

Review Article

role Play of herbal ingredients in the worldwide ailment of diabetes mellitus

Sakshi Gupta^{a*}, Komalpreet Kaur^a, Neeru Dangwal^b, Akshat Choudhary^c

^a*DSB campus, Department of Pharmaceutical Sciences, Kumaun University, Nainital, Uttarakhand, India.

^bSanskar College of Pharmacy and Research, Ghaziabad, Uttar Pradesh, India

^cInstitute of Pharmaceutical Research, GLA University, Mathura, Uttar Pradesh, India.

* **Corresponding Author:** Tel. No. : +91 8449641654, Email: sakshig41654@gmail.com

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abstract

Diabetes Mellitus is one of the major endocrine disorders affecting nearly 10% of the worldwide population and now a days it's becoming a key issue for concern. In this review article, we studied the hypoglycemic activity of different medicinal drugs. We mainly focused on the four medicinal plants i.e: - *Gymnena Sylvestre*, *Salacia Reticulata*, *Swertia Chirata*, *Pterocarpus Marsupiam*. In this the active constituents which we observed for the hypoglycemic activity were Gymnemic acid, Mangiferin, Kotalanol, Salacinol, Swertiamarin, Amarogentin, Liquiritigenin. These phytochemical constituents behaved as antidiabetic agents due to the interaction with multiple targets including alpha glucosidase, GADPH, Sodium symporters, PPAR-g expression, analyse.

1. introduction

In the recent scenario, everyone must have come across certain diseases associated to our lifestyle or other medical issues. The most common ones that have invaded almost in every other family includes diabetes, obesity, hypertension, etc. Herbal medicine, phytomedicine or botanical medicine are synonymous which uses plants for medicinal purposes. Therapeutic utilization of natural medication in the treatment and anticipation of disease including diabetes has a long history contrasted with conventional medication. [1] According to “9th edition of International Diabetes Federation (IDF) Atlas”, diabetes is one of the fastest growing global health emergencies of 21st century. As per the data 2019,463 million people were estimated to have diabetes and the data was projected to reach 578 million by 2030 and 700 million by 2045. [2]. Diabetes mellitus is a metabolic disorder that influences the body's capacity to make or utilize

insulin. Insulin is a protein hormone which is produced by the pancreas that regulates the metabolism of glucose, fat, and protein in the body. Diabetes results in abnormal levels of glucose in the circulation system. [3,4]

Conventionally, medicinal plants were an indispensable element for the public health management. About 35% of the population still rely on herbal medical care. This count is increasing lately as the diversity of medicinal plants is evidently beneficial in healthcare field. [5]. Today, many of the anti-diabetic treatments includes the use of medicinal plants. Most plants contain carotenoids, flavonoids, terpenoids, alkaloids, glycosides that often have anti-diabetic effects. The main purpose of this article is to introduce a number of effective medicinal plants which is used as anti-hyperglycaemic drugs along with the mechanisms of plant compounds which is used to reduce glucose levels and increase insulin secretion. [6] In this article we will discuss Gymnemic