is not necessary to agree on everything
- If matters are agreed in advance and recorded, misunderstandings are reduced in group work
- Positive working atmosphere reduces also suspicions and allegations of fraud



## PROCEDURES

- Allegation of a violation of good scientific practice is handled at the organization in which the suspect research has primarily been conducted
- Most relevant to legal protection in the process are:
  - fairness and impartiality
  - the hearing of all parties concerned
  - speedy process



## PROCEDURE

The procedure proposed by TENK has three stages:

1. written notification
2. inquiry
3. investigation

A suspect or a complainant dissatisfied with the procedure used, the inquiry, the investigation or the final report can request the National Advisory Board on Research Ethics to give its opinion.



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# PROBLEMS IN HANDLING RESEARCH ETHICAL ALLEGATIONS

1. Nature of the problem: ethical, academic, administrative or personal?
2. Written communication vs. conversation
3. How to find the right handling instance/authority
4. Ignorance shifts bigger problems for later
5. One-sided hearing before decision-making
6. Finding a right balance between expertise and impartiality – small research community
7. Awareness of standards for good scientific practice
8. Slow process
9. Legal protection of the “whistleblower”



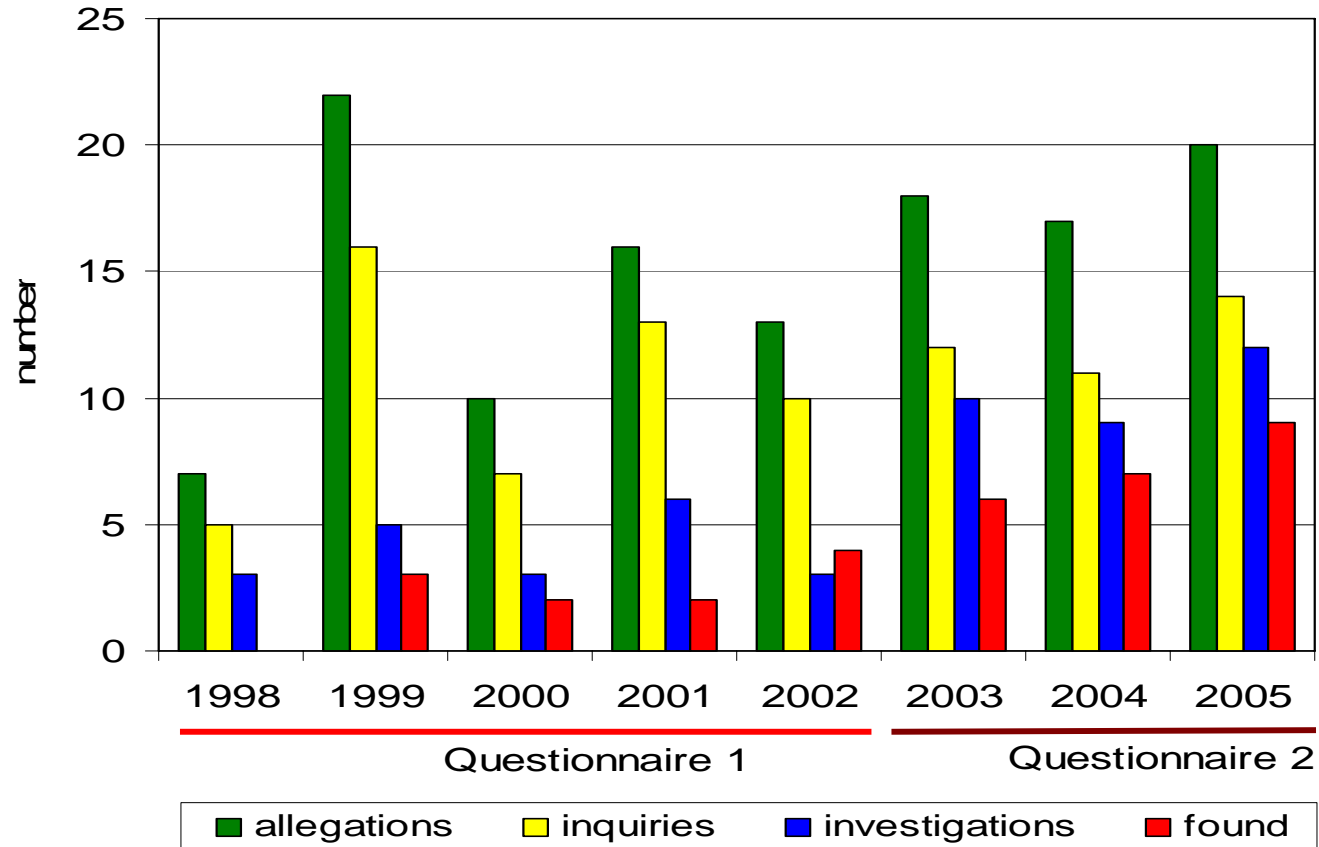
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# QUESTIONNAIRE IN RESEARCH ETHICS

- January 2003 and May 2006 questionnaire to all organizations committed to good scientific practice guidelines 2002:
  - prevalence of allegations and consequences
  - procedures for handling
- In 2006: 52 responses from 78 (67 %)
  - universities 81 %
  - research institutes 73 %
  - polytechnics 53 %
  - other organizations 50 %
- Questionnaire was sent to the rector/director, and it was filled in without exception by a person from the central administration



## The number of allegations, inquiries, investigations and found violations of good scientific practice annually





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## FROM ALLEGATION TO INQUIRY

The most common reasons why an allegation did not lead to an inquiry were:

- Unfounded allegation
- Agreement between the parties involved
- Unsolvable nature of the problem
- Satisfaction to the preliminary 'unofficial' inquiry
- Missing link to the organization
- Legal nature of the dispute

2003 questionnaire results included also:

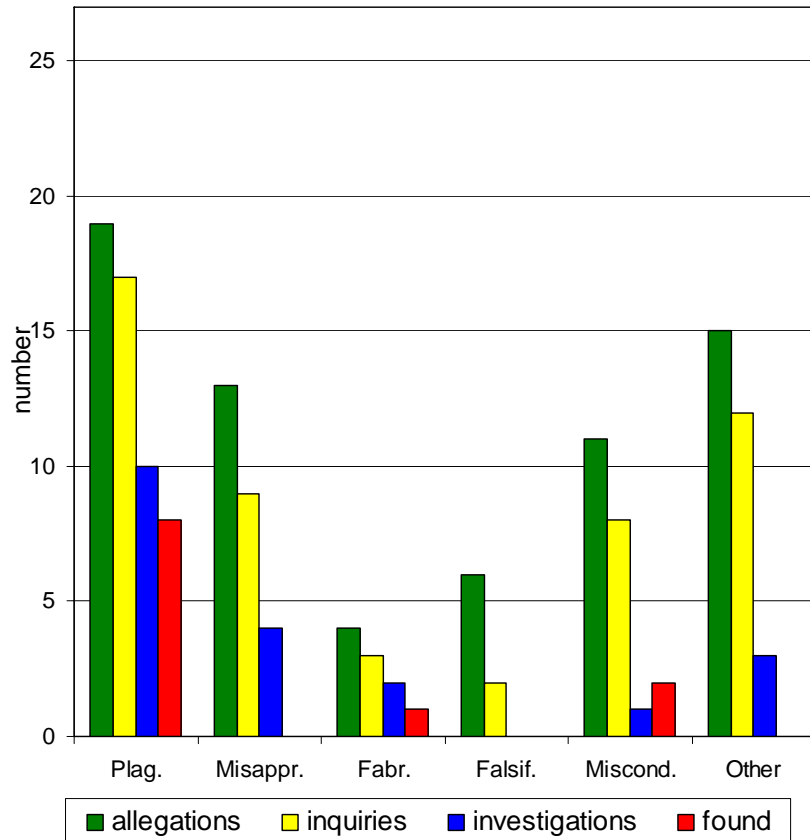
- Anonymous report
- Passivity of the injured party



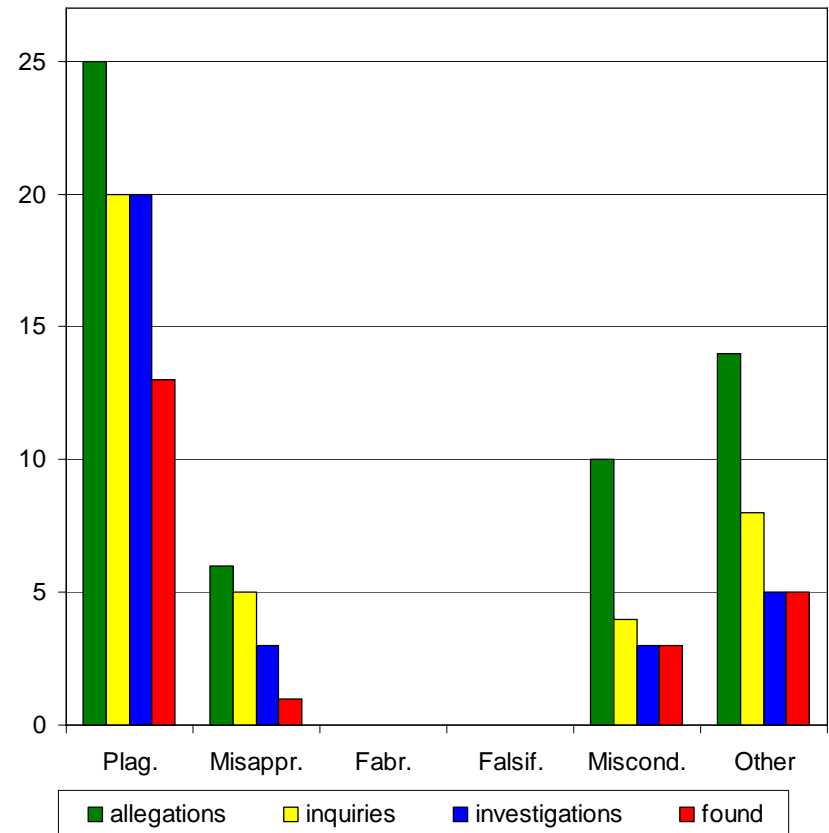
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# Number of allegations, inquiries, investigations and found violations of good scientific practice in years 1998-2005 according to the nature of violation

Questionnaire 1: 1998-2002



Questionnaire 2: 2003-2005





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# CONSEQUENCES OF VIOLATING GOOD SCIENTIFIC PRACTICE

Most used sanctions are:

- Failing the dissertation
- Admonition or warning
- Lowering the mark
- Expulsion for a fixed term

In single instances also:

- Interview with the Rector
- Modification of responsibilities (change of responsible researcher)
- Withholding or termination of a research grant
- Discharge of employment



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## CONTACT DETAILS

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