

## **Beneficial Effect of Biotin in Combination with Canagliflozin on High Fat Diet Induced Diabetes in Rats**

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**Abstract :** Biotin treatment has significant effects on blood glucose, and pharmacological doses of biotin improve hyperglycemia. The present study was aimed to investigate the efficacy and safety of biotin in combination with canagliflozin in improving glycemic control on High Fat Diet-induced diabetes in Rats. Thirty male rats were divided into five groups (six rats /group): control, high fat diet (HFD), canagliflozin (CAG), biotin (BIO), and CAG + BIO. The treatments with CAG and /or BIO significantly reduced the body weight gain, blood glucose and HbA1c levels, whereas CAG in combination with BIO revealed greater glycemic improvement than CAG monotherapy. The treatment with CAG and /or BIO causes significant change in lipid profile and CK level while the treatment with CAG in combination with BIO showed better results as compared with CAG monotherapy. Furthermore, combination of biotin with CAG improved the pancreatic and cardiac damage when compared with other treated groups.

**Keywords :** canagliflozin, biotin, HbA1c, lipid profile

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