

# Role of the transcriptional factors FOXO1 and PPARG on gene expression of SLC2A4 in endometrial tissue from women with polycystic ovary syndrome

Kohan, Karla

Carvajal, Rodrigo

Gabler, Fernando

Vantman, David

Romero, Carmen

Vega, Margarita

Fifty to seventy percent of patients with polycystic ovary syndrome (PCOS) present hyperinsulinemia. On the other hand, reports indicate that forkhead box class O 1 (FOXO1) and peroxisome proliferator-activated receptor-g (PPARG) are involved in the insulin signaling pathway, regulating the gene expression of SLC2A4 (GLUT4). The negative effect of FOXO1 over PPARG transcription disappears when FOXO1 is phosphorylated (p-FOXO1) and excluded from the nucleus, whereas PPARG can suppress gene expression of SLC2A4. Scarce knowledge is available in endometrium of women with PCOS and hyperinsulinemia (PCOSE h-Ins) about the role of these factors. We aimed to evaluate whether the endocrine and metabolic status of PCOS modify the levels of gene and protein expression of FOXO1, PPARG, and SLC2A4 in the endometria from hyperinsulinemic PCOS women compared with controls. In endometria from control (CE, n=7) or PCOSE h-Ins (n=7), we determined the subcellular location and protein levels of p-FOXO1S