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Thymoquinone Down-regulates VEGFA and Up-regulates FLT1 Transcriptional Levels in Human Breast Cancer Cells

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ABSTRACT Angiogenesis is important for cancer progression index and angiogenesis factors related to tumorogenesis deserve to be investigated in detail. The use of minimally toxic phytochemical compounds as the new generation anticancer agents is an appreciated approach to manage angiogenesis factors. The purpose of this study was to investigate the potential effects of thymoquinone (TQ), the major constituent of the black seed, on the expression levels of VEGFA and its receptor FLT1 in human estrogen receptor-positive breast adenocarcinoma (MCF-7) cells. The researchers provide evidence that TQ down-regulated VEGFA and up-regulated FLT1 transcriptional levels in human breast cancer cells compared to HEK293 cells. To the best of the researchers' knowledge, this is the first study determining the effect of TQ in VEGFA and its receptor FLT1 in MCF-cells and more comprehensive investigations are highly recommended.