

Influence of hormones on DNA synthesis of breast tumors in culture

Calaf, Gloria

Garrido, Fernando

Moyano, Carlos

Rodríguez, Roberto

Tissue culture techniques have been developed for studying the influence of hormones on human breast tissues. The present study demonstrated that estrogen induced a highly significant increase in ³H-thymidine incorporation into DNA and labelling index of ductal epithelium of fibrocystic disease; there was no effect of progesterone, either alone or in combination with ovine prolactin, on benign lesions. Estrogen stimulated certain malignant tumors derived from postmenopausal women. These studies also showed that there was an inhibitory effect of ³H-thymidine incorporation into DNA by the effect of progesterone on malignant lesions. When menopausal status was considered, it was found that DNA synthesis was significantly higher in the presence of insulin and hydrocortisone in malignant tumors derived from premenopausal women than from postmenopausal women, or than in benign lesions. Thus, the present findings may provide evidence that specific activity may be an important measurement for br