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Vegetables juice: New generation therapeutics for hyperglycemia and oxidative stress

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Abstract

Vegetables have been used by mankind since the dawn of human civilization as food and medicines. Although, the knowledge about their influence on glycemic disorders dates back to 1923, they have got receiving considerable scientific attention only recently as rich sources of biological antioxidants. Besides presence of potent antioxidants, vegetables can also become very economical natural source of antihyperglycemic activity. Use of vegetables juice before consumption of starch-rich meals has the potential of significantly mitigating postprandial glycemic burden and reducing overall glycemic load.[1] Furthermore, their consumption as beverages can also delay sucrose and fructose induced development of impaired glucose tolerance.[2, 3]. Vegetables juice has been observed to reduce development of hyperglycemia induced biochemical and physiological derangements like increased platelets aggregation, formation of advanced glycation end products, free radicals induced damage of biomolecules, and development of oxidative stress.[2] In addition, vegetables juice have the potentials of mitigating development of insulin resistance for they possess potent PTP 1β inhibitory activity[4] and development of diabetic retinopathy and neuropathy due to their aldose reductase inhibitory properties.

Biography

Dr. Ashok K. Tiwari completed his PhD (1992) and PDF (1998) from Institute of Medical Sciences, Banaras Hindu University Varanasi (India) and joined CSIR-Indian Institute of Chemical Technology Hyderabad as CSIR fellow. In 2001, he was appointed as Senior Scientist in this institute and is presently working in the capacity of Principal Scientist. To his credit he has more than 95 publications in reputed international journal journals and more than 50 international patents to his credit. Dr. Tiwari is involved in study of metabolic disorders and development of therapeutics from natural resources.