Polycystic ovary syndrome (PCOS) is a disorder caused by a defect of the ovarian cells resulting in synthesis of excess androgen and related clinical and biochemical symptoms.1 One of the genes implicated in causing PCOS is that of steroidogenic acute regulatory protein (StAR); this protein is necessary for cellular synthesis of steroids.2,3 StAR initiates the steroidogenesis process by transporting cholesterol - the precursor for steroids - within the mitochondrial membrane of cells.2 Studies have shown that StAR is overexpressed in the ovarian cells of women with PCOS and rodent models of PCOS3,4, yet what specific factors regulate this expression are still unknown.

Works Cited

[1] Bednarska, S. & Siejka, A. (2017). The pathogenesis and treatment of polycystic ovary syndrome: What’s new? Advances in Clinical and Experimental Medicine. 26(2):359–367.

[2] Panda, P. K. et al. (2016). Genetics of PCOS: A systematic bioinformatics approach to unveil the proteins responsible for PCOS. Genome Data. 8:52-60.

[3] Kahsar-Miller, M. D. et al. (2001). Steroidogenic acute regulatory protein (StAR) in the ovaries of healthy women and those with polycystic ovary syndrome. American Journal of Obstetrics and Gynecology. 185(6):1381-1387

[4] Jahromi, M. S. et al. (2016). Elevated expression of steroidogenesis pathway genes; CYP17, GATA6 and StAR in prenatally androgenized rats. Gene. 593(1):167-171.