

## ESTROGEN EFFECTS ON *SPG-7* AND *SPRED2* GENE EXPRESSION IN MCF-7 BREAST CANCER CELL LINE

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The *SPG-7* and *SPRED2* genes were previously identified as differentially expressed in primary breast tumors. The *SPG-7* gene encodes a mitochondrial metalloprotease named paraplegin, which is associated with the susceptibility to hereditary spastic paraplegia. The *SPRED2* gene is a member of the *Sprouty* family and regulates growth factor-induced activation of the MAP kinase cascade. We analyzed the promoter region of these genes for estrogen response elements (ERE) and both, *SPG-7* and *SPRED2*, genes showed potential to be regulated by estrogen receptors. The aim of the present study was to investigate the effects of estrogen on *SPG-7* and *SPRED2* gene expression. For this purpose, MCF-7 breast cancer cell line was treated with 10nM of 17 $\beta$ -estradiol (E2), 1 $\mu$ M of anti-estrogen fuvestrant (ICI 182780) and E2 plus ICI for 2, 6 and 24 hours. Surprisingly, no significant alterations on the *SPG-7* and *SPRED2* transcripts expression were observed in the MCF-7 cells treated with 17 $\beta$ -estradiol or ICI. In another way, *JDP1* transcripts were found to be up-regulated in a time-dependent fashion in MCF-7 cells using the same experiments. Therefore, both *SPG-7* and *SPRED2* do seem to be regulated by other signaling pathways than estrogen *via* estrogen receptor (ER). Supported by FAPESP.