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# Health Canada

# Scientific Integrity Framework

**PIPSC Symposium**

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Larissa Boettger, MA and Zubin Master, PhD

Health Canada



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# Purpose

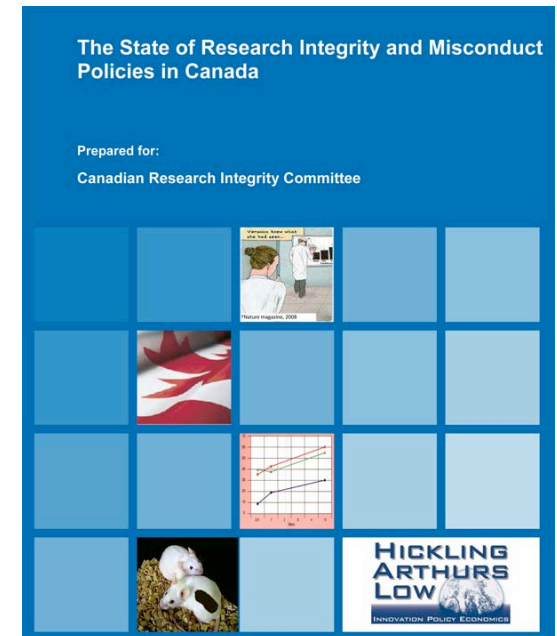
- To provide an overview of the Health Canada Scientific Integrity Framework

# Research Integrity in Canada

- The Tri-Council Policy Statement: Integrity in Research and Scholarship (TCPS-IRS) covers individuals and institutions who receive funding from the Tri-Agencies

## Recent Initiatives:

- Release of Canadian Research Integrity Committee sponsored report
- Release of the Tri-Agency's *Review of NSERC's and SSHRC's Policy Framework for Research Integrity*
- Council of Canadian Academies is developing a common definition and set of principles for research integrity in a Canadian Context
- Tri-Agencies plus Association of Universities and Colleges of Canada are strengthening several aspects of the TCPS-IRS policy



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# What is Scientific Integrity?

- Captures various ethical practices in science
- Can capture all fields of science including:

## Fields of Science

- Natural sciences e.g., physics, biology, chemistry, astronomy, earth & atmospheric sciences, and environmental sciences
- Applied sciences e.g., medicine, psychology, and engineering
- Formal sciences e.g., computer science, math, and statistics
- Social sciences e.g., anthropology, sociology, and political science

- Scientific integrity outlines scientific responsibilities to scientists and others and includes research integrity, integrity of scientific communication, and the responsibility of scientists to educate others

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# Scientific Integrity at Health Canada

- Scientific integrity is essential to the work of the Department in the conduct of scientific research, regulatory review, and in the use of scientific information during decision-making
  
- A few cases of scientific misconduct have been reported

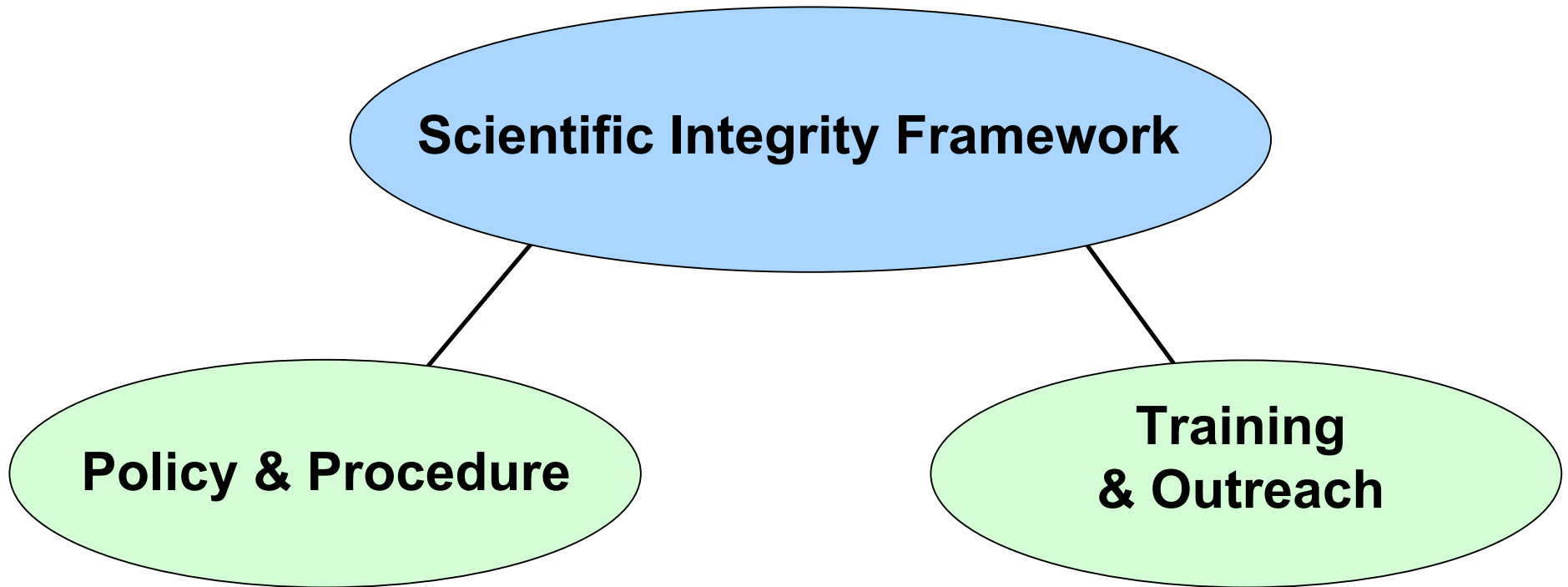
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# Risks Associated with Scientific Misconduct at Health Canada

- Compromising the health and safety of Canadians
- Jeopardizing public trust in the Department
- Loss of credibility of the Minister and the Department
- Eroding trust amongst researchers and scientists
- Creating legal liability and associated administrative, legal and financial costs

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# Health Canada Scientific Integrity Framework



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# Objectives of the Health Canada Scientific Integrity Framework

The Health Canada Scientific Integrity Framework aims to:

- promote scientific integrity within the Department and provide guidance on the ethical practice of science
- mitigate the risks related to scientific misconduct
- provide transparency and consistency in addressing allegations of scientific misconduct



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# Approach

Issues that undermine scientific integrity were identified through:

- an analysis of cases of scientific misconduct at Health Canada,
- an environmental scan of national and international governmental and non-governmental policies and practices of scientific and research integrity, and
- a review of the academic literature on scientific and research integrity

# Environmental Scan of Scientific and Research Integrity Policies

- In an environmental scan conducted in Winter 2008/2009, it was found that some federal science-based departments and agencies have scientific and research integrity policies

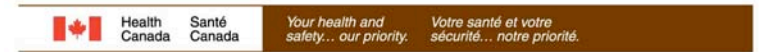
Issues that Undermine Scientific or Research Integrity	Policies and Educational Materials from:			
	HC	AAFC	CFIA	NRC
Fabrication, falsification, plagiarism	⊖	Yes	Yes	Yes
Undue authorship credit	⊖	Yes	Yes	Yes
Lack of peer review for research	⊖	—	—	—
Lack of peer review for publication	⊖	General	Yes	Yes
Data misinterpretation	⊖	Yes	General	Yes
Poor data management	Partial	Yes	Yes	Yes
Poor mentoring practices	⊖	—	—	Indirectly
Lack of research ethics & animal ethics review	Yes	Yes-animal In process-hum	Yes-animal No-human	Yes
Conflicts of interest	Yes	TBD	Yes	Yes
<i>Procedure to Address Scientific Misconduct</i>	⊖	Yes	Yes	Yes

Legend: AAFC – Agriculture and Agri-Food Canada, CFIA – Canadian Food Inspection Agency, NRC – National Research Council Canada

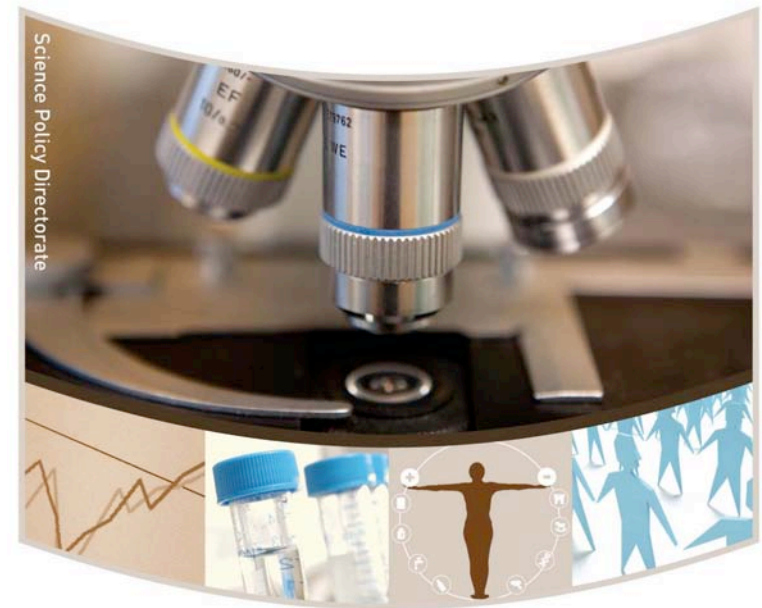
# Scientific Integrity Policy

## Scope

- The scope of the Scientific Integrity Policy covers issues that undermine scientific integrity in the context of research, regulatory review, and the use of scientific information for decision-making at Health Canada
- The Scientific Integrity Policy captures everyone working at or with Health Canada, including contractors and collaborators



The Health Canada  
Scientific Integrity Policy



Canada

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# Provisions in the Scientific Integrity Policy (I)

## **1) Fabrication, Falsification & Plagiarism**

- Consistent with most other policies reviewed during the environmental scan, the Health Canada Scientific Integrity Policy prohibits any act of fabrication, falsification or plagiarism

## **2) Publication and Authorship Practices**

- The Policy addresses publication and authorship in three sections:
  - 1) The Tracking and Notification of Scientific Publications
  - 2) Republication Practices
  - 3) Credit in Publications (authorship and acknowledgements)

## **3) Respect for Research Subjects**

- Health Canada Research Ethics Board Administrative Policy and Procedures Manual
- Health Canada Ottawa-Animal Care Committee Policies and Procedures Manual

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# Provisions in the Scientific Integrity Policy (II)

## 4) Scientific Communications

- Health Canada Spokesperson Policy

## 5) Consideration of Scientific Evidence during Decision-Making

- Health Canada Decision-Making Framework for Identifying, Assessing, and Managing Health Risks

## 6) Data Misinterpretation during Regulatory Review

- Prohibits the intentional misinterpretation of data or misinterpretation of data as a result of gross negligence that deviates from good review practices at the Department

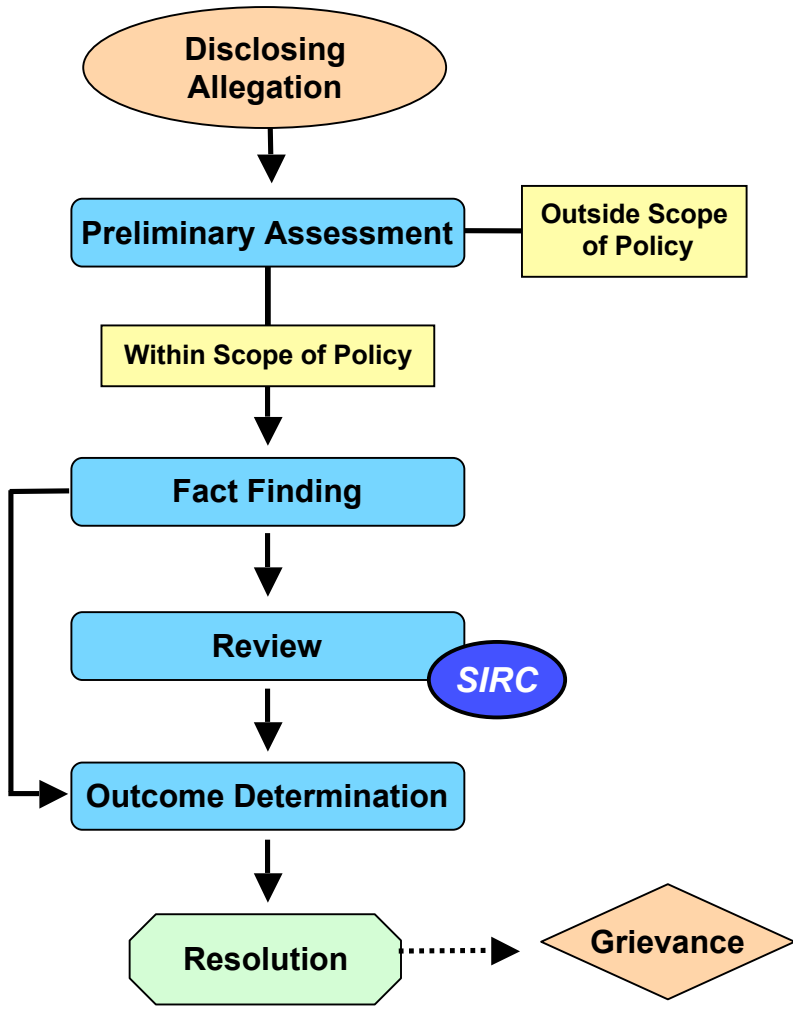
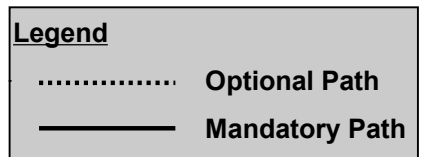
## 7) Conflicts of Interest

- Guidelines for Conflict of Interest and Post-Employment Measures for Health Canada

## 8) Adjunct Professorship

- Health Canada Adjunct Professorship Policy

# Procedure for Addressing Allegations of Scientific Misconduct



# Training and Outreach

- The Training and Outreach program of the Scientific Integrity Framework contains:
  - a Scientific Integrity Course based on case studies
  - a Guide to Mentorship for Scientific Research

- **Scientific Integrity Discussion Forum:**
  - The Forum was held in February 2010 to raise awareness on scientific integrity and the Health Canada Scientific Integrity Policy
  - The Forum included guest speakers from national and international organizations who presented their current activities regarding research and scientific integrity

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## Next Steps

- The scientific integrity course and the mentorship guide are currently under development
- The Scientific Integrity Policy will come into effect in Fall 2010
- Outreach activities will continue in order to promote a culture of scientific integrity at Health Canada



# Acknowledgements



- Dr. Stephen Hare, Health Canada Centre on Ethics and Values Inquiry
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