Combined effect of Momordica Charantia with oral hypoglycemic agents in high fat fed/low dose STZ induced diabetic nephropathic rats

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Diabetic nephropathy is the important microvascular complication of diabetes mellitus. Increase in free radical accumulation due to oxidative stress plays an important role in development of metabolic disorder and its secondary complications like Nephropathy. The present study investigated the combined effect of polyphenolic rich methanolic extract of Momordica charantia (MC) and pioglitazone in high fat fed /low dose STZ induced diabetic Nephropathic rat model. OGTT, single and multiple dose study were carried out. Male Sprague dawley rats were divided into several groups. Group I and II were used as Normal control and diabetic control respectively. Group III – V were treated with Momordica charantia, pioglitazone and MC plus pioglitazone. The change in biochemical parameters, lipid profile and oxidative stress induced by diabetic nephropathy was assessed. The treatment protocol includes both preventive and curative therapy. At the end of the treatment period plasma glucose levels, body weight, and antioxidant enzymes were measured in kidney homogenate. In the preventive therapy the combination of MC and pioglitazone showed significant results in attenuating the diabetes-induced nephropathy when compared with curative therapy. Biochemical and histopathological studies showed also confirmed the above mentioned significance. Hence our study showed that administration of Momordica Charantia (MC) and pioglitazone prevented the diabetes induced nephropathy without causing hypoglycemia when treated for long period.

Biography
Avinash Kumar CH, research scholar, has completed his B.Pharmacy from Adichunchangiri College of Pharmacy, Bangalore and M.Pharmacy from Krupanidhi College of Pharmacy. He attended Poster presentation in IPSCON, Manipal, on Dec 2011. He has Attended IIPTA Work shop in our college. Participated in National seminar on Standardization of Herbal drugs.