



A COMPREHENSIVE REVIEW ON MEDICINAL, NUTRITIONAL AND NUTRACEUTICAL POTENTIAL OF *GANODERMA LUCIDUM*

AASHI DAS, MEENAKSHI KUMARI, SHARAD TIWARI AND RATHNA V*

ICFRE-Institute of Forest Productivity, Ranchi-835303, Jharkhand, India

*Corresponding author email: rathnav509@gmail.com

ABSTRACT: *Ganoderma lucidum*, holds a rich history as an ethno-medicinal mushroom used in Asian countries for over 2000 years. Also known as Reishi, it is a tree root pathogen with a wide plant host range. The multifaceted therapeutic properties of *G. lucidum* have been increasingly recognized in modern medicine as a result of its extensive array of bioactive compounds. These compounds exhibit efficacy in treating a wide range of conditions, such as cancer, bacterial infections, inflammatory diseases, liver disorders, and diabetes. This article critically reviews the contemporary medicinal applications of *G. lucidum*, utilized in diverse forms including powders, tablets, capsules, and nutritional supplements. The article discusses the beneficial therapeutic properties of bioactive constituents of this mushroom for curing emerging epidemic diseases. Finally, it emphasizes the importance of cultivation techniques and commercialization strategies to fulfill industrial demands.

Keywords: Bioactive compound, *Ganoderma*, human diseases, medicinal mushroom, polysaccharide

Citation: Das A, Kumari M, Tiwari S, Rathna V (2023) A comprehensive review on medicinal, nutritional and nutraceutical potential of *Ganoderma lucidum*. Indian J Trop Biodiv 31(2): 105-121.

Received on : 12/12/2023

Accepted on : 08/02/2024

Published on : 30/03/2024

INTRODUCTION

Local indigenous people have employed ethnobotanical herbs such as mushrooms for culinary and therapeutic purposes since the beginning of human civilization (Wasser and Weis, 1999; Mahady, 2001). Mushrooms have gained importance in medicine as they contain essential nutrients and provide health benefits to humans (Ogidi *et al.*, 2020). There are over 250 species of *Ganoderma* used for medicinal purposes around

the world, including *Ganoderma lucidum*, *Ganoderma applanatum* (pers:Wallr) pat., *Ganoderma australe* (Fr.) pat., *Ganoderma capense* (Lloyd) Teng, and *Ganoderma tropicum* (Jungh) Bres. (Moncalvo and Ryvarden, 1997; Deepalakshmi and Mirunalini, 2011).

Ganoderma lucidum also called as Lingzhi in China and Reishi is the Japanese name, belonging to the family Ganodermataceae, this fungus has been considered as a panacea in