Scienxt Journal of Pharmacognosy

Volume-2 || Issue-1 || Jan-June || Year-2024 || pp. 1-9

Antimicrobial activity of ethanol and water extracts for root of Psidium guajava against pathogenic bacteria

[*1]Ashwani Jangade, [2]Neeli Rose Beck, [3]Dimpy Dewangan

[*1]Student, Department of Pharmacy, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh

[2,3]Department of Pharmacy, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh

**Corresponding Author: Ashwani Jangade*

Abstract:

India is the original home of the guava (*Psidium guajava L*.), which is grown both wild and domestically. Guava has been utilized for food and as a source of pharmaceutical basic ingredients. Determining the antimicrobial efficacy of ethanol and water extracts from guava roots against particular pathogenic bacteria was the goal of this investigation. Samples for the study were gathered from Chhattisgarh. Using ethanol and water, 100 grams of ground root powders were extracted one at a time. After being evaporated and 0.2 grams dissolved in the extraction solvent. The extracts were tested against gram-positive (Streptococcus oralis) and gram-negative (Escherichia coli, Pseudomonas) bacteria. Inhibition zone data was measured in millimeters and examined. Since water is more polar and absorbs more bioactive chemicals than ethanol, it exhibits stronger inhibition when used as an extracting solvent. The most inhibited bacteria were Streptococcus oralis, E. coli, and Pseudomonas, in that order. The gram-positive and gram-negative bacteria did not significantly differ from one another. Comparing certain ethanol and water root extracts to certain commonly used commercial antibiotics revealed some surprising and considerable suppression against bacteria. The study's findings suggest that Chhattisgarh guava roots, when extracted using ethanol and water, may provide valuable active chemicals for treating gram-positive and gram-negative bacterial infections.

Keywords:

Psidium guajava; Streptococcus oralis; Pseudomonas; Escherichia coli