High fat diet induced obesity and mesenteric fat lipolysis

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Obesity is a multifunctional illness not well understood. This work was designed to analyze the effect of a high fat diet administration on mesenteric fat lipolysis and circulating levels of insulin and glucose. For this purpose, adult male rats were fed with a high fat diet (HFD) or standard rat chow (CG) for three months. At this point, animals were sacrificed by decapitation to avoid stress effects. Immediately after, mesenteric fat was aseptically dissected and together with the plasma from the trunk blood were kept to -80ºC until analyzed. Relative gene expression was performed by qPCR. As expected, plasma levels of insulin, triglycerides and blood glucose levels were increased in HFD as compared to CG. ATGL was decreased in the light, whereas it was increased in the dark phases of the photoperiod in HFD as compared to CG rats. DGAT1, hormone dependent lipase and perilipin were decreased at either phase of the photoperiod. However, DGATL2 was not modify by obesity in any of the studied time points. HFD markedly increased CG158 in the dark phase but no differences were found in the light phase of the photoperiod. The results suggest that obesity modify the expression of the genes involved in lipolysis.

Biography



Diego Fajardo a 3nd year pharmacy student at Universidad Complutense de Madrid, has a Fluency in English and stands Top 10 Percentile in his Class and he is Interested in Medical Research.

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