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A REVIEW ON ANTIBACTERIAL ACTIVITY OF INDIAN LOCAL TRADITIONAL HERBS

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ABSTRACT

A plant produces no. Of bioactive components that help to convert this bioactive principle into different medicinal preparation for the health benefits.[1] About 50% of modern medicine are initially prepare from herbal sources in pharma. The demand for natural product going to be increases day by day due to ineffectiveness of the synthetic medicine in treating and controlling the major ailment[2] this is showing the necessity to develop such a effective lead molecule from natural origin. Thus the plant become basis of this need. in this review the antibacterial activity of some Indian medicinal plant is highlited.[1]

KEYWORDS: *Bioactive, Ailment, Antibacterial, Lead Molecule.*

INTRODUDCTION

India is a treasure of various medicinal plant which are possessing an impressive restorative value for various physiological and mental illness in all livings.[2] The extensive usage of the herbal tentative products which are described in herbal formularies or any of herbal literature has been go over to occurance of various medicaments and thus it become very helpful for drug development and drug discovery.[1] The effectiveness in controlling and treating the dieseas along with limited side effects encouraging the huge research and carrying the drug discovery in the herbal area alternate to the synthetic area of pharmaceuticals. The compound or chemical constituent which possesses the antibacterial activity shuld be screened for antibacterial activity by using various in vitro methods. The extract of various solvents of specific chemical constituent present in plant suggested to be useful in the preparation of

medicaments in allopathic system of medicine in that the chemical constituents they may shows various therapeutic activity.[12]

1. PIPER BETEL

Plant profile

Taxonomical classification

Kingdom: plantae

Division: Magnoliphyta

Class: Magnolipsida

Order: Piperales

Family: Piperaceae

Genus: Piper

Species: betel.[4]

VERNACULAR NAMES

Hindi: Paan

English: betel

Gujrati: Nagarveli.[4]

PHARMACOGNOSTIC STUDY

PLANT PART USED	CHEMICAL CONSTITUENTS	MEDICINAL USES
LEAVES	Volatile oil: Eugenol, piperol A, piperol B, Alkaloid: Arakene Phenolics: chavibetol , chavicol	Analgesic Anaesthetic Hepatoprotective Antioxidant Antidiabetic Antibacterial Antifungal Antimalarial Antiasthmatic

ANTIBACTERIAL ACTIVITY

Antibacterial activity of betel leaf were determined by using various bacterial strains as following.

GRAM NEGATIVE	GRAM POSITIVE
Escherichia coli Psudomonas aeruginosa Salmonella typhicum Klebsiella pneumoniae	Staphylococcus aureus Staphylococcus epididermis Bacillus cereus

Standard: Chloramphenicol.[6]

Extract: Water Extract

Ethanolic Extract

Chloroform Extract

Petrolium Ether Extract

METHODS

Disk diffusion method

Ditch diffusion method

Agar well diffusion method

2. COLOCASIA esculanta

Plant profile

Taxonomical classification[7]

Kingdom: plantae

Subkngdom: Tracheobionta

Division: Magnoliphyta

Class: Liliopsida

Subclass: Aracidae

Odrer: Areles

Family: Araceae

Genus: colocasia schoott

Species: COLOCASIA esculanta

VERNACULAR NAMES

English: Chinese potato

India: Arum

Brazil: taio

PHARMACOGNOSTIC STUDY

PLANT PART USED	CHEMICAL CONSTITUENTS	MEDICINAL USES
Young leaves	Rich in vitamin C	Styptic, Stimulant, Rubefaciant, Antihaemorrhagic
Roots	Starch, Carbohydrates, Thiamine, R iboflavin, Niacin, Oxalic acid, Calcium oxalate, sapotoxin flavones, Apigenin, Luteoin	Antimicrobial Anti- inflammatory Antibacterial
Tubers	Amino acid *P*roteins	Antibacterial
Corms	Anthocyanin Pilargonidin 3- glucose	Antimicrobial

ANTIBACTERIAL ACTIVITY

GRAM NEGATIVE	GRAM POSITIVE
Escherichia coli Proteus vulgaris	Staphylococcus aureus Bacillus subtilis

Standard: Tetracyclines.[7]

Extract: Chloroform extract

Methanolic Extract.[8]

Method

Agar well diffusion method.

3. OCIMUM basilicum

Plant profile

Taxonomical classification[9]

Kingdom: plantae

Clade: Trachophytes

Clade: Angiosperm

Clade: Eudicots

Clade: Asterids

Clade: Lamiids

Order: Lamiales

Genus: Ocimum

Species: basillicum

VERNACULAR NAMES

Bengali: Khubkalam

Hindi: Ramtulas

Marathi: Bhu- tulsi

Urdu: Burg

PHARMACOGNOSTIC STUDY

PLANT PART USED	CHEMICAL CONSTITUENTS	MEDICINAL USES
LEAVES	Essential oil: Linallol, methyl chavicol, methyl cinnamate, methyl eugenol, eugenol, geraniol	Tonic, Vermifuge, Diuretics, Antispasmodic It is used in the treatment of upper respiratoty tract infection, It is also used as flavouring agent, It is also used in oral care products
STEM	Geraniol, linalool	Antibacterial Antimicrobial

ANTIBACTERIAL ACTIVITY

Bacterial strains

GRAM NEGATIVE	GRAM POSITIVE
Escherichia coli Psudomonas aeruginosa Salmonella typhicum Klebsiella pneumoniae	Staphylococcus aureus Staphylococcus epididermis Bacillus cereus

Standard: Commmertially available standard basil oil.[11]

Method: Agar well diffusion method.

4. TAMARINDUS indica

Plant profile

Taxonomical classification[12]

Kingdom: plantae

Subkingdom: Tracheobionta

Division: Magnoliophyta

Class: Magnoliopsida

Subclass:Rosidae

Order: Fabales

Family: Fabaceae

Genus: Tamarindus

Species: indica

VERNACULAR NAME

Marathi: Chinch

Sanscrit: Tintrini

Hindi: Imli, Amli

Kannadi: Hunase mara

PHARMACOGNOSTIC STUDY

PLANT PART USED	**CHEMICAL CINSTITUENTS**	**MEDICINAL USES**
Fruits	Tartaric acid, Citric acid, Malaic acid	laxative
Leaves	Potassium Bitartartarate, Oxalic acid	Athelmintic
Seed kernel	Polysaccharide, Flavonoid, Tannins, Saponins, Sequiterpines	Antimicrobial, Antiseptic
Stem bark	Alkaloids, Flobatannins	Antiviral, Astringent

CONCLUSION

From above review it is concluded that all above plants showing the antibacterial effect against various gram positive and gram negative infections. This activity proven to be very helpful to treating, control and prevent the various acute and chronic pandemic which are very frequently occurs now a days.

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