BRI INFLUENCE OF HORMONES ON GROWTH AND STEROID HORMONE RECEPTOR CONTENT IN MCF-7 CELLS CULTIVATED IN CHEMICALLY DEFINED MEDIUM

Per Briand and Anne Lykkesfeldt
The Fibiger Institute, Laboratory of Tumour Endocrinology, Copenhagen, Denmark.

The present investigation is concerned with a subline of MCF-7 cells grown in chemically defined medium for 16 months without losing hormone receptors or tumourigenicity. It is a relevant model for the investigation of hormonal effects on breast cancer cells and it is suitable for the study of hormone induced growth factor synthesis. With this model system we have found that insulin above 25 ng/ml and transferrin 10 µg/ml stimulated growth by about 30 and 300%, respectively. However, combined addition of insulin 250 ng/ml, transferrin 10 µg/ml, epidermal growth factor (EGF) 10 ng/ml and sodium selenite, 2.6 ng/ml resulted in a 6-8 fold increase in growth as compared to controls without these factors. No direct stimulation of growth was found by estradiol, hydrocortisone or prolactin. Progesterone + estradiol, but not progesterone alone, inhibited growth. Treatment with tamoxifen 10^{-6}M resulted in a 60% inhibition of growth which could be prevented by simultaneous addition of estradiol 10^{-8}M. Newborn calf serum as well as serum from athymic mice inhibited growth and this inhibition could also be annulled by estradiol.

BRO RAS-GENES AND CELLULAR TRANSFORMATION

Robin Brown, Germane Falcone, Alan Hall, Ian McKay, Chris Marshall and Hugh Paterson
Institute of Cancer Research, Royal Marsden Hospital, Chester Beatty Laboratories, Fulham Road, London SW3 6JB, U.K.

We have identified activated N-ras genes in a variety of human tumour cell lines. We are currently attempting to find the role these genes play in the transformation process. Flat revertant cell lines have been derived from tumour cell lines in order to determine the fate of the mutant p21s. These revertants can be retransformed with a mutant N-ras gene attached to an inducible promoter, the MMTV LTR. In this way we can switch the transformed phenotype on and off. Similar inducible constructs have been made with the myc gene and they have also been introduced into cell lines. Our results have been interpreted with respect to the role of the genes in tumorigenesis.

BUB MONOCLONAL ANTIBODIES AGAINST BLADDER CARCINOMAS

J.Bubeník, J.Kieler, P.Perlmann and Z.Dienstbier.
Czechoslovak Academy of Sciences, Prague, Czechoslovakia; The Fibiger Institute, Copenhagen, Denmark.

Twenty-six human cell lines and cryostat sections of frozen tumour and normal tissues from 15 patients were used to characterize the selectivity of three monoclonal antibodies directed against human urinary bladder carcinomas (BTCC). The most selective monoclonal antibody, 7E9, was purified by protein A affinity chromatography, labelled with ^{131}I and used successfully for gamma-scintigraphy in nude mice xenografted with BTCC T24 cells. The 7E9 antibody was capable of localizing in T24 xenografts but not mammary carcinoma xenografts. Monoclonal antibodies against mammary carcinoma cells and two other control antibodies did not localize in T24 xenografts.
