

Western Illinois University
2021 Thomas E. Helm Undergraduate Research Conference

Abstract

Recorded Scholarly Presentation

Major: Biology

Faculty Mentor: Dr. Sue Hum-Musser

Antimicrobial Properties of Plant Extracts

Zahar Chew

Today's society heavily relies on the use of antibiotics in order to cure bacterial infections. Antibiotic resistance occurs when a given bacteria is no longer able to be treated by a particular antibiotic due to the bacteria's ability to become immune to the antibiotic. There is also the possibility of anti-fungal resistance as it pertains to fungal infections. The purpose of this experiment is to discover the antimicrobial properties of various plant extracts such as cinnamon oil, clove oil, CBD oil, and Japanese honeysuckle extract which lower the chance of microbial resistance. Medicinal drugs are often originally purified from plant products (e.g. aspirin from willow bark, taxol for the bark of yew trees for breast cancer treatment). Some of these plant products have been shown to exhibit antibacterial activities. Natural extracts are often effective due to the action of several plant components acting synergistically. The ultimate goal is to determine if there are antimicrobial properties in plant extracts as it pertains to bacteria and fungi in comparison to antibiotics and antifungals in order to discover new ways to treat infections and diseases avoiding antibiotic and antifungal resistance.