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When total tumour eradication cannot be achieved by conventional treatment, the prevention of tumour metastasis by drugs selectively inhibiting the process of tumour spread may be of interest. Remarkable and approximately equal antimetastatic effects are caused in mice bearing Lewis lung carcinoma (3LL) by N-diazoacetylglycinamide (DGA) and by potassium p-(3,3-dimethyl-1-triazeno) benzoate (DM-COOK). When drug treatment is followed by surgical removal of primary tumour, DM-COOK produces about 40% long term survivors whereas DGA causes none in spite of its pronounced antimetastatic action, suggesting that host responses, contributing to the cures caused by DM-COOK which is weakly immunodepressive, are not available after treatment with DGA which strongly depresses cell mediated immune responses. A further investigation on host responses has been made by comparison of tumour growth, spread and response to cyclophosphamide (CY) in mice bearing 3LL kept in conventional housing (CH), or in a protected environment (PE) and subjected to emotional stress (anxiety for spatial disorientation, SD). Tumour growth, and particularly metastasis weight, are remarkably small in mice kept in PE, while they have usual values in mice in CH or in PE plus SD. When the mice are treated with CY, cure rates vary from about 70% in CH to 100% in PE, dropping to 0 in PE plus SD. These findings indicate the importance of host responses and stress in drug treatment, with implications of interest for experimental and clinical situations.

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HYALURONECTIN: DETECTION WITH MONOCLONAL ANTIBODIES IN HUMAN TUMOURS

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Hyaluronectin (HN), a proteoglycan which exhibits a high affinity to hyaluronic acid has been characterized in the nervous system. It was also found to be associated with embryonic mesenchyme and with tumour connective tissue. Two MAbs were obtained against human brain HN. The ELISA additivity test demonstrated they bound to two different epitopes. This finding was confirmed with immuno-histological techniques performed on human and rat tissues: the first MAb recognized only human HN while the second MAb recognized both human and rat HN. The staining on tumour sections was superimposable with that obtained with rabbit polyclonal anti-HN antibodies. Both MAbs stained desmoplasia of carcinomas and sarcomas, the extracellular matrix of fibrosarcomas and gliomas and also the benign proliferation of fibromas. Since HN is a marker of all types of tumours anti-HN MAbs could be of great interest in the medical imaging of tumours.

REGULATED EXPRESSION OF A TRANSFECTED DIPHTHERIA TOXIN GENE AS A NOVEL MECHANISM FOR KILLING TUMOUR CELLS

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We have shown that transfection of a diphtheria toxin A (TDA) chain gene linked to appropriate transcriptional regulatory elements can achieve selective cell killing (Maxwell *et al.*, Cancer Res., 46: 4660, 1986). In experiments now in progress we have constructed vectors which include the regulatory elements of the heat shock response gene (hsp 70) (Morgan *et al.*, Mol. Cell Biol., 7: 1129, 1987) as well as elements from Epstein Barr Virus (EBNA-1 and Ori-P) which should allow such vectors to replicate as episomes (Sugden *et al.*, Mol. Cell Biol., 5: 410, 1985). We will attempt to derive permanent cell lines which may be induced to express a mutant toxin gene, Tox 176 (Maxwell *et al.*, Mol. Cell Biol., in press, 1987) and thus commit suicide by transient exposure to 42° C. Controlled toxin gene expression may prove useful in eliminating malignant cells which express marker proteins or other characteristics via *trans*-activators not found in normal cells.

IMMUNOGENICITY OF HYBRID TUMOUR CELLS AND MHC ANTIGEN EXPRESSION

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In a model of murine fibrosarcoma of H-2b haplotype, we isolated from a somatic hybrid cell (H-2b x H-2k) several variants differing in their ability to induce