

# 3<sup>rd</sup> International Conference and Exhibition on **Obesity & Weight Management**

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## Harnessing the power of nutrigenomics to combat obesity

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Prevalence of obesity is steadily increasing, leading to morbidity and mortality due to diabetes, and cardiovascular diseases amongst others. Approaches to combat obesity included reducing caloric intake and increasing physical activity. However, other factors such as genetic susceptibility in predisposing an individual to obesity have been studied in the past few years. Genome wide association studies (GWAS) and studies on twins have demonstrated that genetic factors contribute 40-70% of variability in susceptibility to obesity. It is well established that nutrients alter molecular processes such as DNA structure, gene expression, and metabolism, and these in turn may alter disease initiation, development, or progression. One of the most important genes is the fat mass and obesity associated (FTO) gene, which not only has the largest influence on body mass index but is also widely expressed in many tissues. Several genes such as MC4R and BDNF genes are directly involved in weight regulation. Genes such as ACE, PPARG are involved in gene-diet and gene-exercise interactions and have been reported to affect blood glucose and insulin levels. Although Nutrigenomics research is at its infancy, the vital clues regarding obesity genes and single mutations form the basis for deepening our understanding. Since obesity is directly linked with many health implications and is currently considered an epidemic it would be prudent to use the latest findings in order to combat obesity.

### Biography

Sowmya Bharani was awarded a gold medal for her Master's degree in Nutrition and Dietetics and she has a doctoral level degree from King's College London, UK. She worked as part of the drug testing team during the Olympics and Paralympics -2012 held in London. She reviews papers for Bio Med Central and is the Director of a London based Dietetics consultation company.

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