

KELSI FOSTER & SAMIA HAMATI, Dept of Biology, West Virginia University Institute of Technology, Beckley, WV, 25801. Assessment of the Antibacterial Potential of Mountain Laurel (*Kalmia latifolia*) Extracts.

Multidrug resistance in bacteria and fungi continues to increase and is becoming one of the most significant threats to global public health. Plant-derived compounds offer a promising alternative to conventional antimicrobials and have been historically used in traditional medicine across cultures for centuries. This study aimed to investigate the potential antibacterial activity of *Kalmia latifolia*, Mountain Laurel, against common bacterial pathogens. Mountain Laurel, a native plant of West Virginia in the Ericaceae family, was collected in January 2026 from a private residence in Tipton, WV. Leaves were dried and ground into a fine powder prior to extraction. Several extracts were prepared using ethanol, acetone, diethyl ester, and water. These extracts were tested for antibacterial activity against *Escherichia coli* (*E. coli*) and *Staphylococcus aureus* (*S. aureus*) using the disc diffusion method and by coating the plate with the extracts, with erythromycin as a positive control. Preliminary results indicate minimal inhibition by diethyl ether and water extracts against *E. coli* and *S. aureus*. Future work will explore the use of additional solvents, expand testing to other bacterial and fungal species, as well as analyzing extracts using gas chromatography to identify potential compounds present in the samples.