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**PSA mRNA EXPRESSION DURING MENSTRUAL CYCLE IS UPREGULATED BY PROGESTERONE**

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Prostate specific antigen (PSA) production in the prostate is upregulated by androgens through the androgen receptor. We have previously found that PSA expression in the female breast is regulated by steroid hormones and their receptors. We have now examined if the PSA concentration in serum and its mRNA expression changes during the menstrual cycle. Sera of some volunteers were tested for their ability to upregulate PSA protein and PSA mRNA in a tissue culture system based on the T-47D breast carcinoma cell line. Only sera obtained during the mid-late luteal phase were able to upregulate the PSA mRNA and protein. In stimulation experiments in-vitro, progesterone, but not LH, FSH, estradiol, hCG, prolactin or growth hormone, was able to upregulate PSA mRNA and protein in T-47D cell line. These data suggest that progesterone, and possibly other corpus luteum steroids, stimulate target tissues for PSA production in a cyclical manner during the menstrual cycle.