

## Global Summit on OBESITY AND HORMONES

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**Effects of Bariatric Surgery on non-alcoholic Fatty Liver Disease associated with Diabetes and Obesity****Louis Ragolia***New York University Long Island School of Medicine Mineola, USA*

The incidence of obesity and related comorbidities of cardiovascular disease (CVD), nonalcoholic fatty liver disease (NAFLD) and type 2 diabetes (T2DM) continues to rise globally. Bariatric surgery is currently the most efficacious option for sustained weight loss, with the two most common procedures being the Roux-en-Y gastric bypass (RYGB) and the vertical sleeve gastrectomy (VSG). In addition to weight loss, reduced NAFLD and remission of T2DM have been reported in response to these surgeries, prior to any significant weight loss. Clearly, the development of safer, noninvasive alternatives to surgery requires a deeper understanding of mechanisms involved and represent a worthwhile endeavor. The use of rodent models for bariatric surgery has emerged with standardized procedures for rat and mouse models of RYGB and SG now existing, which to a high degree resemble operations in humans. A growing body of evidence demonstrates a strong association between serum levels of lipocalin-type prostaglandin D2 synthase (L-PGDS), obesity, atherosclerosis and diabetes. Our laboratory has reported accelerated atherosclerosis and glucose intolerance in L-PGDS knockout (KO) mice. We have exciting data demonstrating that the beneficial metabolic effects of bariatric surgery are procedure dependent and not realized in L-PGDS KO mice. In this lecture, a brief introduction to bariatric surgery in rodents, which compares RYGB to SG outcomes, will be presented. A more detailed discussion will focus on L-PGDS as a novel adipokine modulating crosstalk between adipose tissue and the liver, which contributes to the beneficial cardiovascular effects of bariatric surgery.

**Biography**

Louis Ragolia received his Bachelor of Science degree in Biochemistry from Stony Brook University in 1985 and his Ph.D. in Biochemistry/Molecular Biology from Queens College in 1994. He is presently a Professor in the Department of Foundations of Medicine at the New York University Long Island School of Medicine. He has published over 80 publications in highly respected peer-reviewed journals as well as several review articles, book chapters. He sits on the editorial board of multiple journals and holds two U.S. Patents.