## International Conference and Exhibition on MICSGroup on ferences Accelerating Scientific Discovery

October 21-23, 2013 Radisson Blu Plaza Hotel, Hyderabad, India

## Evaluation of natural saponins for its role in obesity

Payal Rahul Dande SVKM's NMIMS, India

A ccording to the report of World Health Organization, obesity is one of the leading, chronic and fatal metabolic diseases of the current century. Increased fat intake is one of the important elements associated with body weight gain which leads to obesity and majority of its complications.

The problem of obesity calls for a multidimensional approach that suggest exercise, healthy diet intake and medicines which can inhibit the intestinal absorption of dietary intake, reduce cholesterol and lipids levels or act as an antifeedant to combat the overall risk.

Saponins are natural chemical compounds with structure related biological activities. Literature review has suggested its antifeedant and cholesterol reducing activity in various clinical and preclinical evaluations.

The present study was undertaken to evaluate the effect of saponins from Sesbania sesban on high fat diet induced obesity, hyperlipidemia and hypercholesterolemia. Saponins from S.sesban leaves was extracted, purified and evaluated for its total saponin content. Obesity was induced by feeding the young adult female albino sprague dawley rats with high fat diet composition. Effect of saponin on body weight, total calorie intake, organ weight, visceral fat, serum ALT, AST, glucose, lipid and cholesterol levels were evaluated.

Saponins from S.sesban showed significant control on the weight gain and showed antifeedant activity from the fourth week of treatment period. It showed reduction in serum ALT, AST, glucose, triglycerides, total cholesterol and LDL cholesterol levels. It also had a beneficial effect on HDL cholesterol. The extract showed a reduction in weight of organs and total visceral fat pad suggesting its effect on the fat accumulation in the form of white adipose tissue. The study confirms that saponin from S.sesban leaves have its effect on combating diet induced obesity and in preventing the risk of associated disorders with obesity.

## Biography

Payal Rahul Dande is presently working as an Assistant Professor at SVKM's NMIMS, School of Pharmacy & Technology Management. She has a cumulative blend of industrial, administrative and academic experience of 10 years. She has completed her Master's degree in Pharmacy and is presently pursuing her doctoral research in Phytochemistry. Her area of research includes phytochemical and pharmacological investigation of herbal drugs in fertility, diabetes and associated complications. She has presented more than 20 papers in national and international conferences. She has also received University grant for presenting her research paper in an international conference at Malaysia. She has guided several PG students in their research projects and has published various papers in the journals of repute.