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EVALUATION OF ANTIDIABETIC ACTIVITY ON LEAVE OF EPIPREMNUM AUREUM ON EXPERIMENTAL ANIMALS

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ABSRACTS

The present study was an attempt to investigate the effect of *Epipremnum aureum* leaves extract on streptozotocin induced diabetes in Wistar rats. Two gropus of streptozotocin-induced diabetic rats were orally treated with herbal extract (250,300 and 350mg/kg) respectively. The blood glucose level, body weight, Glycosylated hemoglobin, liver glycogen, lipid profile, Antioxidant status were measured at the end of the study i.e. after 40 days of treatment. Herbal extract were found to be significant ($p < 0.05$) in reducing the blood glucose level, glycosylated hemoglobin, lipid profile, whereas both the treatments increased body weight, liver glycogen content and antioxidant status when compared to the diabetic control. It has been concluded that *E. aureum* leaves extract, in addition to the antidiabetic activity, also possess antihyperlipidemic and antioxidant activities in the streptozotocin induced diabetic model.

KEYWORDS: Two gropus of streptozotocin-induced diabetic rats were orally treated with *Epipremnum aureum* herbal extract (250,300 and 350mg/kg) respectively.

1. INTRODUCTION

Diabetes is a chronic disorder. It may be characterized by hyperglycaemia. These may help in insulin secretion defects and both insulin action. Due to development of insulin resistance the inadequate insulin secretion and tissues dimension may lead to abnormalities of fats, carbohydrate and metabolism of protein. These may lead to change or may increases the concentration of blood glucose level. These may damage many systems of the body like blood vessels, nerves. Diabetes is one of the most leading causes of morbidity and mortality in all over the world. According to the survey it was concluded that 0.5 to 3% of person was surfer from these diseases. Now a days its reaches to more than 7 %. Around 200 to 300 million people are affected and it should be double or triple in next few years.[1,2]

2. MATERIALS AND METHODS

2.1. Preparation of the plant material

The plant material is collected from botanical garden of our university. With the help of a botanist, it was identified as *Epipremnum aureum.* Sample is been preserved and documented in the herbarium. A small pieces of plant root were washed. Then it will be dried in room temperature. By the use of electric mixer these roots are converted into the powder form. experiment is carryout to study the effects of ethanolic roots extract of *Epipremnum aureum.* Around 50g of powder is been weighed and soaked into 500ml of 90% ethanol solution at room temperature. For occasionally shaking this preparation is leave for overnight. Whatman filter paper is use for filtration of extraction. By using Soxhlet evaporation method for the filtration and it should be done until drying and dried to obtained 5g of dried extract.

2.2 Experimental protocol for type 1 diabetes

This experiment is done for the investigation and determination of effect of ethanolic leave extract of *Epipremnum aureum* on the STZ induced diabetic rats. Animals are weighed around 160 to 195g. animals are feed by the laboratory food and ad libitum water is been provided thought out the experiment. Animals were grouped into 6 for 6 weeks of age. Each group consist of 10 animals. Group (I) control, Control group with 200 mg/kg/day *Epipremnum aureum.* leave extract treatment (II), Group (III) Diabetic control, Group (IV) Diabetic treated with 250 mg/kg/day, Group (V) Diabetic treated with 300 mg/kg/day *Epipremnum aureum.* leave extract and Group (VI) diabetic treated with 350 mg/kg/day *Epipremnum aureum.* leave extract. Animals of groups IV, V and VI were given a single injection of streptozotocin (STZ-60 mg/kg) with citrate buffer (pH 4.5). Animals with Group I, II and III injected with buffer alone. After 72 to 75 hr of injection, blood were taken from the tail of conscious rats and by the use of glucometer glucose were estimated. This process is repeated every week until autopsy. After 10 to 11 days of