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## HERBAL MEDICINES FOR THE TREATMENT OF DIABETES, USED BY THE RAJBANSHI, AN ANCIENT TRIBAL COMMUNITY OF THE DISTRICT COOCHBEHAR, WEST BENGAL, INDIA

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### ABSTRACT

North Bengal is the northern most part of West Bengal, and gateway to the Himalayan region. It includes six civil districts. Darjeeling, Jalpaiguri, Coochbehar, Malda, North and South Dinajpur. The Rajbanshis and Koches of district Coochbehar are the remnants of the ancient race, who formerly possessed a kingdom at the foothills of the Himalayas. An ethnobotanical census of medicinally important antidiabetic plants of the district Coochbehar has been recorded. Such census reveals the record of 27 species of plants used as antidiabetic agent by the tribal and local people. The plants under discussion are essential for health, culture and economic stability of the local people. Hence this study was initiated to know the economic and medicinal uses of these plants in different parts of the Coochbehar where the rural people use it in some unique way not reported earlier. Kaviraj and Ojhas of the district Coochbehar usually use various types of herbal medicines prepared from the extract of leaves/stem/bark/roots singly or in combination with other ingredients for the treatment of various types of diseases. In the present study an attempt has been made to suggest alternate source for some of these conventionally used antidiabetic medicinal plants so as to conserve them to continue to show their importance on mankind as they have been doing since the dawn of the history.

**KEYWORDS :** Rajbanshi, Koch, antidiabetic plants, kaviraj, ojha, Coochbehar, W.B

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**INTRODUCTION**

Diabetes mellitus (Madhumeha) is the well known disorder in human beings and is caused by inherited or acquired deficiency in production of insulin by the pancreas. Due to the deficiency of pancreatic juice concentration of sugar in blood is increased. The symptoms of the disease are the frequent micturition, thirst, weight loss, and tiredness. This type of disease was also mentioned in ancient Ayurvedic literature such as “Charak Samhita” written possibly before 1000 BC. The tribes often suffer from diabetes which they cure by using the plant parts of one single plant or plant parts in combination. In India, elaborate studies in the field of Ethno botany have been done by different workers. “Glimpses of Indian Ethno botany” by Jain(1981) was the first book dealing with Indian ethno botany. The traditional peoples possess ethno botanical emporia, living close to the nature; they are custodians of a unique traditional knowledge system and wisdom about ambient flora and fauna with rich heritage of ethno medicine Singh and Jain 2003, Jain, 1991). During the last decades scientists all over the world are paying much more attention to the studies of this branch of science, which may be called ethno-medico- botany (Pushpangadan, 1992; Pradeep, 2008 ). Several such plant species for treatment of diabetes are already mentioned in literature on medicinal plants like (Nadkarni, 1954; Mukherjee, 1957, Chaudhary et. al. 1970).The usefulness of wild and cultivated plants has been sparsely studied in India (Dastur 1951; Jain 1964) who studied the ethno botanical importance of Purulia. Mukherjee and Ghosh (1992) have studied useful plants of angiosperms of Birbhum District, West Bengal. Bhargava (1981) and Awasthi (1990) worked on the traditional people of Andaman-Nicobar Island. Dewan (2003) worked on traditional people of North Bengal about their methods of herbage formulation and formation of herbal medicine.

**OBJECTIVE:**

Major form of health care in the rural parts of developing countries is traditional medicine, which Available online on [www.ijprd.com](http://www.ijprd.com)

is mostly plant based( Jager and Vanstaden, 2000 ) the aborigines or tribes and local people of the district depend upon the plants for medicinal purposes. The present investigation highlights the age old indigenous knowledge about plants used to prevent diabetes.

**STUDY AREA:**

Coochbehar is a district having geographical varieties. It lies between 26 degree 36 minutes and 25 degree 57 minutes North latitude and in between 89 degree 54 minutes and 88 degree 47 minutes East longitude. The district surrounded by Jalpaiguri in North and North- west. in east and Indobangladesh boundary in the south and south – west region. Rainfall is in huge quantity where as annual rain fell 3201mm. Annual mean temperature 21 degree Celsius. Coochbehar occupying an area of 3387 square km among which 2530.63 square km area use as agricultural area. The surface layer is loamy and hardly clay. Total forest area of the district is 246491 hectare approximately.

**METHOD:**

The accumulated data from different villages and sources (Jain 1970) were compared. Collected specimens from different villages were checked properly by Dr. S. Mukherjee Dept. of Botany, university of Kalyani. The survey was based on interview or questionnaires method. The collected specimens were processed and made in to herbarium as per methodology of Fosberg and Sachet (1965). In the laboratory the specimens were identified by Dr. S Mukherjee. Botanical names were worked out as per International Code of Botanical Nomenclature (1988). Local names were noted from the field. These herbaria are maintained in the Endocrinology laboratory, Dept. of Zoology, University of Kalyani.

**OBSERVATIONS:**

Collection of anti diabetic plants, their pressing, preservation and their drug fluencies are also recorded for 26 plants. It is also interesting to note that their parts and products also give better result like that of early workers (Jain and Rao, 1977; Jain

,1987) . The results are presented in table (Table, trees. In most of the cases the plant parts are used. 1).The plants are belonging to herbs, shrubs and

**Table 1** : Systematic enumeration of antidiabetic plants from the district Coochbehar

Serial no	Local name	Type	Botanical name	Family	Parts used
1	Olot kambol	Shurb	<i>Aborma augusta</i> L.f	Sterculiaceae	Whole plant
2	Babul	Tree	<i>Acacia nilotica</i> L.ssp. <i>indica</i> (Benth.)Brenan	Mimosaceae	gum
3	Bel	Tree	<i>Aegle mermelos</i> (L.) Corr.serr.	Rutaceae	fruit
4	Piyaz	Herb	<i>Allium cepa</i> L.	Liliaceae	Bulb
5	Rasun	Herb	<i>Allium sativum</i> L.	Liliaceae	Bulb
6	Ghritakumari	Herb	<i>Aloe vera</i> (L.)Burm.f	Liliaceae	Leaves
7	Nim	Tree	<i>Azadirachta indica</i> A.Juss.	Meliaceae	Leaves
8	Tal	Tree	<i>Borassus flabellifer</i> L.	Arecaceae	Root
9	Palas	Tree	<i>Butea monosperma</i> (Lam.)Taubert	Caesalpiniaceae	Stem
10	Sada nayantara	Shurb	<i>Catharanthus roseus</i> (L.) G.Don	Apocynaceae	Leaves
11	Kalkasunda	Shurb	<i>Cassia ochidentalis</i> L.hc	Caesalpiniaceae	flowers
12	Haldi	Herb	<i>Curcuma longa</i> L.	Zingiberaceae	Rhizome
13	Amloki	Tree	<i>Embllica officinalis</i> Gaertn.	Euphorbiaceae	Seeds
14	Bat	Tree	<i>Ficus bengalensis</i> ( L.)	Moraceae	Stem
15	Katbel	Tree	<i>Feronia limoni</i> (L.)Swingle	Rutaceae	Fruits
16	Kapas	Tree	<i>Gossypium herbaceum</i> L.	Malvaceae	Seeda
17	Kulekhara	shurb	<i>Hygrophila schulli</i> (Buch.-Ham.)	Acanthaceae	Stem
18	Aam	Tree	<i>Mangifera indica</i> L.	Anacardiaceae	Leaves
19	Karela	Herb	<i>Momordica charantia</i> L.	Cucurbitaceae	Fruits
20	Ban karela	Herb	<i>Momordica dioica</i> Roxb.ex Willd.	Cucurbitaceae	Fruits
21	Kala	Shurb	<i>Musa paradisiaca</i> L.	Musaceae	Flowers
22	Ritha	Tree	<i>Spindus mukorossi</i> Gaertn.	Sapindaceae	Seeds
23	Gulanha	Herb	<i>Tinospora cordifolia</i> (Willd.)Miers ex Hook.f.& Thoms.	Menispermaceae	Leaves
24	Patol	Herb	<i>Trichosanthes dioica</i>	Cucurbitaceae	Fruits

			Roxb.		
25	Methi	Shurb	<i>Trigonella –foenum graecum</i> L.	Fabaceae	Seeds
26	Nishinda	Tree	<i>Vitex nigundo</i> L.	Verbenaceae	Leaves

Fig.1 . Map of West Bengal high lighting the position of the District Coochbehar



**DISCUSSION:**

The present ethno botanical studies reveal a huge number of information regarding the use of medicinal plants for antidiabetic purposes. These plants are mainly used medicinally by the ancient tribal people, the Rajbanshis, in the district Coochbehar. The information gathered during this study were not previously documented in the available publications (Chopra et.al, 1950, Ramanathan, 1983, Jain 1991). In contrast many of the plants present in the area which are otherwise documented for their medicinal value are not used for that purpose by the local people. Further studies to prove the medicinal value and reliability of the various drugs employed in the traditional medicines are the need of the time.

**CONCLUSION:**

The life styles of the tribal people are being changed considerably in the recent past due to mingling with the advancement of education and literacy programmes influence of mass communication facilities. They are now using and often depend on modern medicines. But nowadays some people still using traditional medicines for the efficacy believed and age old practice. The same trend has been reported by Sajeev and Sasidharan (1997). No one would able to retrieve this kind of undocumented knowledge which are conveyed verbally from one generation to the other. Necessary measures are needed to fill in this gap.

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