

Survey of plants having antidiabetic activity from Pune district of Maharashtra state

■ M.K. DESALE AND P.B. BHAMARE

SUMMARY

The present compilation gives an account of plants of Pune district of Maharashtra state, which are used for diabetes. Pune is inhabited by tribals, local non-tribals. It is knowledge hub and dominated by Ayurved loving population. Naturally source of medicinal plants is also rich in the packets of Bhimashankar, Purandhar, Parinche, Junnar, Lonavala-Khandala, Velha. A study on the ethnomedicinal plants of Pune district was carried out. Through questionnaire, personal interviews and conversation, a total number of 41 plant species used by the aboriginals to treat diabetes were enumerated. The major ethnic group present in this area include Mahadev Koli, Thakar, Koraku, Dhangar, Gujar etc. During the investigation, a well-known developed system of ethnomedicinal practices was found to exist among these ethnic groups. The family Solanaceae was having maximum number of medicinal plants used by the ethnic groups followed by Liliaceae and Asclepiadaceae. The major plant parts used was constituted by seed followed by leaves, root and stem.

Key Words : Ethnomedicine, Tribals, Antidiabetic medicinal plant

How to cite this article : Desale, M. K. and Bhamare, P.B. (2012). Survey of plants having antidiabetic activity from Pune district of Maharashtra state. *Internat. J. Plant Sci.*, 7 (2) : 328-331.

Article chronicle : Received : 19.03.2012; Revised : 15.05.2012; Accepted : 31.05.2012

Many ethnomedicinal surveys on medicinal plants used by ethnic population have been performed in different parts of the country. Several plant species have been reported to be antidiabetic. These include *Trigonella foenum graecum*, *Mimordica charantia*, *Ficus bengalensis*, *Gymnema sylvestre*, *Allium sativum* and Aloe vera. Many of them seem to act directly on pancreas and stimulate insulin level in blood. This study aims to provide a comprehensive review on various plant species from biosphere of Pune, which have been shown to display the potent in ethnic group and antidiabetic activity.

Diabetes is caused by inherited deficiency in production of insulin by the pancreas or by the ineffectiveness of the insulin produced. Such irregularities results in increased

concentration of glucose in the blood, which in turn damage heart, kidney, eyes. Many herbal medicines have been recommended for the treatment of diabetes. Medicinal plants used for the treatment of diabetes are inexpensive easily available and without side effects. Some of the medicinal plants are found to use in traditional system of medicine from hundreds of years in many countries of the world.

The ethical drug approved for the treatment of patient, which derived from a medicinal plants *Gymnema sylvestre* historically used for treatment of diabetes in ancient Indian territory.

According to WHO (1980) more than one million people rely on herbal medicines to some extent. The WHO has listed 21000 plants which are reported as medicinal plants. India has rich medicinal plant flora of some 25000 species of these 1500 species are commercially used for drug formulation. It is 1500 BC old practice. Medicine culture of India is really very rich. The references in Atharvaveda (Ayurveda) (Parwardhan *et al.*, 2004; Chikitsasthana and Sharma, 1983; WHO, 1980) list long back our textual evidence of tradition of use of medicinal plants that is more than 3000 years old. Researchers have aimed at identifying plant derived substances for the treatment

MEMBERS OF THE RESEARCH FORUM

Author to be contacted :

P. B. BHAMARE, Department of Botany, Jaihind College, DHULE (M.S.) INDIA

Address of the Co-authors:

M. K. DESALE, Bharati Vidyapeeth Deemed University, PUNE (M.S.) INDIA