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Anti-diabetic and antioxidant activity study of maize silk (*Maydis stigma*)

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Maize is the third most important cereal crop of the world. Maize silk (*Zea mays* L.) refers to the stigmas from the female flower of the maizeand present in abundance after maize harvest. It contains carbohydrates, proteins, Ca, K, Mg, vitamins fixed and volatile oils, steroids such as sitosterol and stigmasterol, saponins, alkaloids, tannins, and flavonoids. Methanolic extract of corn silk has very high antioxidant activity. The male wistar rats were orally administered with corn silk extract and their blood glucose was significantly decreased in streptozotocin-induced hyperglycemic mice in Type-II diabetes, whereas the level of insulin secretion was increased markedly in streptozotocin-induced hyperglycemic. The streptozotocin -damaged pancreatic β-cells were partly recovered gradually after the rats were administered with maize silk extract. However, maize silk extract increased the level of hepatic glycogen in the streptozotocin-induced hyperglycemic rats; there was no significant difference in the control group. The study suggests that maize silk extract can be a potential hypoglycemic or antidiabetic agent in terms of this modern pharmacological industry and can acts as a connection between agriculture and medicine.

Biography

Sapna has completed Msc. Biochemistry from Chaudhary Charan Singh Haryana Agricultural University, hisar. She is doing in service Phd from Jamia Hamdard University, Delhi. She is working as a scientist, Biochemistry at ICAR-Indian Institute of Maize Research, Ludhiana, India, a premier institute for agriculture in the Ministry of Agriculture. She has published more than 10 papers in reputed journals and has been serving as an editorial board member of reputed journals. She has a wide experience of working in nutritional quality of maize with specialization in carotenoids.

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