

## Therapeutic potential of antidiabetic nutraceuticals

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### Abstract

Diabetes mellitus is a metabolic disorder of endocrine system. This dreadful disease is found in all parts of the world and is becoming a serious threat to mankind health. There are lots of chemical agents available to control and to treat diabetic patients, but now currently several medicinal plants have been investigated for their beneficial use in diabetes. The effects of these plants may delay the development of diabetic complications and correct the metabolic abnormalities. Many chemical constituents are responsible for antidiabetic effects have been isolated from medicinal plants as nutraceuticals. There is growing recognition of the potential role for nutraceuticals and dietary supplements in helping to reduce health risks and improve health quality. In the global marketplace nutraceuticals and functional foods have become a multi-billion dollar industry. Selection for consistent production of high and low productivity of active nutraceutical components within specific ecological regions will lead to development of alternative nutraceuticals and functional foods with distinctive and more reliable health and food properties.

**Keywords:** Diabetes mellitus; Plants; Herbal medicine; phytochemical

### Introduction

Diabetes is a chronic disease that occurs either when the pancreas does not produce enough insulin or when the body cannot effectively use the insulin it produces (WHO 2009). Diabetes is fast becoming a leading cause of morbidity, mortality and disability across the world. Diabetes mellitus is a global metabolic epidemic affecting essential biochemical activities in almost every age group (Gupta et al., 2008). According to International Diabetic Federation the estimated diabetes prevalence for 2010 has risen to 285 million, representing 6.4% of the world's adult population, with a prediction that by 2030 the number of people with diabetes will have risen to 438 million corresponding to 7.8% of the adult population (IDF 2011). India has been declared as the "Diabetic capital of world". Currently 40.9 million people in India suffering from diabetes (IDF 2007) and by 2030 there would be 79.44 million diabetics in India alone (WHO 2007). It is estimated that by the year 2030, diabetes is