

## **Antimicrobial properties against human pathogens of medicinal plants from New Zealand**

### **ABSTRACT**

The emergence of resistant microorganisms towards standard antibiotics has stimulated an on-going exploration for new sources of antimicrobials. The microbial susceptibility of extracts produced from leaf, bark, or rhizome parts of nine different New Zealand bushes was investigated using liquid broth dilution and agar plating techniques. Minimum inhibitory (MIC) and lethal concentrations (MLC) were expressed in micrograms of dry extract per milliliters of solution. The lowest MIC of 62.5  $\mu\text{g}/\text{mL}$  was determined for methanol extract of *Kunzea ericoides* against *Bacillus cereus* and *Candida albicans*, and ethyl acetate extract of *Pseudowintera colorata* against *Staphylococcus aureus*. Additionally, *K. ericoides* also presented the lowest MLC of 250  $\mu\text{g}/\text{mL}$  against *S. aureus* and *B. cereus* (methanol extract), and against *S. aureus* (ethyl acetate extract). The methanol extract of *Weinmannia racemosa* was lethal to *B. cereus* (MLC = 250  $\mu\text{g}/\text{mL}$ ). Some of the extracts of *Phormium tenax*, *Schefflera digitata*, and *Pomaderris kumeraho* were antimicrobial against *S. aureus* and *B. cereus* (MIC = 500  $\mu\text{g}/\text{mL}$ ). The extracts of *Geniostoma ligustrifolium* and *Melicytus ramiflorus* plants did not exhibit antimicrobial activity.