

## Comparison of the Effects of Fresh Leaf, Septum and Peel Extracts of Walnut on Blood Glucose and Pancreatic Structure

**Authors :** Tahmineh Hasanzadeh, Afshin Farahbakhsh

**Abstract :** There is some report about the hypoglycemic effect of *Juglans regia* L. leaf in alloxan induced diabetic rats and hypoglycemic effect of its fruit peel administered intraperitoneally. In Iranian traditional medicine, septum of walnut shell (SWS) was recommended to reduce blood glucose. For this purpose, 41 male bulb/C mice 25-30 gm were divided into five groups. All the animals received IP injection of streptozotocin (STZ) (220 mg/kg). Two weeks later, the diabetic animals were received daily oral treatment of normal saline and aqueous extract of SWS (200, 400, 600 and 800 mg/kg) respectively for four weeks. Blood samples were taken from retro orbital sinus before the start of the experiment and repeated each two weeks. At the end of the experiment, the animals were sacrificed and the pancreatic tissues were fixed, prepared and stained by Hematoxylin-Eosin for light microscope studies. The results showed that in each group, the SWS extract reduced blood glucose in a long time ( $p < 0.05$ ). metabolic extract in STZ- induced diabetic rats, which was accompanied by the hypoglycemic effect of leaf extract. However, this effect should be determined with scientific researches. Therefore, the aim of this study is to evaluate the effect of the aqueous extract of SWS on blood glucose and histopathological structure of pancreas.

**Keywords :** septum of walnut, blood glucose, pancreas, diabetes, walnut leaf, walnut peel, insulin

**Conference Title :** ICBCP 2016 : International Conference on Biological and Chemical Processes

**Conference Location :** Tokyo, Japan

**Conference Dates :** September 05-06, 2016