Assessing Antimicrobial Properties of Selected Local Homeopathic Plants

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The purpose of this experiment was to determine if selected local trees (Sage brush (Artemisia tridentate), Balsam poplar (Populus balsamifera), and Trembling Aspen (Populus tremuloides)) contain antimicrobial properties as tested on the bacteria species Eschrichia coli, Staphylococcus epidermidis, and Bacillus cereus. We hypothesized that all of our selected local plants will have antimicrobial properties and we believe that the trembling aspen will yield the best results because it has historically been used to treat infections, fevers, and parasitic worms. We prepared six extracts from the three trees, one water-based and one alcohol-based for each species. To test our hypothesis, we soaked sterile disks in the extracts and placed them in bacteria coated petri dishes. Using a ruler, we measured the diameter of the zones of inhibition at twelve hour increments for 72 hours. After analysis, we accepted our hypothesis because all of our extracts possessed antimicrobial properties. However, Sage was statistically the most effective extract.

Awards Won: