

# 4<sup>th</sup> International Food Safety, Quality & Policy Conference

December 05-06, 2016 Dubai, UAE

## Evaluation of *in vitro* antimicrobial, cytotoxic and genotoxic activities of *Ganoderma lucidum* (Reishi Mushroom)

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*Ganoderma lucidum* is a medicinal mushroom that has been used as a Chinese traditional folk remedy for centuries. As a traditional remedy, the *Ganoderma lucidum* mushroom is thought to treat disorders such as hepatic failure, chronic hepatitis, nephritis, hypertension, hyperlipidemia, arthritis, bronchitis, asthma, gastric ulcers, atherosclerosis, diabetes, anorexia, and cancer. In this study, it is aimed to investigate the antimicrobial, cytotoxic and genotoxic activities of *Ganoderma lucidum* extract. The extract was screened for its antibacterial and antifungal activities against different microorganisms by using microbroth dilution method. *Ganoderma lucidum* extract was evaluated for its cytotoxic effect using XTT method against NIH3T3 cell lines. Furthermore, genotoxicity of *Ganoderma lucidum* extract was evaluated by Ames MPF 98/100 mutagenicity assay. The minimal inhibitory concentration values against the tested microorganisms ranged from 200 to 400 µg/ml. The extract didn't have any cytotoxic activity against NIH3T3. Otherwise, it was detected by *in vitro* Ames test that *Ganoderma lucidum* extract may induce genetic damage with metabolic activation against TA98. According to our results, *Ganoderma lucidum* isn't a promising agent because of its genotoxic potential and poor antimicrobial activities.

### Biography

Bulent Ergun received his MSc degree in 1986 from Ankara University Graduate School of Science. He received his PhD from Anadolu University Graduate School of Science. He has conducted Post-doctoral research at the University of Munich. At present, he is working as Head of Toxicology Department, Anadolu University Faculty of Pharmacy.

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