



GREEN APPROACH FOR IRON OXIDE NANOPARTICLES SYNTHESIS: APPLICATION IN ANTIMICROBIAL AND ANTICANCER- AN UPDATED REVIEW

Norul Aini Zakariya

Faculty of Pharmacy and Health Sciences, Universiti Kuala Lumpur-Royal College of Medicine Perak

Wan Hafizah W. Jusof

Faculty of Pharmacy and Health Sciences, Universiti Kuala Lumpur-Royal College of Medicine Perak

Shahnaz Majeed

*Faculty of Pharmacy and Health Sciences, Universiti Kuala Lumpur-Royal College of Medicine Perak,
shahnaz@unikl.edu.my*

Follow this and additional works at: <https://kijoms.uokerbala.edu.iq/home>



Part of the [Biology Commons](#), [Chemistry Commons](#), [Computer Sciences Commons](#), and the [Physics Commons](#)

Recommended Citation

Zakariya, Norul Aini; Jusof, Wan Hafizah W.; and Majeed, Shahnaz (2022) "GREEN APPROACH FOR IRON OXIDE NANOPARTICLES SYNTHESIS: APPLICATION IN ANTIMICROBIAL AND ANTICANCER- AN UPDATED REVIEW," *Karbala International Journal of Modern Science*: Vol. 8 : Iss. 3 , Article 13.

Available at: <https://doi.org/10.33640/2405-609X.3256>

This Review Article is brought to you for free and open access by Karbala International Journal of Modern Science. It has been accepted for inclusion in Karbala International Journal of Modern Science by an authorized editor of Karbala International Journal of Modern Science.



University of
Kerbala

GREEN APPROACH FOR IRON OXIDE NANOPARTICLES SYNTHESIS: APPLICATION IN ANTIMICROBIAL AND ANTICANCER- AN UPDATED REVIEW

Abstract

Cancer and microbial infections create numerous challenges nowadays. Chemotherapy agents cause severe side effects, while microbial infections, especially multidrug-resistant bacterial strains hard to treat with available antibiotics. Therefore, this review provides an overview of the green synthesis of Iron oxide nanoparticles (IONPs) with their physicochemical properties and mechanism of action. The IONPs causes cytotoxicity and antimicrobial activity by causing oxidative distress through the production of Reactive Oxygen Species (ROS). The IONPs as an anticancer and antimicrobial agent may help to overcome the limitation of conventional treatments but needs toxicity evaluation before usage in clinical applications.

Keywords

Iron oxide nanoparticles; Biological synthesis; Anticancer activity; Antimicrobial activity

Creative Commons License



This work is licensed under a [Creative Commons Attribution-Noncommercial-No Derivative Works 4.0 License](https://creativecommons.org/licenses/by-nc-nd/4.0/).