**Research Article**

# Assessment of Antimicrobial Activity of *Piper nigrum, Piper longum* and *Zingiber officinale* Against Some Bacterial Species

**KR Kavitha**

*Post Graduate Department of Botany, Sree Narayana College, Chempazhanthy, University of Kerala, Thiruvananthapuram, Kerala; Email: kavithakr026@gmail.com*

**Abstract**

In this study extracts of three spices, black pepper, long pepper, and ginger, were evaluated in three solvents for anti-microbial activities. Using the agar well diffusion method the antibacterial activity was measured, while antifungal activity was measured using the poisoned food methodology. According to the study, it is observed that *Piper nigrum* extracts had varying degrees of antibacterial activity against bacterial strains. The ethanolic extracts were quite resistant to *Staphylococcus aureus* and *Bacillus subtilis*, whereas *Escherichia coli* and *Salmonella typhi* exhibited the higher MIC values. *Piper longum* extract boosted the activity of gram-positive *Staphylococcus aureus* (15.17±0.3 mm). However, methanol extract was inactive as ethanol or chloroform extracts. *Piper longum* crude extracts had only minor antifungal efficacy against the majority of fungus tested. *Bacillus subtilis* was very susceptible to the ethanolic extracts of ginger, with zones of inhibition ranging from 14±0.3 mm. The ethanolic extracts of *Zingiber officinale* were much more effective than the aqueous extract. The inhibition zones in the aqueous extract were 10 mm compared to 14 mm in the ethanolic extract.

**Key words**: Agar well diffusion, anti-microbial activity, *Piper longum, Piper nigrum, Zingiber officinale*, zone of inhibition

**Citation:** Kavitha KR. 2024. Assessment of antimicrobial activity of *Piper nigrum, Piper longum* and *Zingiber officinale* against some bacterial species. *J Mycol Pl Pathol* 53 (4): 405-411