



Bibliometric Insights Into Medical and Biological Sciences Research: A Case Study Approach



Arash Khaki^{1*}

The Crescent Journal of Medical and Biological Sciences (CJMB) is an open access peer-reviewed platform for scientific communication, covering a diverse range of subjects in both basic and clinical sciences. This editorial seeks to examine the bibliometric features of the journal, focusing on publication trends, citation metrics, and common research themes. Bibliometrics, a quantitative approach to analyzing scientific literature, provides valuable insights into the dissemination and impact of research outputs (1-5).

Data for this bibliometric study was collected on December 17, 2024 by searching all papers using the Web of Science Core Collection. A total of 560 publications were retrieved for analysis. The study examined citation counts, including self-citations, and identified the most cited papers and research topics. The citation topics were developed by the Centre for Science and Technology Studies in Leiden and the Institute for Scientific Information (ISI), providing a structured approach to categorize the research themes identified in this study (6).

The bibliometric analysis revealed that the papers published in CJMB received a total of 1,035 citations, with 996 citations when excluding self-citations. This indicates a robust interaction with the journal's content within the academic community. The average number of citations per publication was determined to be 1.11, while the average excluding self-citations was 1.01.

Among the publications, two papers emerged as the most cited within the database. The first, titled "Does COVID-19 Affect Male Fertility?" authored by Kurdoglu in January 2020, received significant attention, reflecting the timely relevance of the topic during the COVID-19 pandemic. The second paper, "Protective Effect of *Galega officinalis* Extract on Streptozotocin-Induced Kidney Damage and Biochemical Factor in Diabetic Rats", authored by Abtahi-Evari et al. in 2017, also received high citation counts, highlighting its impact on research related to diabetes and kidney health.

Analyzing citation trends over the past four years, we observed fluctuations in citation counts, with 193 citations

Arash Khaki is an active member of the American Society of Andrology (ASA), a member of the International Society of Gynecology and Endocrinology (ISGE), and a member of the Women's Reproductive Health Research Center at Tabriz University of Medical Sciences. Khaki's research focuses on reproductive pathology, women's health, and the development of eight innovative naturopathic medicine products for infertility treatment. His work in reproductive biomedicine has resulted in over 289 published papers in international journals and 10 book chapters. His Scopus H-index is 26, and he has been consecutively listed among the top 2% of scientists in the world, as published by Stanford University, from 2020 to 2025.



recorded in 2021, followed by an increase to 210 citations in 2022. However, citations decreased to 196 in 2023 and further declined to 186 in 2024. Furthermore, the analysis identified key research themes based on citation topics. In the macro-level category, significant areas of focus included Phytochemicals (n=43, 7.67%), Reproductive Biology (n=40, 7.14%), and Obstetrics & Gynecology (n=31, 5.54%). Other notable topics included Cardiology - General (n=18, 3.21%) and Anesthesiology (n=17, 3.03%). At the micro-level, themes such as Essential Oil (n=18, 3.21%), Electromagnetic Fields (n=13, 2.32%), and Spermatozoa (n=13, 2.32%) were prominent, alongside Polycystic Ovary Syndrome (n=11, 1.96%) and Antibiotic Resistance (n=12, 2.14%).

The bibliometric analysis indicates that CJMB has established itself as a significant contributor to the fields of medical and biological sciences. The increase in citations over the years, particularly in 2022, suggests a growing interest and relevance of the journal's publications. The identification of key research topics, such as phytochemicals and reproductive biology, reflects current trends and priorities in scientific research.

The journal's adherence to high editorial standards and rigorous peer-review processes ensures the quality and integrity of the published research. Furthermore, the commitment to open access facilitates wider dissemination and accessibility of scientific knowledge.

In conclusion, the journal plays a key role in advancing research and knowledge in medical and biological sciences. The bibliometric analysis presented in this



study highlights the journal's impact and relevance in the academic community.

Ethical Issues

Not applicable.

References

1. Khaki A. Celebrating the First Impact Factor: A Turning Point for Our Journal. *International Journal of Women's Health and Reproduction Sciences*. 2023;11(3):97-98. doi:10.15296/ijwhr.2023.17
2. Jiang S, Liu Y, Zheng H, et al. Evolutionary patterns and research frontiers in neoadjuvant immunotherapy: a bibliometric analysis. *Int J Surg*. 2023;109(9):2774-2783. doi:10.1097/JS9.0000000000000492
3. Ahmad P, Slots J. A bibliometric analysis of periodontology. *Periodontol* 2000. 2021;85(1):237-240. doi:10.1111/prd.12376
4. Li D, Yu D, Li Y, Yang R. A bibliometric analysis of PROTAC from 2001 to 2021. *Eur J Med Chem*. 2022;244:114838. doi:10.1016/j.ejmech.2022.114838.
5. Wu F, Gao J, Kang J, et al. Knowledge Mapping of Exosomes in Autoimmune Diseases: A Bibliometric Analysis (2002-2021). *Front Immunol*. 2022;13:939433. doi:10.3389/fimmu.2022.939433
6. Introducing Citation Topics. Available from: <https://clarivate.com/academia-government/blog/introducing-citation-topics/>. Accessed 7 December 2024.

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