

An executive summary of the final report of work done on the Minor Research project of Sushma Gail Patrao, entitled "Isolation and Characterisation of gut microbiota involved in Metabolic Syndrome" sanctioned by UGC, vide sanction 1449-MRP/12th Plan/14-15/KAMA002/UGC-SWRO dated 4 February, 2015

The gut microbiome contributes to a number of metabolic related issues in the living system. The type of diet consumed by the individual is also responsible for the alteration of the microbiota in the gut. A high fat diet leads to the increase in Bacteroids and Firmicutes.

The mice used as models for the study were divided into two groups, an experimental set and a control group. The experimental animals were fed with a formulated high fat diet and the control group was fed with a standard diet. The mice were maintained in accordance with CPCSEA guidelines and approved by the Institutional Animal Ethics Committee.

Studies on the body mass index revealed that the experimental group gained weight at a faster rate as compared to those in the control group indicating that the high fat diet results in the development of obesity.

The gut microbiota was studied in three media, namely, Bifidobacterium agar, L.D. Esculin HiVeg TM agar and Gut microbiota agar. The study revealed that with the increase in time and consumption of high fat diet the density of the microbiota also increase probably indicative of certain repair mechanisms that they may be capable of carrying out.

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Sushma Patrao
Principal Investigator

Principal