SKO DIFFERENTIAL EXPRESSION OF THE c-MYC ONCOGENE IN HUMAN UROTHELIAL CELLS TRANSFORMED TO MALIGNANCY IN VITRO

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A number of cell lines have been established from human urothelium, and characterized with respect to several biological properties - morphology, cytogenetic characteristics, antigenic expression, growth pattern, and tumourigenicity/invasiveness. According to these properties the cell lines have been classified into four transformation grades (TGr 0 to TGr III), that most likely represent different steps in bladder oncogenesis. Two cloned TGr II cell lines (HCV 29 and HU 609) have apparently spontaneously developed a tumourigenic and invasive TGr III phenotype (HCV 29T, HU 609T) on various occasions during propagation in vitro.

The molecular differences between the transformants and their parent cell lines have been investigated with respect to the expression of cellular oncogenes. We have observed an enhanced expression of the oncogene c-myc in HCV 29T compared to HCV 29. However, no difference was observed between HU 609 and HU 609T, indicating that the transformation of urothelium to malignancy may follow several alternative routes.

SLA USE OF DNA SYNTHESIS INHIBITION AND HGPRT GENE MUTATIONS IN THE SCREENING OF CARCINOGENS

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A number of methods have been suggested for the purpose of testing the carcinogenic activity of chemical and physical agents. In the framework of the primary prophylaction of cancer therefore, it is necessary to select a reliable and economically appropriate battery of tests. Our study contributes to these aims by comparing two methods: DNA synthesis inhibition in human cells and the occurrence of 6-thioguanine resistant mutations in Chinese hamster V79 cells. The results obtained in a study of 5 positive carcinogens and 12 unknown chemicals indicated a high correlation between inhibition of DNA synthesis in human cells and the occurrence of gene mutations in Chinese hamster cells, although the first test reflected either damage at the level of DNA or any interraction of the chemical studied with DNA replication, and gene mutation reflected only damage, which could change the genetic information contained in HGPRT locus.

SOV COMPARISON OF AVIAN MC29 and MC 31 VIRAL ONC-PROTEINS

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Lysates of [^{35}S] methionine-labelled quail cells transformed by MC31 virus were immunoprecipitated with anti-myc or anti-gag serum and analysed by SDS-PAGE. A protein with apparent molecular weight of 110 kd was found in both immunoprecipitates. Thus, the product of the MC31 genome is a gag-myc fused protein with the same molecular weight as the product of the MC29 genome. Comparison by tryptic peptide mapping and p15 cleavage analysis showed no difference between both p110 proteins.
