PÁL

IMMUNOLOGICAL DIFFERENCES BETWEEN HIGH AND LOW METASTATIC LEWIS LUNG TUMOUR (LLT) CELLS

K.Pál, J.Timár, L.Kopper and K.Lapis
First Institute of Pathology and Experimental Cancer Research, Semmelweis Medical University, Budapest, Hungary.

A tumour line (LLT-HH) with increased metastatic capacity was developed from liver metastases, which appeared after intrasplenic transplantation of LLT cells. We examined the changes of metastatic capability after the pretreatment of NK blocking, macrophage blocking and stimulating agents. It was determined on the basis of these examinations that the LLT-HH cells are macrophage and NK resistant. The metastatic capacity was established in other mouse strains. The differences of metastatic capacity between LLT and LLT-HH cells only remained in the BD_2F_1 mice. The concomitant immunity of the LLT-HH cell line decreased. These results showed that the increasing metastatic capacity was caused by the immunological differences.

PÁL

PHENOTYPIC CHARACTERISTICS OF AN EBNA-NEGATIVE HUMAN MALIGNANT LYMPHOMA ESTABLISHED IN CULTURE

I.Pályi, T.Fleischmann, Sz.Ottó, M.Bak and J.Sugár
National Oncological Institute, Budapest, Hungary.

An EBNA-negative lymphoma, originating from the axillary lymph nodes of a female patient, has been established in culture. The cells, designated BHL-89, grow in single cell suspension, or in clumps. The doubling time is 72 hr and cells form colonies in soft agar. The plating efficiency is 50%. The cell line is diploid with A-1 trisomy, D-15 monosomy and 14q+ clonal aberration. The EBNA-reaction is negative, and superinfection of cells with B 95-8 EBV is unsuccessful. Ig-secretion is minimal. HLA A, B, C and Ia 2 histocompatibility antigens were found to be negative. In addition, the cells showed no reaction with a large number of various HLA antigens. NK activity, or sensitivity to NK cells has not been observed. Beta-2 microglobulin was expressed on 20 to 30% of the cells. Reactions with various monoclonal antibodies prove that BHL-89 cells belong to the B lineage. This new human lymphoma line appears to be suitable for studying the cytotoxicity of anticancer drugs in vitro.

PAR

A QUANTITATIVE VERSUS A QUALITATIVE APPROACH TO THE UTILIZATION OF GENOTOXICITY DATA IN THE PERSPECTIVE OF STUDIES OF CARCINOGENIC RISK ASSESSMENT IN HUMANS

Silvio Parodi, Maurizio Taningher and Leonardo Santi
Istituto Nazionale per la Ricerca sul Cancro, University Department of Oncology, Genova, Italy.

The usefulness of short term genotoxicity tests evaluating carcinogenic risk in humans has been investigated. The limits of establishing qualitative correlations between genotoxicity and carcinogenicity have been analysed. The major drawback appears to be that indications of extremely high and extremely low potencies are indistinguishable. Moreover, discordant results obtained with batteries of tests become uninterpretable. The possible advantages and limits of replacing the qualitative approach with a quantitative analysis were explored. Firstly, we considered building Databases offering for each chemical objective potency values for both in vivo carcinogenesis and short term genotoxicity tests. We have found this to be possible. For a quantitative correlation between the results of a genotoxicity test and the corresponding in vivo carcinogenic potencies, a typical correlation level was $\simeq 0.4$. Therefore, the confidence limits of a given estimation are very large, but probably can be measured and taken into due account in the perspective of risk assessment studies. In addition, the confidence limits of the provision from an appropriate battery of tests become significantly narrower. The gain in information obtained with this approach is considered to be potentially very important.

Research supported by C.N.R.Grants No.83.00901.96 and No.83.02850.56.
