reveals growth regulation and cell density dependent reactions. The culture system described for growing L929 cells in feeder layers promotes colonies of homologous cells, cultured on the surface agar layer. A cell density of $0.5x10^6$ cells per ml reach confluency at 24 hr and these stationary cultures cause a complete inhibition of colony formation. This inhibition is extended not only to homologous cells but to prokaryotic cells as well. Streptococcus grows slowly and forms tiny colonies on stationary cultures, on the contrary a growing cell culture promotes development of greater diffused colonies. Such model systems of colony morphogenesis on stationary and growing feeder cells may prove more sensitive estimating regulatory actions of pharmacological and biological substances or cell to cell interactions.

OCHRATOXIN A IN HUMAN BLOOD IN RELATION TO BALKAN ENDEMIC NEPHROPATHY AND URINARY SYSTEM TUMOURS IN BULGARIA

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In an effort to provide further evidence for the hypothesis that a mycotoxin is involved in the aetiology of Balkan endemic nephropathy(BEN) and that the later is associated with the occurrence of urinary system tumours (UST), a survey was made for the occurrence of ochratoxin A(OA) in human blood samples collected from people living in an area with BEN and high incidences of UST compared with those from another non-endemic area in Bulgaria. In all, 312 people were analysed and OA was found in the serum of people from both endemic and non-endemic areas. But a much greater proportion of samples containing OA (26.3%) was found in the serum of patients with UST and/or BEN whereas the proportion of OA in the serum of people from the non-endemic area approximately to 7.7%. The highest concentration found was 35 ng ochratoxin A /g serum.

A TRANSFORMING GROWTH FACTOR PRODUCED BY SV40-3T3 CELLS

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A growth promoting activity was purified from serum-free medium conditioned by SV40-transformed 3T3 cells seeded at high density (CM). The purification steps consisted of gel permeation chromatography of the acid-soluble CM fraction followed by cation exchange and reverse-phase high pressure liquid chromatography. A partially purified preparation of growth factor was found capable of stimulating both thymidine incorporation as well as the proliferation rate of quiescent 3T3 cells. This fraction also induced anchorage-dependent non-transformed cells (NRK) to form colonies in soft agar. The presumptive transforming properties associated with the growth promoting activity as well as its possible relationship with known TGFs or PDGF-like factors are currently under investigation.

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IGF1 RECEPTORS (IGF1-R) IN 72 PRIMARY HUMAN BREAST CANCER. RELATION WITH ESTRADIOL AND PROGESTERONE RECEPTORS (ER, PgR)

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IGF1 (Insulin-Like Growth Factor (1) stimulates the proliferation of human breast cancer cells. We have characterized the R-IGF1 in four breast cancer cell lines in long-term tissue culture: we followed this work determining the R-IGF1 concentration in 76 primary breast cancers. The labeled IGF1, 200 uCi/ug (Pr Humbel-Zurich and Amersham-France) was incubated for 5 hr at 4°C with 400 ug of breast cancer membrane proteins, in the presence or absence of a partially purified IGF1 preparation. Only 6.6% of the tumours bound less than 1% of the total radioactivity (IGF1-R-); 18.4% bound 1 to 2% (IGFR+), 75% of the tumours bound more than 2% (IGF-R+). The range was 0 to 16.4%. There is a relation between IGF1-R+ and RPg+ (χ^2=8.6,p=0.003) and between IGF1-R+ and the menopause (χ^2=6.8, p=0.009). The concentration of IGF-R is correlated (Spearman test) to RE (p=0.0018) and to RPg (p=0.0011). There is a linear positive correlation between log IGF-R and log RE (n=59, p=0.025) and between IGF-R and log RPg (N=54, p=0.0025). These results suggest that (1) as breast cancers contain IGF-1-R they could be sensitive to this growth factor, and (2) an IGF-R lowering drug could be a beneficial treatment for these patients.

MODULATION OF THE HUMAN Ha-ras-1 ONCOGENE EXPRESSION BY DNA METHYLATION