

Characterization and efficiency of <i>Ganoderma lucidum</i> biomass as an antimicrobial and anticancer agent		
Authors	Mohammed Ibrahim Alghonaim, ^a Sulaiman A. Alsalamah, ^a Ahmed Alsolami, ^{b,*} and Tarek M. Abdel Ghany ^{c,*}	
Publication Year	2023	https://doi.org/10.15376/biores.18.4.8037-8061
Grant Number	IMSIU-RP23038	
<p>Abstract: This study investigates the microconstituents, antimicrobial, and anticancer properties of <i>Ganoderma lucidum</i> biomass (GLB). Gas chromatography-mass spectrometry identified 12-octadecadienoic acid (Z,Z)- and n-hexadecanoic acid as significant compounds in GLB. Both uncooked biomass (UCB) and microwave-cooked biomass (CE) showed dose-dependent inhibition of human breast cancer (MCF-7) cell proliferation, with UCB being more effective. UCB had a lower IC₅₀ value (25.63 µg/mL) compared to CE (49.99 µg/mL). Antimicrobial tests revealed UCB's superior activity against various bacteria and fungi. The compounds demonstrated potential in combating cancer and antimicrobial resistance, suggesting their promise in therapeutic development.</p>		