ANTINEOPLASTIC POTENCY OF VITAMIN C ON BENZO(a)PYRENE-INDUCED TUMOURS. G.Kallistratos, E.Fasske, A.Donos and A.Evangelou. Department of Experimental Physiology, Faculty of Medicine, University of Ioan, Ioannina, Greece, and Department of Pathology, Research Institute of Experimental Biology and Medicine, D-2061 Borstel, F.R.G.

The antineoplastic potency of Vitamin C was determined in a model system using benzo(a)pyrene (BaP)-induced tumours. Twenty seven Wistar rats were treated with a single subcutaneous injection of 10 mg BaP dissolved in 1 ml tricaprylin. All rats treated in this way developed malignant tumours which were mainly fibrosarcomas, rhabdomyosarcomas, polymorphonuclear cell sarcomas and undifferentiated sarcomas. All animals died between 152 and 253 days after injection of the carcinogen. The mean survival time was 191.5 days (s.d. 27.8 days). The carcinogenic potency of BaP (i.e. the percentage of rats with tumours divided by the mean survival time, multiplied by 100) was 52.2. Oral administration of Vitamin C at about 500 mg/rat/day to 30 Wistar rats prolonged their life and their mean survival time was about 33 days longer than the control group. Vitamin C statistically significantly decreased the carcinogenic potency of BaP from 52.2 to 44.6 ($p = 0.01$).

ANGIOGENESIS-INDUCING ABILITY OF HUMAN BLADDER EPITHELIUM CELL LINES AND 'SPONTANEOUSLY' TRANSFORMED MURINE FIBROBLASTS. M.Kaminski, J.Kieler and Britta Christensen. Laboratory of Environmental Carcinogenesis and The Fibiger Laboratory, Copenhagen, Denmark.

Ten human bladder epithelium cell lines of normal and of tumour origin were tested for their ability to induce blood vessel formation after intradermal injection into irradiated ST/a mice. Cell lines that were shown to be tumourigenic in nude mice, were able to evoke angiogenesis of a higher intensity than non-tumourigenic cell lines irrespective of their origin. The angiogenesis reaction showed cell dose- and time-dependence; but it was unrelated to the growth potential of the cultured cells. Two spontaneously altered sarcoma producing murine cell lines showed a higher angiogeneic activity than tumourigenic human bladder epithelial cells. The angiogeneic response to these two murine cell lines was unrelated to morphological signs of transformation and to differences in growth pattern and isoimmunizing properties.

EXPRESSION OF MONOMORPHIC HLA-DR-DETERMINANTS IN HAEMOPOIETIC MALIGNANCIES. H.v.Keyserlingk, B.Komischke and F.Herrmann. Tissue Typing Laboratory, Department of Haematology and Oncology, Klinikum Steglitz, Free University of Berlin, F.R.G.

A large series of neoplastic cell samples from patients with non-Hodgkin lymphomas (NHL)(n=263) and acute leukaemias (AL)(n=191) were studied for expression of a monomorphic HLA-DR-determinant (DR) using a monoclonal antibody (OK Ia1). According to the Kiel-classification, the following NHL were examined: CLL, HCL, PLL, immuno-, centrocytoma, centroblastic/centrocytic-, immunoblastic-, lymphoblastic lymphoma and myeloma. 251 of these samples were of B- and 12 of T-cell origin. AL were divided into 87 myeloid and 104 lymphoblastic leukaemias. AML was classified according to the FAB criteria. Using a panel of standardized monoclonal and conventional surface markers, 8 subgroups of ALL were defined: common-T, pre-T, pre-pre-B, pre-B, B- and 0-type. All B-NHL - irrespective of their histological subtype - expressed DR, except the cases of myeloma. In T-NHL, only one case (T-CLL) was DR-positive. AML mature forms (most of them M2, M3) and erythroid leukaemias were DR-positive. In contrast to the pre-T and T-ALL, which were DR-negative, samples of all investigated common, common-T, pre-pre-B, pre-B and B-ALL expressed DR. In 0-ALL, 6 out of 23 cases were negative. Our data suggest that the presence of DR-determinants in haemopoietic malignancies appears to parallel the known pattern of DR-expression on normal haemopoietic cells.