

Ethical Treatment and Protection of Subjects

- ▶ Humans and animals
- ▶ Human subjects' protection:
 - ▶ respect and consideration (e.g. privacy, courtesy)
 - ▶ confidentiality (personal information)
 - ▶ extra care of patients' records
- ▶ Animal subjects' protection:
 - ▶ respect
 - ▶ proper care

Ethics oversight at MacEwan

- ▶ Research Ethics Board (REB)
 - ▶ Must examine and approve all studies based on human subjects
 - ▶ Contact: research@macewan.ca or Rebecca Mitchell:
mittchellr38@macewan.ca
- ▶ Animal Research Ethics Board (AREB)
 - ▶ Must examine and approve all studies on animals
 - ▶ Contact: areb@macewan.ca

Ethics Tutorial

- ▶ TCPS2 CORE tutorial (<https://tcps2core.ca/>)
- ▶ first homework

Honesty and Integrity

Scientists demonstrate

- ▶ *moral integrity*
- ▶ *openness* (share results, open to different ideas)
- ▶ *honesty* (recording and analyzing data, reporting findings)

Honesty and Integrity

Use of *all* evidence collected

- ▶ Data should not be removed from analyses unless they are outliers – criteria for removal must be reported
- ▶ It is legitimate to remove measurements from analyses if:
 - ▶ the procedure of the experiment was not properly applied when recording that observation
 - ▶ there was a recording error
 - ▶ the individual measured belonged to a different population or species
- ▶ If no reasonable explanation can be found for observing the outlier, the outlier should either be retained or removed with caution. Report!

Objectivity, Impartiality, and Lack of Prejudice

Scientists

- ▶ consider all available information and explanations
- ▶ avoid bias
- ▶ lack prejudice

Competence and Carefulness

Scientists

- ▶ maintain, promote, and improve competence in their profession
- ▶ demonstrate carefulness
- ▶ are meticulous in recording and analyzing data and in scientific writing

Socially Responsible

Scientists

- ▶ work towards human progress by conducting meaningful research, by promoting scientific education, and by eliminating any possible harmful consequences of research
- ▶ responsible publication: publish for the advancement of science and society
- ▶ legality: knowledgeable and obedient to laws and government policies when conducting research

Respect for Intellectual Property

Scientists

- ▶ honour patents, copyrights
- ▶ do not use unpublished data or results without permission
- ▶ acknowledge source of public data (like data on the Internet)
- ▶ do not take credit for the work of others
- ▶ fully acknowledge the participation and contributions of others to the research
- ▶ avoid plagiarism, that is:
 - ▶ presenting someone else's work in their own report without giving credit to the one who did the original work
 - ▶ misrepresenting someone else's findings to suite own needs

Scientific misconduct is often identified by:

- ▶ Peer reviews
- ▶ Scientists repeating the same studies later and reporting different results
- ▶ Online search and compare tools can discover plagiarism

Famous case in recent years: Researcher using the same graph in different contexts, only relabelling the axes.