THE NEW ARMENIAN MEDICAL JOURNAL
Volume19 (2025), Issue 3 p. 30-36

DOI: https://doi.org/10.56936/18290825-3.19v.2025-30

COMPARING THE ANTI-CANDIDA ALBICANS EFFECT OF ZINGIBER OFFICINALE WITH COMMON ANTIFUNGAL DRUGS

Gavanji S.[1], Bakhtari A.[2], Baghshahi H.[3]*, Hamami Chamgordani Z.[4], Gavanji J.[5], Sinaei J.[5], Hassani D.[6]

[1] Department of Plant Biotechnology, Medicinal Plants Research Centre, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran
[2] Department of Reproductive Biology, School of Advanced Medical Sciences and Technologies, Shiraz University of Medical Sciences, Shiraz, Iran
[3] Department of Animal Science, Faculty College of Agriculture and Natural Resources, University of Tehran, Karaj, Iran
[4] Department of Adult Health Nursing, Faculty of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran
[5] Institute of Traditional Medicine and Herbal Plants of Iran, Esfahan, Iran
[6] Department of Food Industry, Faculty of Agriculture, Ferdowsi University of Mashhad, Mashhad, Iran

Received 23.05.2024; Accepted for printing 15.05.2025

Abstract

Candida albicans (C. albicans) is considered one of the most opportunistic fungal agents and the most common cause of fungal diseases that causes candidiasis in humans and manifests in different clinical forms ranging from simple superficial infection to severe systemic. The study aimed to investigate the inhibitory and lethal effects of Zingiber officinale (Z. officinale) ethanolic extract and common antifungal chemical drugs on C. albicans. Ethanol extract of Z. officinale was prepared at 2 to 20 mg/ml concentrations. Using the microbroth dilution method, the minimum inhibitory concentration and minimum fungicidal concentration of the extract and chemical antifungal drugs were determined. The disk diffusion method and Sabourud Dextrose Agar culture medium were used to evaluate the inhibition zone diameters. The results showed that with the increase in the concentration of the ethanolic extract of Z. officinale, the inhibition rate of C. albicans increased. Ketoconazole had the highest anti-C. albicans effects. The ginger extract at 20 mg/ml concentration had a higher anti-Candida inhibitory activity than nystatin and fluconazole. It was comparable to amphotericin. The current results revealed that the ethanolic extract of Z. officinale had a growth-inhibitory impact on C. albicans and can be used as a safe antifungal therapy.

Keywords: candidiasis, minimum fungicidal concentration, mnimum inhibitory concentration, ginger, ketoconazole.

Cite This Article as:

Gavanji S., Bakhtari A., Baghshahi H., Hamami Chamgordani Z., Gavanji J., Sinaei J., Hassani D.(2025). Comparing the anti-Candida albicans effect of Zingiber officinale with common antifungal drugs; The New Armenian Medical Journal, vol.19 (3), 30-36; https://doi.org/10.56936/18290825-3.19v.2025-30

Address for Correspondence:

Hojjat Baghshahi
Department of Animal Science, Faculty College of Agriculture and Natural Resources, University of Tehran, Karaj, Iran
Phone; +989159031196
Email: Baghshahi_h1989@yahoo.com