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STUDY OF PLANTS USED AS ANTI DIABETIC AGENTS BY THE NILGIRI ABORIGINES

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ABSTRACT: The present paper profiles plants used as anti-diabetic agents by the Nilgiri hills. The plants have been well identified and studied from the ethno therapeutics point of view.

KEY WORDS: Diabetic, Nilgiri aborigines, tribes, ethno therapeutics.

INTRODUCTION:

The Nilgiri is a paradise of ethnobotanical and anthropological research. Six primitive tribes are living in this district. They are Toda, Kota, Kurumba, Kattunayaka, Irula and Paniyas.

The district consists of six taluks named Udhagamandalam, Kunda, Kotagiri, Gudalur, Pandalur and Coonoor. The tribes are distributed throughout the district. The Nilgiris is placed North of Mysore and East of Coimbatore and lies at $11^{0}24'$ north Lat. And 76o 44' East Long. The annual rainfall in this region ranges from 1600mm. to 1800mm. The soil types are commonly clay and clay-loan. Each tribal community has a medicine man they have in depth knowledge of medicinal plants that can cure various ailments. This research work highlights eleven plant species, which are widely used by the Nilgiri tribes in their folk system of medicine for treating diabetes. During the past two decades, some ethnobotanical surveys were carried out by Abriahan (1981), Gardner (1972), Hosagowder & Henry (1996), Narasimhan (1978, Rajan & Sethuraman (1991).

MATERIALS AND METHODS:

Regular filed trips were conducted in all tribal settlements in the district between January 2004-September 2004. The information was collected from the tribal medicine man in ever settlement.

The plants were identified with the help of flora of Madras Presidency. In the following enumeration the botanical name, field number, vernacular name, family, a short description of plants and the uses have been mentioned. The letter I, K,T, P,K. Nay, Kr mark I – Irula, K-Kota, T –Toda, P-Paniya, K – Nay-Kattunayaka, Kr-Kurumba tribes respectively. The Plant specimens were preserved in the herbarium of Department of Plant Biology & Biotechnology, Government Arts College, Udhagamandalam for future reference.

ENUMERATION OF PLANT SPECIES:

Asparagus racemosus Willd. 112, I – Kayasoppu, Asparagaceae A climbing shrub, leaves scaly, triangular, flowers bisexual, common.
Root paste is taken internally as a remedy for diabetes.

Azadirachta indica Juss. 208, P-Vembu, Meliaceae A tree, leaves alternate, flowers white, common in foot hills.
Tender leaf paste is given orally early morning in empty stomach to control diabetes.

Abrus precatorius Linn. 08, K.Nay-Mullisoppu Papilionaceae A climbing shrub, root nodules contain nitrogen fixing bacteria (Rhizobium), leaves pinnately compound, papilinaceous corolla, pink, found in foot hills.

Tender leaf paste is mixed with the seed powder of **Pithecellobium dulce** is given orally in empty stomach to cure diabetes.

Ficus racemosa Linn. 075, K& Y – Attimora Moracceae. A tree, leaves alternate, cymose head like inflorescence, seeds with usually curved embryo and with fleshy endosperm, common.
The tender leaf paste is taken orally in morning empty stomach for diabetes.

Gymnema Sylvestre (RetZ.) R. Br. Ex Schultes, 118, 1- Sakkarai Kolli thala, Asclepiadaceae
Large climbers or straggler, leaves elliptic to obovate corolla yellow, common. The Irulars take internally the leaf juice for diabetes and gas trouble.

Gymnema hirsutum Wight & Arnott. 138, T-Naragae, Asclepiadaceae a hairy thick twinner. Flowors yellowish green, wild.
The leaf paste is taken orally as a good remedy for jaundice and as an antidiabetic.

Momordica charantia Linn. 181, K. Nay – Pagakka, Cucurbitaceae a climbing herb with tendrils, leaves alternate flowers pink, cultivated. The boiled fruit extract is given orally to reduce diabetes.

Murraya Koenigii (L) Spreng. 202, K. Nay – Karambai sopu, Rutaceae a small tree. Flowers white, cultivated. The leaf juice is useful for anti-emetic purpose. It is a refrigerant to eyes and believed by kattunayakkas that it will lower blood sugar levels.

Salvia officinalis Linn. 177, K-Arealogai, Lamiaceae
An erect herb, flowers lilac or white, cultivated.
The fresh leaves are chewed on an empty stomach as anti-diabetic.

Syzygium cuminii (L.) Skeel. 088, K. Nay – Navaphazam Myrtaceae a tree, leaves opposite, flowers white, fruits berry, common in Gudalur and pandalur takuks.
The seed powder is mixed with the root paste of **Pterocarpus marsupium** and taken orally for diabetes

Syzygium Jambolanum Dc. 005, P – Navaphazam, Myrtaceae A tree, flowers white, distributed in Gudalur and Pandalur taluks. The fruit is sweet and eaten for diabetes.

CONCLUSION:

The local tribal communities use eleven numbers of plants for diabetes. The Nilgiri tribal groups have a strong faith and belief in traditional health care systems via. Herbal treatment. The work aims at preservation of the knowledge, which would be valuable for

identification of new drugs in medical world.

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