Anti Bacterial Activity Of Some Medicinal Mangrove Plant Leaves Against Pathogenic Bacteria

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Abstract- *Fish disease is a major concern for farmers and fish consumers. The health of cultivated fish can be adversely affected by numerous biotic and abiotic factors. Bacterial diseases are usually characterized by red streaks or patches or swelling of abdomen. The antibacterial activity of leaf extract of mangroves, namely, Rhizophora mucronata ,Suaeda, Exoecaria agallocha was investgated against bacterial pathogen Stephalococus , Streptococus species , Salmonalla typhie ,Proteus etc.., And many studies reveals the positive impact of antibacterial activity against bacterial species. However, higher antibacterial activity for Staphylococcus aureus than Proteus sp. The highest antibacterial activity was shown by Acetate of mature leaf extracts of E. agallocha for Staphylococcus aureus in many studies.*

Keywords- Mangrove plant leaves, Antibacterial activity, Screening.

I. INTRODUCTION

Plants have been proven the ability to produce many natural products and have been valuable and indispensable sources of natural products for the health of all living organisms and they have a great potential for producing new drugs. According to the World Health Organization, plants are a source of compounds that have the ability to combat disease, antimicrobial, antiviral and antifungal activities Mangroves are woody, specialized types of trees growing in brackish wetlands in the tropical and sub-tropical inter-tidal coastal zones and river deltas where other plants cannot grow. Common uses of mangroves in bush medicine are reviewed by Bandaranayake, A number of mangroves and associates contain poisonous substances, which also show biological active, antifungal, antibacterial,antifeedant,molluscicidal. And pesticidal properties Mangroves therefore contribute significantly to Guyana's fishing industry and provide us with our fish resource. Mangroves break down pollutants and play a large role in carbon sequestration (the capturing and storing of carbon).

Anti Bacterial Properties of Exoecaria agallocha :

Excoecaria agallocha L. (Euphorbiaceae) is asmall mangrove tree found extensively in the tidal forestsand swamps of the Krishna-Godavari area. This plant is also well-distributed in a number of other countries of temperate and tropical Asia. The bark oil has been found effective against rheumatism, leprosy and paralysis. This plant also has been traditionally used to treat sores andstings from marine creatures, and ulcers, as a purgativeand an emetic. However, the milky sap of this tree cancause temporary blindness if it enters the eyes. The sapcan also cause skin blisters and irritation. Clinical trialscarried out on this plant have shown its potential IN anticancer, antibacterial and antiviral properties.Previous phytochemical investigations on this speciesrevealed the presence of diterpenoid,triterpenoids.

Many studies showed extensively positive result on anti bacterial properties against pathogenic bacteria.Also antibacterial activity test was performed by using paper diffusion, while minimum concentration test was done by using dilution method. The result show that compounds of sambung darah leaves extract were alkaloid, tanin, flavonoid, tritefenoid, glicosida and saponin. Sambung darah extract has antibacterial activity on Gram positif bacteria (S. aureus, S. epidermidis, S. agalactiae), where as it has not antibacterial activity against Gram-negative bacteria (E. coli and Salmonella sp.)

Antimicrobial activity of plant constituents such as phenol, quinines,flavones, flavor-noids, tannins, terpenoids, essential oils and alkaloids have been reported by several authors Edeoga et al. (2005). There is a continuous and urgent need to discover new antimicrobials with diverse chemical structures and novel mechanism of action for new and reemerging infectious diseases.

II. CONCLUSION

It is possible to control bacterial infections using natural products responsible for the inhibitory effect on pathogenic microorganisms by using mangrove plant extracts. The present study reveals the positive action of the maximum antibacterial activity shown by mangrove plant extracts.

Extracts from different mangrove plants are reported to possess diverse medicinal properties.

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