NOTES ON NATURAL HISTORY

Floral Record from the Member of the Family Mimosaceae, having Therapeutic Value: a Survey from Sambhal, Uttar Pradesh, India

Ashok Singh Yadav^{1*}, Duresh Chand², Zafar Abbas¹

¹Department of Botany, Gandhi Faiz-E-Aam College, Shahjahanpur-242001, Uttar Pradesh, India

²Government Degree College, Babrala-Gunnor, Uttar Pradesh, India

Study Area: Sambhal, Uttar Pradesh, India...

Coordinated: 28.58°N; 78-55°E

Key words: Medicinal plants, Chemical constituents.

Introduction:

Plants rendering human welfare since the pre-historic era. The utility of Plants for various human benefits are even documented in our holy books like the Rigveda, Bible, and Quran. Hence, man has dependent on nature, particularly on the plants for its substance and survival since his existence on earth. In Ancient times, he knew how to relieve his suffering by using the Plants growing around him. The civilizations records show that a during ancient times. Its credit goes to Indian sages and physicians who were acquainted with a large number of medicinal plants compared to other countries in the world.

Various evidence reflected the therapeutic significance of plants in India as well as in other countries (Telehaymanot, 2009; Zhang *et al.*, 2016; Saha *et al.*, 2014). Various Medicinal plants are found to be the main source of several phytochemical compounds like alkaloids, tannins, phenols, steroids and flavonoids. For curing various chronic diseases medicinal plants are the best known scavenger of ROS having almost nil adverse effect Naidoo *et al.* (2016).

In this context plants belonging to family Mimosaceae have been reported to hold tremendous therapeutic value Chaudhary (2011), Sharma *et al.* (2016). Joseph *et al.* (2013); Saha *et al.* (2018), Verma *et al.* (2013), Kulkarni & Jamakhandi (2018). The present study upto far extent corroborates the above reports carried out at Sambhal district of (U.P.) on members of family Mimosaceae having multidisciplinary medicinal value.

Our collection:

Our study area falls under Ramganga and Gangetic plain of Northwest India which covers an area of 16 Sq. Km. The average temperature was 36°C having average rainfall ~780 mm. The main profession and livelihood of most of the people come from agriculture and animal husbandry. Extensive Field surveys and plant collections are the routine work for various localities of the area specially belonging to family Mimosaceae. We accompanied them for such collections which were further properly

identified, authenticated from the relevant department of Universities, and research Institutes. Pieces of information were also recorded from the review of literature on various aspects of such medicinal Plants also through the questionnaire, consultation and Interviews with the local Vaidhyas and senior citizens during the field studies in the year 2015-2016.

We have compared here 8 species of 6 Genus belonging to family Mimosaceae in Table-1. The report the details of plants used in each case for the specific ailments to cure human disorders and deviations and record of active compounds present in them possessing tremendous Therapeutic value.

Plate-1: a. *Acacia catechu*, b. *Acacia nilotica*, c. *Acacia auriculiformis*, d. *Albizia lebbek*, e. *Dichrostachys cinerea*, f. *Lecaena leucocephala*, g. *Mimosa pudica*, h. *Pithecellobium dulce*

*Corresponding Author: ashoksingh.singhoo1@gmail.com

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Table -1: Some Features of Plants Belonging to Family Mimosaceae Having Therapeutic Value from Sambhal, U.P.

Species/Local Name	Usable Parts	Active Compound
Acacia catechu (LF) Wild Khair	Dried heart wood	Catechutanic acid
Uses: Inflammation, Skin diseases, Urinary disorders.	Leaf	Taxifolin (alkaloid)
Uses: Antibacterial	Heart wood	Polyphenolic compound, Flavanoids
Uses: Anticancer	Bark	Tannins, Flavonoids
Uses: Antidiarrhoeal, Sore throat, Wound healing	Fruit / pod	Gallic acid & Me-ester-n-digallic acid & Tannins
Acacia nilotica (L.) Babool	Leaf	Apigenin, 6-8-bis-D-glucoside, Rutin
Uses: Infertility in man.	Bark	Tannins, Terpenoids, Saponins & Glycosides, Phlobetanins, Gallic acid, procatechuic acid, Procatechol, (+) Catechin, (-) Epigallocatechin-5,7 digallate, Phenolic content.
Uses: Cold & cough, Anti-inflammatory, Diarrhoea	Gum	Galactoaraban, L-arabinose, D-galactose, L-rhamnose, D-glucuronic acid & 4-o-methyl-D-glucuronic acid.
Uses: Astringent, liver tonic	Leaf	Flavones, N-benzoyl-L-phenylalaninol, Friedelin-3- α , sitosterol, Hexaglycosylate Saponins, Unsaturated Carboxylic acid, Methyl ester, Triterpene, Saponin, Albigenic, Quercetin, Kaempferol.
Albizia lebbek (L) Indian Siris	Bark	Tannins, anthocyanins (leucodelphinidins, leucocyanidins), Flavonoids
Uses: Rheumatism, Wound healing	Root	Friedelin, Friedelin-3- β -ol, α -amyrin & beta, Sitosterol
Dichrostachys cinerea (L) Vurtuli	Root	Beta-amyrin, friedelin-3- β -ol, Friedelin-3-one, betasitosterol & N-octacosanol.
Uses: Dysentery, Headaches, Toothaches, Elephantiasis	Seeds	Galactomanon
Lecena leucocephala (Lam.) Subabul	Root	2-Hydroxymethyl-chroman-4-ol
Uses: Anti dengue activity		
Mimosa pudica (L) Lajwanti		
Uses: Dysentery, Small pox, Ulcer, Jaundice, Leucoderma,		

Inflammations, Asthma, Hemorrhoids, & Fistula

Leaf Phenolic ketone Josewin & 7,3,4-trihydroxy-3,8-dimethoxy-flavone L-malate, Magnesium potassium trans-aconitate, dimethyl ammonium salt, Potassium 5-O- α -D-glucopyranosylgentisate, mimupodine

Uses: Rheumatism, Hydrocele, Hemorrhages, Fistula, Conjunctivitis, Hemorrhoids.

Plant Mimosine Jasmonic acid Isolation of C-glycosylflavones

Pithecellobium dulce **Flower** Quercetin

(Roxb.) Jungle jalebi

Uses: Anti-inflammatory

Leaf Quercetin, Kaempferol Dulcitol, Afezilin, Phytol, Anthracene

Uses: Gallbladder ailments, Prevent miscarriage.

Bark Tannins of catechol type

Uses: Gum ailments, Toothache, Hemorrhage, Dysentery, Diarrhoea, Constipation

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