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ANTI-DIABETIC ACTIVITY OF EDIBLE MACROFUNGUS DACRYOPINAX SPATHULARIA IN STREPTOZOTOCIN-INDUCED HYPERGLYCEMIA IN ALBINO WISTAR RATS

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ABSTRACT

The present study was performed to evaluate the anti-diabetic efficacy of the edible macrofungus Dacryopinax spathularia against Streptozotocin (STZ)-induced diabetes in Wistar albino rats. STZ has been reported to cause hyperglycemic conditions by inducing various adverse impacts on Beta cells of Pancreatic islets, including enhanced oxidative stress and alterations in vital molecules like NAD (Nicotinamide Adenyl Dinucleotide) and DNA (deoxyribonucleic acid). The results of the present work revealed that the present macrofungus i.e. D. spathularia contains various biochemical constituent compounds having strong antioxidant properties. The results also revealed that the STZ-induced diabetic rats showed a significant depletion in blood glucose levels back towards the normal blood glucose levels after administration of aqueous extract of D. spathularia for 21 days of experimental time period. The present work reveals that the D. spathularia is an excellent nutraceutical source, and can be used as a natural hypoglycemic agent. The present work may further be extended to discover the precise biochemical constituent compound present in the macrofungal extract and the precise molecular and cellular mechanism underlying its strong anti-diabetic impact to develop new drugs or medicines for treatment of one of the most common disease across the globe i.e. Diabetes mellitus.

KEYWORDS: Macrofungus, Diabetes Mellitus, Anti-Diabetic, Streptozotocin, Hyperglycemia Hepatoprotective, Antioxidant, Silver Nanoparticles