



## Short Communication

## Artificial intelligence (AI) in medical research and publication

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Introduction of Artificial intelligence AI literally affect the each and every aspect of day to day life. Medical research is also one of them. Medical research and publishing includes three main aspects Content, peer review and post-publication. AI can make all these aspects more accurate and efficient. It can also speed up each of these processes and make publication faster. AI-based systems can help editors to find the suitable reviewers. The AI system could handle the process, from selection of reviewers, collection of reviewer reports, and a final decision from the reviewers' reports. AI systems can check the quality and also completeness of articles.<sup>1</sup>

ChatGPT, an AI tool, was released in November 2022. It can literally interact with you like human being. It can generate a human-like response to your text requests or text commands.<sup>2</sup> AI can transform a scientific writing in medical research. It can create drafts, summarize articles, and also translate contents in different languages. It helps to make medical writing and publication easier and faster.<sup>3</sup>

AI is helpful in many ways for the medical research and medical writing. It can access different databases and give clue to the future research. AI can automate data entry, formatting and reference management, making it faster and researcher can focus on data analysis and interpretation. AI tools can write articles, abstracts, and also summaries it within in no time. Manuscript formatting, grammar of the content are reliable. Data analysis can be faster with AI tools. All these things are done within fractions of seconds making the process superfast.

Artificial intelligence speeds up drafting of manuscripts, data analysis, and managing references. AI is reshaping the medical publications by faster workflows, improving accessibility, and supporting researchers in academic publishing.<sup>4</sup>

But AI in medical writing have some serious challenges. The utilization of AI increases the chances of medical errors and must be validated thoroughly before publishing.<sup>5</sup> AI tools may simplify complex data or concepts, resulting in to incomplete or irrelevant interpretations. AI tools datasets may contain intrinsic biases or errors, which can lead to biased outcomes. Frequently the response generated by AI tools are inadequate and inconsistency. Inadequate and inconsistency result can seriously affect the reliability of medical research.<sup>6</sup> Plagiarism is another prominent issue when AI tools are used for medical writing. Many confirmed reports of vast duplication of data are observed when AI tools are used for writing research articles.<sup>7</sup>

One of the most serious drawback of the AI use in research is it cannot differentiate between retracted research article and can cite it again and again leading to completely wrong or false outcomes. There is a 10 % of chance that ChatGPT can cite the retracted articles and answer your questions. It can repeatedly cite the same article if used for manuscript preparation.<sup>8</sup>

Many prominent publishers banned or restricted the use of AI in research. National Institute of Health (NIH) and Australian Research Council banned the use of AI in review

processes. Elsevier limit the AI use to in-house or licensed technologies.<sup>22</sup>

Authors using AI tools in research must disclose their use of AI and also details in which part of the research like manuscript preparation or data analysis or references where AI is used. AI-generated content like text, images must be verified before publishing to maintain the quality and reliability of the research articles. Various AI tools like AI Detector, GPT Detector, and GPTZero are available to detect the AI generated text and must be utilized whenever the AI tools are used for the medical writing.

In conclusion when AI tools are used for medical research or medical publication the accuracy and reliability of data must be verified by humans and not machines.

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### Conflict of Interest

None.

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