resistant P388 leukaemia, Yoshida sarcoma and BCNU resistant L1210 leukaemia cell lines. The parameters examined vary substantially among the different cell lines. BCNU resistance of L1210 was almost completely overcome by dianhydrogalactitol.

TISSUE DISTRIBUTION OF POLYALKYLCYANO-ACRYLATE NANOPARTICLES CHARGED WITH SPIN-LABLED NITROSOUREA

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The tissue distribution of biodegradable polyalkylcyanoacrylate nanoparticles associated with spin-labled nitrosourea, possessing high antitumour activity has been studied. The investigation has been carried out on C57 black mice with intramusculary implanted Lewis Lung carcinoma after intraperitoneal administration. The localisation of the polymer-carrier into the studied tumour has been estimated by ESR-spectroscopy.

The concentration of the drug carrier in the tumour tissue, 30 min after the administration, is almost constant. The highest concentration was found in the lung tissue of tumour-bearing animals. As intramusculary grafted experimental Lewis Lung carcinoma induces metastasis in the lung, this result can be used for application of the nanoparticles as a reliable drug-carrier of the cytostatic agents for pulmonary metastasis treatment.

INTERFERENCE OF ONCOGENE PRODUCTS WITH THE HORMONE DEPENDENT MMTV-LTR TRANSCRIPTION

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The H-ras and the v-mos oncogene proteins repress the glucocorticoid hormone-dependent transcription of the MMTV-LTR (EMBO J., 5: 2609-2616, 1986). To probe the mechanism of this effect, NIH cells transfected with an MMTV-LTR gene construct or with a chimeric gene construct consisting of the hormone responsive element of the MMTV-LTR (HRE) and the α-globin gene were infected with ras, mos, src or myc expressing retroviruses. Constitutive expression of oncogene protein did not abolish MMTV-LTR inducibility. The kinetics of transcriptional repression of the hormone dependent gene constructs was determined in all cases. Stimulation with dexamethasone and treatment with cycloheximide did not change the pattern of induction and repression of the HRE- α -globin gene transcription in ras- and mos-infected cells. We conclude that (1) the hormone/receptor binding domain is instrumental for the repression of the MMTV-LTR transcription and suggest that (2) the inhibition of the transcription is mediated by a modification of the affinity of activated glucocorticoid receptor to the MMTV-LTR DNA.

TIME DEPENDENCE OF BIOCHEMICAL CHANGES DURING DIFFERENTIATION OF A HUMAN NEUROBLASTOMA CELL LINE, SH-SY5Y

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TPA induces differentiation in the human neuroblastoma cell line SH-SY5Y. The sensitivity of muscarinic receptors to agonist with respect to Ca^{2+} mobilization decreases during the initial 6 hr. After induction of differentiation, the cells loose their processes and a decrease in c-myc expression occurs. The number of muscarinic receptors decreases after this time period followed by the appearance of features of a differentiated phenotype after 24 hr, including long neurite-like processes and an excitable membrane.

IMMUNOHISTOCHEMICAL LOCALIZATION OF S-100P AND NSE IN MALIGNANT MELANOMA

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This study included 30 cases of malignant melanoma. The classification of Clark has been used (LMM, SSMn, NM, ALM). The cells of the following types have been distinguished in morphological pattern: CE-epithelial, CS-spindle and mixed. The PAP method was used formalin-fixed paraffin embedded material. Immunohistochemical localization of S-100P and NSE in cytoplasm of melanocytes were observed. Positive staining was graded on a scale of -,+,++,+++. In the cells of both types S-100P and NSE were spread out within whole cytoplasm. The differences appeared in the intensity of staining: CE: S-100P (+); NSE (++,+++) and CS: S-100P (++,+++), NSE- (+). Immunohistochemistry research of the localization and intensity of S-100P and NSE in melanocytes may assist in the diagnosis

and in pathology of malignant melanoma.

GENOTOXICITY OF PRISTANE AND OTHER ALKANES BY THE SOS CHROMOTEST

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The most extensively studied model of plasmacytoma genesis is by induction of BALB/c mice with i.p. injections of mineral oil or, chemically more defined, by several branched alkanes, such as pristane (2,6,10,14-tetramethylpentadecane), phytane (2,6,10,14-tetramethylhexadecane), and 7-n-hexyloctadecane. The available evidence suggests that the primary action of these plasmacytomagenic agents is to induce the formation of a chronic granulomatous tissue, the histological matrix of plasmacytoma development. However, certain genotoxic (mutagenic) effects caused by these substances can not be ruled out a priori. Pristane, 2-methyldodecane, and 1,3-di-tert-butyl-5-methylcyclohexane as well as hexahydrodibenzauberane and perhydroanthracose were shown to be potential genotoxic agents using the SOS Chromotest, a quantitative bacterial colorimetric assay for genotoxicity. The tested substances, which widely differed in their toxicity, did not provide any evidence for mutagenicity.

ACTIVATION OF MACROPHAGES IN HODGKIN'S DISEASE

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We describe the results of an investigation in frozen sections of 80 cases of Hodgkin's (HD) and non-Hodgkin's lymphoma (NHL) with a panel of monoclonal antibodies directed to human macrophage subsets. A variety of macrophage patterns were observed with the antibodies Ki-M6, Ki-M8, UCHM1 and 44. The greatest frequency of macrophages in all cases was demonstrated with antibodies directed to the alpha-chain of the p150:95 complex (CD11c). The antibody, 10.1, putatively directed to a high-affinity Fc receptor, absent in NHL, was strong in HD and in certain large cell lymphomas positive for Ki-1. In a separate series of experiments we have shown that gamma interferon and the supernatants of Hodgkin's lymph nodes, in short-term culture, are capable of inducing 10.1 positivity on blood monocytes. This suggests that the presence of this marker in HD and Ki-1 lymphomas is due to the local production of high levels of lymphokine.

CARCINOGEN-DNA ADDUCTS AS PROBES FOR THE MECHANISMS OF CHEMICAL MUTAGENESIS AND CARCINOGENESIS

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The formation of specific carcinogen-DNA adducts, their relative persistence in the target tissues of experimental animals, and their demonstated mutagenicity in both microbial and mammalian test systems have provided strong evidence for their role in the initiation of the neoplastic process. For several classes of chemical carcinogens including aromatic amines, polycyclic aromatic hydrocarbons and their nitroaromatic derivatives, metabolic activation pathways leading to DNA adduct formation have been elucidated and found to be quite comparable in tissues of humans and experimental animals. Structure-activity studies have indicated that DNA adducts can induce specific chemical or conformational changes that, upon cellular replication, can lead to specific base transitions or transversions. These same mutations hae also been implicated in the activation of certain cellular proto-oncogenes in both human and animal tumours. Consequently, biochemical methods, which are now being developed to quantify carcinogen-DNA adducts in human tissues, may provide not only an estimate of exposure to occupational and environmental carcinogens but also a reasonable assessment of cancer risk.

ACTION MECHANISMS AND ANTI-LYMPHOMA PROPERTIES OF NEPLANOCIN A

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We have analysed the antineoplastic activity of Neplanocin A (NA), a carbocyclic adenosine analog, against several cultured cell lines. NA was cytostatic and cytotoxic against human and murine T and B Lymphoma cell lines. 50% growth inhibition was brought about at 1 to 10 nM drug levels in 3-day toxicity tests. Several non-lymphoid cell lines were about 1000-fold resistant to NA. Normal peripheral blood lymphocytes