

## Research vs Plagiarism in Medical Science (Cytohistopathology)

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### Abstract

The most common form of scientific misconduct or literary theft in medical science is Plagiarism. Plagiarism simply means use of writings in any form belonging to others with fabrication and falsification of the data. Research meant creative work on systemic basis to increase our existing knowledge, discover or revise facts and theories. But the boundaries between plagiarism and research are often unclear. Plagiarism may corrupt scientific medical literature and causes harm to patients. It is the most common problem in cytohistopathology also.

This article summarizes most common causes and types of plagiarism with ways to avoid any type of plagiarism. Honesty, trust, self satisfaction are the heart of medical scientific articles. The aim of this review is to curtail the plagiarism practice and to create awareness regarding all headings of plagiarism for researchers.

**Keywords:** Plagiarism, Research, Cytology, Histopathology, Scientific research

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### Introduction

In medical sciences, Research defined as the systemic investigations into and careful study of materials and sources in order to establish facts and reach new conclusions to increase the present stock of knowledge<sup>(1)</sup>.

Plagiarism is one of the research misconducts including results fabrication, data falsification, misinterpretation of data, drawing certain conclusions. Misconduct also includes the breach of confidentiality and or violation of authorship or publication<sup>(2)</sup>.

Merriam-Webster online dictionary defines, to “plagiarize” means stealing and passing off(ideas/ words of another) as one’s own, using (another’s publication) without crediting the source, committing the literary theft, presenting as new and original ideas or product derived from an existing source<sup>(3)</sup>.

Plagiarism is an act of fraud, involving both stealing someone else’s work and lying about it afterwards<sup>(3)</sup>. This type is more common in Cytohistopathology in especially retrospective and prospective studies also with gifted or ghost authorship. The boundary between plagiarism and research is often unclear<sup>(3)</sup>.

As per data from WAME (World association of medical editors)-precise definition of Plagiarism, is when copied six consecutive words in a continuous set of 30 used characters<sup>(4)</sup>. This can be corrected by putting quotation mark if more than 6 words are used<sup>(4)</sup>.

As per Nick Grantham<sup>(5)</sup>, founder of Fractus developed the school wallpapers stating that “If you steal from one author its plagiarism. If you steal from many its research”. The word plagiarism comes from the latin- plagiare means to kidnap, and theft of intellectual property<sup>(2)</sup>. Intellectual property is the product of one personal mind, expressed as ideas or concept, that has commercial value protected by copyright laws<sup>(3)</sup>. Copyright laws exist to protect our

intellectual property. It make illegal to reproduce someone else’s expression of ideas or information without permission<sup>(3)</sup>. It includes images, diagnosis, Fig. written words etc. in cytohistopathology.

Plagiarism is the most common misconduct, literary theft or scientific dishonesty in research articles<sup>(2)</sup>. In medical institutes, prevalence of plagiarism varies from one community to another with reported rates of 11-14%<sup>6,7</sup>. Nature publishing group, in 2010 reported that 23% of estimated articles were rejected due to plagiarism<sup>(8)</sup>.

### The most common type of plagiarism are

1. **Intentional plagiarism:** Buying or burrowing or cut-copy-paste or using some others work partly or completely without giving adequate credit to the original author is refereed as intentional plagiarism<sup>(9-11)</sup>.
2. **Unintentional plagiarism:** Using some others work with wrong paraphrasing or improper citing gives unintentional plagiarism<sup>(9-12)</sup>.

In Cytohistopathology, the most common type is unintentional, but intentional also not uncommon. It mainly includes plagiarism of ideas, thoughts, diagnosis, images, word to word plagiarism like in dissertations, mosaic plagiarism<sup>(13)</sup>. Self plagiarism as duplicate, salami or text recycling including several papers on same subject, several papers out of results from same study, same topic in different journals etc are more commonly found in cytohistopathology<sup>(14)</sup>. Theft of final diagnosis of other researchers implied on ones name, copy-paste gross and microscopic images from web, use of others academic documents for self are commonly found in cytology related plagiarism.

The penalties of plagiarism includes formal disciplinary action like apology letters, retraction of published articles(most commonly seen) to criminal charges as blacklisting/ suspension for 3 to 5 years and prosecution of authors<sup>(12)</sup>.

**The main factors for plagiarism summarized as<sup>(2,3,14)</sup>**

1. "Publish or perish" academic culture- Peoples were published due to get promotions as per MCI guidelines to higher cadres, to get funds, and rarely to get incentives in India. In western world, scenario is different.
2. Misbelief or unintentional copy paste material especially in dissertations.
3. Human nature regarding desire for status, power and fame without ability to do research in proper way.
4. Too much competitive stress resulting in poorly drafted and less timely managed articles.
5. To prove academic competency, name and fame to and by the academic society.

The main route cause of plagiarism in medical fraternity is the competitive stress with unhealthy relations among them and availability of any information of others in the electronic media by personal computers, laptops with the Google<sup>(12)</sup>. This electronic boom is also used to detect plagiarism now a days by plagiarism detection software like crosscheck, plagiscan, ithenticate, Google search, Pubmed, Mesh etc. Experience reviewers and editorial board members can detect plagiarism easily with experience and with these tools<sup>(15)</sup>.

Hence, such type of unethical practices of publications should be avoided at the first step itself at the post graduate level at the time of dissertations.

Most of the plagiarism (about 90%) can be avoided by just citing sources. Simply acknowledging that certain material has been borrowed and providing your audience with the information necessary to find that source is usually enough to prevent plagiarism<sup>(3)</sup>. Changing the words of original source is not sufficient to prevent plagiarism. Hence citations is the only way you tell your readers that certain material in your work came from another source and no harm in this aspect<sup>(3)</sup>.

COPE (Committee on publication ethics) is the largest committee that makes guidelines for publication ethics in the world. In 2006, COPE published flow charts that help to differentiate between minor and major plagiarism<sup>(2)</sup>.

**Golden rules to avoid plagiarism and to publish a quality paper summarized as<sup>(2,13,16,19)</sup>**

1. Evidence makes your paper stronger, as in Cytohistopathology-photographs of patients (without revealing identity), detailed relevant investigations data, operative images, gross images and microscopic photographs are helpful.
2. Take written permission for diagnosis, data and images diagnosed by seniors in retrospective studies.
3. Source credit/ mentioning the references properly-regarding ideas, facts, images, diagnosis, written

material, Fig. etc. in proper citation and acknowledge.

4. Paraphrasing- in authors own words from other original work without changing the scientific fact and with crediting that source.
5. Plagiarism detection software's like crosscheck, plagiscan etc. are used.
6. For junior researchers and PG students, framework the protocol and give sufficient time for writing.
7. Collect hard copies of all the relevant references. Read them carefully and highlight important areas.
8. Understand the whole concept and write the new ideas in your own words.
9. Follow the author guidelines as per speciality journals.
10. Always acknowledge and give sufficient credit to the original sources.
11. Avoid copy-paste –print system, especially in dissertations.
12. Avoid hurried prepared, poorly drafted, illegitimate articles, duplication of articles or fabrication of data prepared under pressure of hierarchy competition. No ghost or gifted authorship.
13. Give up academic dishonesty by thinking towards self –satisfaction and self-asking "what's the use" towards copy-paste material.

By understanding above rules, we can definitely reduce the menace of plagiarism to produce excellent, honest, trustful scientific research articles. Scholarly writing is a skill for junior researchers and dissertation is first step of it. It requires training and practice under mentors, supervisors and guides; and for senior experts, it requires patience and time<sup>2</sup>. Research papers have at-least main things as-what you think about the topic and what you have learned from it. And, what the other people know about it and have said about the same topic in past.

**Conclusion**

Proper citing, quoting, referencing, paraphrasing, acknowledge, written permission and self satisfaction are the important things to avoid academic misconduct, dishonesty and plagiarism.

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