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## Research misconduct

Research misconduct means fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results; but does not include honest error or differences of opinion.

- Fabrication is making up data or results and recording or reporting them.
- Falsification is manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.
- Plagiarism is the appropriation of another person's ideas, processes, results, or words without giving appropriate credit.

## <u>Plagiarism</u>

<u>Plagiarism</u> is the appropriation of another person's ideas, processes, results, or words without giving appropriate credit, including those obtained through confidential review of others' research proposals and manuscripts. In other words, <u>plagiarism is an act of fraud</u>.

All of the following are considered plagiarism:

- (1) turning in someone else's work as your own;
- (2) copying words or ideas from someone else without giving credit;
- (3) failing to put a quotation in quotation marks;
- (4) giving incorrect information about the source of a quotation;
- (5) changing words but copying the sentence structure of a source without giving credit;
- (6) copying so many words or ideas from a source that it makes up the majority of your work, whether you give credit or not (see our section on "fair use" rules)

## Six ways to avoid Plagiarism

- ▶ Paraphrase: Read someone's papers and put it into your own phrases.
- > Cite: Proper citing is one of the effective ways to avoid plagiarism.
- ➤ **Quoting:** When quoting a source, use the quote exactly the way it appears.
- ➤ **Citing Quotes:** Citing a quote can be different than citing paraphrased material. This practice usually involves the addition of a page number, or a paragraph number in the case of web content.
- > Citing Your Own Material: Treat your own previous research papers as others' material and cite it appropriately.
- ➤ **Referencing:** Include a reference page or page of works cited at the end of the research paper.

## Office of Research Integrity (ORI) recommends six strategies to champion integrity

- \* Adopt zero tolerance: It is essential that an institution specifies and implements the requirements that all suspected misconduct must be reported, and all allegations must be thoroughly and fairly investigated.
- \* <u>Protect whistleblowers:</u> Careful attention must be paid to the creation and dissemination of measures to protect whistleblowers.
- \* Clarify how to report: Establishing a reporting system that clearly identifies the individuals to whom allegations should be brought, and establishing clear policies, procedures and guidelines related to misconduct and responsible conduct.

- \* <u>Train the mentors:</u> To build a stronger culture of integrity, the current generation of researchers has to be educated to pay more attention to how they work with their junior team members. Institutional investment is essential to build better mentors.
- \* <u>Use alternative mechanisms:</u> Institutions must start to use other means to protect the integrity of their studies.
- \* Model ethical behaviour: Institutions can successfully stop cheating when they have leaders (powerful role models) who communicate what is acceptable behaviour, encourage faculty members and staff to follow the policies, and to develop fair and appropriate procedures for handling misconduct cases.