polychlorinated ethanes using different biological systems in collaboration with other Institutes.

In this report, five chlorinated ethanes such as 1,1-Dichloroethane (1,1-DCE), 1,2-Dichloroethane (1,2-DEC), 1,1,1-Trichloroethane (1,1,1-TCE), 1,1,1-Trichloroethane (1,1,2 TCE) and 1,1,2,2-Tetrachloroethane (1,1,2,2 TCE) were tested using D7 yeast strain of Saccharomyces cerevisiae with and without metabolic activation. Chemicals were tested on yeast cells from stationary and logarithmic growth phase where the level of cytochrome P-450 is high.

The results confirmed the relevance of metabolic activation and the use of yeast cells rich in cytochrome P-450 capable of metabolic activity. From this methodology 1,2-DCE, 1,1,2-TCE and 1,1,2,2-TCE show a genetic activity.

SAPINTOXIN A, A NON-PROMOTING PHORBOL ESTER ACTIVATES PROTEIN KINASE C

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In this communication we report the activity of a naturally occurring, highly fluorescent phorbol ester which activates protein kinase C (Ka 76nM) but which is neither a complete nor second stage tumour-promoter in traditional Berenblum tests. This compound, Sapintoxin-A, 12-0-[2-methylaminobenzoyl]-4-deoxyphorbol-13-acetate was isolated from the unripe fruits of Sapium indicum L., and forms one of a family of fluorescent phorbols, including Sapintoxin-D, and the protein kinase C receptor antagonist α-sapinine. Sapintoxin-A has properties in common with promoters such as TPA in that it will induce erythema in vivo, liberate PG's in vitro, induce lymphocyte mitogenesis and aggregation of human and rabbit platelets. Sapintoxin-A is therefore a suitable negative control compound for further biochemical studies concerning the involvement of protein kinase C in tumour-promotion and cell proliferation.

ANTITUMOUR EFFICACY OF HUMAN RECOMBINANT INTERLEUKIN 2

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Repeated peritumoural injections of human recombinant interleukin 2 (RIL-2) inhibited the growth of 80% of methylcholanthrene (MC)-induced murine sarcomas in syngeneic mice. Twenty percent of the MC-induced murine sarcomas were resistant to the RIL-2 immunotherapy. A direct correlation was observed between the susceptibility of the MC-induced murine sarcomas to RIL-2 immunotherapy in vivo and the sensitivity of these sarcomas to the cytolytic effect of RIL-2-activated spleen (LAK) cells in vitro. These results suggest that LAK cells represent the effector cell mechanism responsible for the anti-tumour efficacy of local RIL-2 immunotheapy, and that in vitro testing of sensitivity to LAK cell-mediated cytolysis may be used to detect tumours that will respond to IL-2 immunotherapy in vivo.

PURIFICATION OF A PHOSPHOTYROSINE PROTEIN PHOSPHATASE (PTP)

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It is now generally accepted that phosphorylation of proteins on tyrosine residues plays a fundamental role in growth regulation and oncogenesis. Many of the known oncogene products and growth factor receptors are associated with tyrosine protein kinase activity. To be of physiological significance, phosphorylation of tyrosine residues has to be reversible. A PTP activity capable of removing phosphate from tyrosine residues has been demonstrated by us and others. Of all the phosphatases known to dephosphorylate tyrosine residues, we concentrate on a membrane associated activity insensitive to EDTA/Fluoride which can be inhibited by micromolar amounts of Zn^{2+} or vanadate. The epidermal carcinoma cell line A431 was found to have high amounts of PTP activity and is being used as a source for purifying the enzyme. We are in the process of optimizing purification and recovery.

DIFFERENT GLYCOCONJUGATES ON HUMAN NORMAL AND TUMOURS TISSUES DEFINED BY THE MONOCLONAL ANTIBODY, MLuC1

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The monoclonal antibody (MAB) MLuC1