

2<sup>nd</sup> International Conference and Exhibition on **Probiotics & Functional Foods** 

October 23-25, 2013 Holiday Inn Orlando International Airport, Orlando, FL, USA

## Protective effects of black seed (*Nigella Sativa*) and garlic (*Allium sativum*) against fructoseinduced metabolic syndrome in rats

Yieldez Bassiouni King Saud University, Saudi Arabia

Since ancient times, man has used medicinal plants to cure human diseases. Among famous medicinal plants with known antioxidant activity; the black seed (*Nigella sativa, NS*) and garlic (*Allium sativum*) have been used for thousands of years in traditional medicine. Aim of the work: In recent years, rates of metabolic syndrome (MS) have been increasing globally. The present work was designed to study the potential protective effects of black seed and raw garlic against fructose-induced MS in rats and to assess the benefits gained from their combination.

**Methods:** 50 White male albino rats were divided into 5 groups, 10 rats each. A control group was allowed to feed on normal chow and drink tap water. MS group was fed the same diet plus 10% fructose in drinking water. Treated groups received NS or garlic either alone or in ombination as oral supplements to high fructose diet for 4 weeks. Results revealed that body weight, liver weight, fasting blood glucose, serum TG, TC and LDL-C levels were significantly increased while HDL-C and the activity of Lactate dehydrogenase, glucose -6-phosphate dehydrogenase and catalase in liver tissues were significantly decreased in MS group compared with the control group. Administration of NS or garlic either alone or in combination significantly ameliorated all the above-mentioned altered parameters. Treatment with both NS and garlic showed the utmost reduction in serum LDL-C and TG levels and could restore the activity of the studied enzymes nearly to normal values. Conclusion Both NS and garlic were effective in attenuating multiple abnormalities of MS. Combination of these medicinal plants may have additional effectiveness in reducing serum TC, LDL-C and increasing HDL-C levels which could be a step in the prevention and management of MS

## Biography

Yieldez Bassiouni has obtained her Ph.D. in 1990 in Basic Medical Sciences in Pharmacology, Department of Pharmacology, Faculty of Medicine, University of Alexandria, Egypt. 1978 Bachelor of Medicine -Very good, Distinction of honor- University of Alexandria, Egypt.Present Position: Professor of Pharmacology, Department of Pharmacology and Toxicology, College of Pharmacy, King Saud University, Riyadh, KSU and Professor of Pharmacology, Faculty of Medicine, University of Alexandria, Egypt. Supervisor and examiner of Master and Ph.D. Theses in Pharmacology, Faculties of Medicine, Egypt. She has published more than 30 papers in reputed journals.

yieldez@yahoo.com