**POSITION OF THE JOURNAL REGARDING THE USE OF ARTIFICIAL INTELLIGENCE (AI) IN MANUSCRIPT PREPARATION**

The Journal of Clinical Nutrition and Metabolism (RNCM) demands transparency and integrity from authors regarding the use of Artificial Intelligence (AI) in the production of their manuscript, and furthermore, requires its disclosure. If authors used AI tools in writing their manuscript, producing figures or graphical elements of the article, or in data collection and analysis, they must indicate it in the manuscript's "Methods" section, detailing how the tool was used and which tool was used.

"In a short span of time, medical journal editors and researchers have had to address the role that AI tools can play in scientific literature and whether it is appropriate to cite them as authors of publications, as there is a real threat of an avalanche of fake articles written by machines that could drown the scientific process in a 'sea of garbage’”(1)

Manuscripts written with the use of artificial intelligence - AI (such as ChatGPT, among others) - may appear to be "scientific enough" to deceive unsuspecting reviewers and readers, and even worse, those co-authored with AI are already making their way into scientific literature. An AI program cannot be an author. Violating this principle may constitute scientific fraud comparable to image manipulation or plagiarism of existing works, with ethical boundaries yet to be determined (2). In such cases, the author must ensure compliance with the four authorship criteria of the International Committee of Medical Journal Editors (ICMJE):

* To have participated in the conception and design, as well as acquisition of data, or analysis and interpretation of data;
* to have participated in the drafting of the article and its reviews;
* to have approved the final version of the article to be published; and,
* agreement to be accountable for all aspects of the article ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved (3).

Until the arrival of AI, the process of writing a manuscript required the involvement of human researchers who were experts in the field, ensuring the accuracy, coherence, and credibility of the content before it was submitted to a journal for publication. "Although chatbots can assist, they need to be 'fed' by researchers, and if what is provided to them is incorrect, they will generate erroneous results. For this reason, both chatbots and other types of AI cannot replace, at the moment, human expertise in scientific research." (1).

**Can we recognize if a text has been created by IA?**

Texts written by AI often lack nuances, style, and originality. There are also AI detectors or expert reviewers available. However, unfortunately, many similar flaws can be found in texts written by "humans" (such as copy-pasting from previous works, errors in translations of works written in languages different from the native language of the author), so plagiarism detection programs can make mistakes (4).

For this reason, publishers, to protect themselves, should have AI detectors as part of the editorial process, as well as plagiarism detectors. In the foreseen future, AI could be trained to automatically extract and analyze relevant information from electronic records and patient data (vital signs, laboratory results, medical histories, etc.) to assist professionals in decision-making or to draft patient discharge reports (5).

**Is it correct to cite ChatGPT among the authors of a manuscript?**

This question, which is not yet defined, can have unpredictable consequences, and that is why the International Committee of Medical Journal Editors (ICJME) recommends basing authorship evaluation on the four criteria mentioned at the beginning of this document. Due to the commitment that an author must fulfill, all sections of articles created with AI must be adequately specified, and the methodology used to generate them should be explained in the article itself—in the **Methods** section—including the name and version of the software used, in the interest of transparency and ethics in article publication. However, an AI program cannot be an author.

Fernández-Samos-Gutiérrez, R., strongly recommends discouraging “the submission of papers entirely prepared using AI, especially if they are systematic literature reviews, among other things, due to the immaturity of the system and its tendency to perpetuate statistical and selection biases present in the instructions of the system creator, unless the studies in question aim to precisely evaluate the reliability of such systems. The generation of images and their use in scientific articles is also discouraged because they go against the ethical standards of scientific publications, unless these images are the subject of research themselves” (1).

The blind, complex, and time-consuming process of verifying information is what gives value to peer-reviewed journals, but because doing this process well is difficult, it inevitably leads to a decrease in the quality of peer review. There is a real problem of overproduction of scientific content, making it almost impossible for an expert to keep up with all the advances in their own disciplinary field. It is difficult to understand why the scientific community should facilitate or promote an AI tool that increases the speed and quantity of articles, while it would be better to publish scientific works of higher scientific quality and greater statistical support and significance.

**Under no circumstances should AI tools be included as authors or co-authors, as they cannot assume responsibility, originality, or integrity of the submitted manuscript since they are not human beings, nor do they have legal personality.** Therefore, individuals are responsible for any material included in the manuscript that involves the use of AI-assisted technologies. They must identify, review, and correct biases in data sources, tool design, and any information that may compromise the integrity of the manuscript's authors. Authors as humans are morally and legally responsible for any errors or biases in the manuscript or infringement of copyright and harm to third parties.

**There are still many ethical issues that the scientific community will have to reflect upon as AI improves over time: the technology is here, so it's better to learn to live with it (7-9).**

**References:**

1.Fernández-Samos-Gutiérrez Rafael. La inteligencia artificial en la redacción y autoría de publicaciones científicas. Angiología [Internet]. 2023 Oct [citado 2024 Ene 26] ; 75(5):281-283.Disponible en:http://scielo.isciii.es/scielo.php?script=sci\_arttext&pid=S0003-31702023000500001&lng=es.

2.Stokel-Walker C. AI bot ChatGPT writes smart essays - should professors worry? Nature 2022. DOI: 10.1038/d41586-022-04397-7.

3.ICMJE. Defining the Role of Authors and Contributors: Artificial Intelligence (AI)-Assisted Technology [Internet]. (consultado en 23/01/2024). Disponible en: <https://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html#four>.

4.Gao CA, Howard FM, Markov NS, D, et al. Comparing scientific abstracts generated by ChatGPT to original abstracts using an artificial intelligence output detector, plagiarism detector, and blinded human reviewers. bioRxiv preprint. 2022. DOI: <https://doi.org/10.1101/2022.12.23.521610>.

5.Patel SB, Lam K. ChatGPT: the future of discharge summaries? Lancet Digit Health 2023;5(3):e107-8. DOI: 10.1016/S2589-7500(23)00021-3.

6.Kung TH, Cheatham M, Medenilla A, et al. Performance of ChatGPT on USMLE: Potential for AI-assisted medical education using large language models. PLOS Digit Health 2023;2(2):e0000198. DOI: 10.1101/2022.12.19.22283643.

7.Departamento Nacional de Planeación. CONPES 3975. Política nacional para la transformación digital e inteligencia artificial. Bogotá, 2019.

8.Cárdenas J. Inteligencia artificial, investigación y revisión por pares: escenarios futuros y estrategias de acción. Revista Española de Sociología, 2023;32(4):a184. <https://doi.org/10.22325/fes/res.2023.184>**.**

9.COP. Authorship and AI tolos. Disponible en: https://publicationethics.org/cope-position-statements/ai-author.