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Justification of use of some Medicinal Plants to Treat Various Diseases in Khulna, Bangladesh

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Abstract

Eleven locally used medicinal plants were selected for an intensive in-depth literature review, the purpose of which was to learn more of their therapeutic activity, local effects and chemical constituents.

Key words: Medicinal plants, Traditional Use, Major Constituents.

Introduction

Plants are the natural reservoir of many antimicrobial, anticancer agents, analgesics, anti-diarrheal as well as various therapeutic activities. Bangladeshi people have traditional medical practice as an integral part of their culture. A lot of medicinal plants are available for the treatment of various diseases. However, scientific studies have been conducted on only a relatively few medicinal plants, and then only to a superficial extent. In this investigation, 11 locally used plants were selected for an intensive in-depth literature review, the purpose of which was to learn more of their therapeutic activity, local effects and chemical constituents.

Materials and Methods

A field survey was done during the months of June and July in the Khulna district of Bangladesh and a list of various medicinal plants and their local uses was compiled. A literature review was then initiated in order to learn more of their therapeutic activity and chemical constituents in various journals, books and the Internet. This study provides some fundamental information for researchers.

Result and Discussion

Table 1. Local use and their therapeutic activity and chemical constituents of some medicinal plants of Bangladesh.

Plant (Family)	Uses in traditional medicine	Reported major constituents;
Aglaia roxburghiana (Meliaceae)	Dysentery, leucoderma, leprosy, fever, thirst, Tumors, vomiting.	24, 25-epoxy-29-norcycloartan-3-ol, 29-norcyclorart-23-ene-3, 25-diol , 24,25-epoxy-29-nor-24-cycloarten-3ß-ol, roxburghiline, hydroxyroxburghiline, aglaroxin-A, roxhurghiadiol A.10 acid.[2]
Amoora rohituka (Meliaceae)	Cancer, tumors, spleen and liver disease, Rheumatism.	6b,7b-epoxyguai-4-en-3-one, 6b,7b-epoxy-4b,5-dihydroxyguaiane,11-stigmasta-5,24(28)-dien-3ß-O-ß-D-glucopyranosyl-O-a-Lrhamnopyranoside, 7-keto-octadec-cis-I 1-enoic acid.[2]
Buchanania lanzan (Anacardiaceae)	fever, thirst, diarrhea, Itch.	Myricetin 3'-rhamnoside-3-galactoside.[3]

Chukrasia tabularis (Meliaceae)	As an astringent and antidiarrhoeic.	tabulalides A–E,[5] tabularin[6], scopoletin, melianone, [7]chukrasin A-E.[8]
Ficus indica (Moraceae)	Relieve toothache, rheumatism, lumbago, inflammations, diarrhoea, dysentry, vomitting, biliousness.	Bengalenoside, leucoanthocyanidins, leucoanthocyanin glycoside, betasitusterol glycoside, mesoinositol, friedelin, beta-sitosterol, qurecetin-3-galactoside and rutin, tiglic acid ester of gamma-tarxerol, cyanidin rhamnoglycoside, ficusin and bergaptin.[9]
Lannea coromandelica (Anacardiaceae)	Leprous and obstinate Ulcers, toothache, mouth, Sores, impotency.	(2*R*,3*S*)-(+)-3',5-dihydroxy-4',7-dimethoxydihydroflavonol, (2*R*,3*R*)-(+)-4',5,7-trimethoxydihydroflavonol, (2R,3R)-(+)-4',7-di-O-methyldihydroquercetin, (2R,3R)-(+)-4',7-di-O-methyldihydrokaempferol and (2R,3R)-(+)-4'-O-methyldihydroquercetin [21], Quercetin-3-arabinoside, ellagic acid, â-sitosterol, physcion, physcion anthranol B, leucocyanidin.[10]
Nephelium litchi (Sapindaceae) Syn: *Litchi chinensis*	Neurological disorders, smallpox, throat Infection.	Folic acid , L - ascorbic acid, cyanidin-3-glucoside, cyanidin-3-rutinoside, malvidin-3-acetylglucoside, alpha-[methylene cyclopropyl] glycine.[9]
Pongamia glabra (Leguminosae)	Bleeding piles, fistulous sores, bronchitis, gonorrhea, whooping cough, tonic[11]	Karanjin , ovalitenone, pongachromene, lanceolatin, betulinic acid, caffeic esters, pongapin, glabrachromene, desmethoxykanugin, (-)-isoglabrachromene, kanugin, glabra-ii, fisetin tetramethyl ether, 5-methoxy-3',4'-methylenedioxy-2", 2"-do(7,8-6'',5")flavone[12],glabone.[13],pongagallone-a, pongagallone-b, isopongachromene, pongamol, kanjone,pongaglabol Glabrachalcone[14], isopongaglabol and 6-methoxyisopongaglabol, 5-methoxyfurano(8,74",5")flavone, 5-methoxy-3',4' methylenedioxyfurano (8,7-4",5") flavone, ovalichromene B, cycloart-23-ene-3p,25-diol, friedelin, and ß-sitosterol-ß-D-glucoside,31-pongaglabol, aurantiamide , acetate, pongaglabol. [15]
Quisqualis indica (Combretaceae)	Diarrhea, fever, rickets in children, boils,	Quisqualic acid,35 quisqualin A. [4]

	ulcers, helminthiasis.	
Semecarpus anacardium (Anacardiaceae)	Scrofulous, venereal and leprous infections, Nervous debility.[16]	Anacardic acid, semicarpol, bhilawanol, monolefin I, diolefin II, bhilawanol-A, bhilawanol-B, amentoflavone tetrahydroamentoflavone, tetrahydrobustaflavone, semecarpuflavanone,galluflavanone anacarduflavone, anacardoside,36 semecarpetin, nallaflavanone[17] ,bjeediflavanone[18], semecarpuflavanone[19], galluflavanone[20], Otrimethyl biflavanone A1, O-trimethyl biflavanone A2, O-Tetramethyl biflavanone A1.
Shorea robusta (Dipterocarpaceae)	Ulcers, wounds, gonorrhea, leprosy, helminthiasis.8	9,10-dihydroxystearic acid, 3,25-epoxy-1,2,3,11-tetrahydroxy-12-ursen-28-oic acid, 7 28-nor-12-ursen-3-ol, shorea phenol, 2,3,23-trihydroxy-11-methoxy-12-ursen-28-oic acid. [4]

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