

Classification of Scientific Misconduct*¹

Types of Scientific Misconduct	Description
1. Fabrication	“Making up data or results and recording or reporting them ⁽²⁾ ”
2. Falsification	“Manipulating research materials, equipment, or processes, or changing or omitting data or results ⁽²⁾ ”
3. Plagiarism	
a. Plagiarism of ideas	Using another person's ideas, processes, or results without giving appropriate credit ⁽²⁾
b. Plagiarism of text	Using another person's words without giving appropriate credit ⁽²⁾
i. Without citing the source	
- Verbatim copying	Using the exact text or any materials of others without acknowledging the source
- Paraphragiarism	Using the text of others with a few changes or mixing the others' texts without acknowledging the source(s)
ii. With citing the source	
- Verbatim copying	Using exact words of others with citing the origin but without using quotation marks
- Inappropriate paraphrasing	Using texts of others while citing the origin but only with minor changes in the words or structure
- Copyright infringement	Using a large part of others' words (even in quotation marks) that violates the copyright
4. Self-plagiarism[†]	
a. Duplicate publication	Publication of paper that are identical or the same in hypothesis, results, and conclusions
b. Salami publication	Publication of each part of the results of one study in several papers
c. Practice of text recycling	Using one's own text in several different papers

*Adapted from the paper by Roig and the definitions of the Office of Research Integrity.^(2,3) The definitions are applicable for any part of a written work (text, table, figure, etc) and are regardless of the extent (either a sentence, a paragraph, or a large body of the text).

†Self-plagiarism is considered either as an independent entity or as a subcategory of plagiarism. Here, it was not possible to include it under the plagiarism classifications just because of the nature of this classification.

References

1. Farrokhi F. Plagiarism: where unawareness makes a lame excuse. Arch Iran Med. 2009;12:176-8.
2. Office of Research Integrity. Available from: <http://www.ori.dhhs.gov> [accessed Oct 26, 2008].
3. Roig M. Avoiding plagiarism, self-plagiarism, and other questionable writing practices: A guide to ethical writing. St John's University; 2006. Available from: URL: <http://facpub.stjohns.edu/~roigm/plagiarism/Index.html> [accessed Oct 26, 2008].