

SAMANTHA STUDER, Chemistry major, Shepherd University, Shepherdstown, WV, 25443, SKYE CLARK, Biology major, Shepherd University, Shepherdstown, WV, 25443, and LAURA ROBERTSON, Dept of Biology, Shepherd University, Shepherdstown, WV, 25443  
Investigation of the antibacterial activity of herbal leaves, extracts, and essential oils.

As antibiotic-resistance in bacterial pathogens becomes more prevalent, there is an increasing need for alternative treatments for bacterial infections. This study used disk-diffusion assays to investigate the ability of leaves, leaf extracts, and essential oils from a variety of herbs to inhibit growth of *Escherichia coli*, *Staphylococcus epidermidis*, and *Bacillus cereus*. Bacterial growth was not inhibited by leaves or leaf extracts (in 95% ethanol) from eucalyptus, thyme, rosemary, chocolate mint, sage, lemongrass, lemon balm, or lavender. Bacterial growth was not inhibited by commercial essential oils from peppermint, sage, eucalyptus, lavender, or rosemary. Essential oils from lemongrass and from thyme inhibited growth of the Gram-positive bacterial species *S. epidermidis* and *B. cereus*. The essential oil of thyme inhibited growth of *E. coli*; however, the essential oil of lemongrass did not inhibit growth of the Gram-negative bacteria *E. coli*.