

## 3<sup>rd</sup> Indo-Global Summit & Expo on **Healthcare**

October 05-07, 2015 New Delhi, India

### Evaluation of hypoglycemic effect of *Withania somnifera*, *Curcuma longa*, *Zingiber officinale* and *Cinamomum cassia* on diabetic mice

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India has the largest number of diabetes in the world. Its syndrome characterized by the loss of glucose homeostasis and lack of insulin secretion. In spite of introduction of various hypoglycemic agents, diabetes and its complications continue to be a major problem in the world populations. Modern medicines are available for the treatment of diabetes. But they also have undesired effects associated with their uses and fail to give a long term glycemic control. Thus the present study is designed to study hypoglycemic effect of root of *Withania somnifera*, rhizome of *Curcuma longa*, rhizome of *Zingiber officinale* and leaf of *Cinamomum cassia* on biochemical and histological parameters of liver, kidney and pancreas of mice. Control group of mice receives distilled water while experimental group receives 150 mg/kg. bw, alloxan for eight weeks followed by eight weeks of administration of herbal medicines. Glucose level was increased to 328 mg/dl in alloxan induced group while it was 118 mg/dl, 170 mg/dl, 156 mg/dl, 105 mg/dl in eight weeks of *Withania*, *Curcuma*, zinger and *Cinamomum* administered group. Lipid peroxidation was also restored to greater extent in *Withania* and zinger administered group. SGPT, SGOT. Urea, uric acid and creatinine were also restored to greater extent in *Withania* and *Curcuma* administered group. Liver and kidney are more restored in *Cinamomum* and *Withania* administered group. While zinger show more restoration in pancreas. Thus it is evident from study that *Cinamomum cassia* play vital role in restoration of histological and biochemical parameters of diabetes.

#### Biography

Ranjit Kumar has completed his PhD from Patna University, Bihar. He is working as Scientist at Mahavir Cancer Institute and Research Centre for last 8 years. He has Co-supervised 8 PhD candidates and supervised 93 students for their MSc dissertation. He has published more than 65 papers in reputed journals and has been serving as an Editorial Board Member in more than 15 journals. He has written three books for international publisher. He is a Principal Co-Investigator of DST, Government of India funded project.

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