

# PROFESSOR GARY FROST

## Faculty of Medicine, Department of Medicine

*Chair in Nutrition and Dietetics*

### SUMMARY

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I am currently head of the Section for Nutrition Research and lead the Imperial Nutrition and Food Network. I qualified as a dietitian in 1982 and have always maintained a clinical input throughout my career. Was appointed to Professor of Nutrition and Dietetics at Imperial College Jan 2008. Prior to this, for 18 years Gary had work at Hammersmith Hospital. Over his time at Hammersmith he gained his PhD in Nutrition and was appointed Honorary Reader in Nutrition at Imperial College, then joined the University of Surrey as Professor of Nutrition and Dietetics in 2005. My research interests are very diverse, and some are listed below:

**Dietary Carbohydrates:** These are a major focus of my work has been on the role of dietary carbohydrates on appetite regulation, insulin resistances and lipid metabolism in particular the glycaemic index as a model of the physiological effects of carbohydrates. We were the first to demonstrate the impact of low glycaemic diets on adipocyte metabolism. More recently in partnership with Professor Jimmy Bell we have used an integrative physiological approach to investigate the role of dietary carbohydrates on body composition and appetite regulation.

**Short Chain Fatty Acids:** These are products of microbial fermentation of dietary carbohydrate in the gastrointestinal track. Our research program in partnership with the University of Glasgow has led to the new understanding of the role for these molecules in appetite regulation.

**Food Structure:** Over the last five years in partnership with colleagues at the Quadram Institute, John Innes Centre and the University of Glasgow we have had a major interest in how food structure influences human metabolism

**Obesity Management:** My group is part of the section of Division Diabetes, Endocrinology and Metabolism which is headed by Professor Bloom where we have been part of the team that demonstrated the importance of a number of gut peptides in appetite regulation peptides in appetite regulation. We also have an on going project investigating the role of nutrients in the secretion of appetite regulating peptides and a major interest in the basic nutritional physiology involved in energy balance.

**Dietary intake:** One of the major nutritional challenges is the accurate assessment of food intake in free living people. With Prof Holmes, Dr Garcia, Dr Posma and Prof Nicholson with had made a significant contribution by using metabolic profiling to improve dietary reporting. Also with Prof Yang and Dr Lo we are developing new camera technology to improve dietary reporting

Nutrition in the Elderly: My research group are interested in the relationship between food, the gastrointestinal tract and appetite regulation during aging. Over recent years we have demonstrated that anorexigenic hormones released from the gut higher than in young people.