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ANTIBODIES AGAINST A SYNTHETIC DECAPEPTIDE, PRECIPITATE PROTEIN KINASE ACTIVITY

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A decapeptide whose structure was derived from the v-src sequence was prepared using solid phase synthesis. After binding to an appropriate carrier (BSA or human globin) the resulting conjugate was used as antigen for immunization of rabbits. The rabbit antiserum obtained was positive in ELISA and RIA. It precipitated protein kinase activity from lysates of tumour cells, at titres comparable to those of TBR. Peptide-specific immunoglobulin was isolated from the antiserum by affinity chromatography and used for immunological analyses.

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DETERMINATION OF MTX LEVELS BY DIFFERENTIAL PULSE POLAROGRAPHY (DPP) IN CLINICAL PRACTICE

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DPP determination of MTX in biological fluids was based on electrochemical reduction. The measured polarographic peak height is linear with the drug concentration from 3×10^{-7} M up to 1×10^{-5} M. With a preconcentration step on a hanging mercury drop electrode, a detection limit of 2×10^{-8} M can be achieved by DPP. The method is selective and Leukovorin and 7-OH MTX do not interfere with the assay. The correlation coefficient comparing the results obtained with DPP and HPLC techniques in vitro was 0.9947. Similar good correlation was observed with samples from patients. The method is easily applicable in clinical practice and the results can be delivered within one hour after the blood sampling.

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IMMUNOLOGICAL METHODS IN CYTOLOGY: PAUCITY OF HLA ANTIGENS ON METASTATIC BREAST CARCINOMA CELLS IN EFFUSIONS

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A major problem in diagnostic cytopathology is the distinction between benign reactive mesothelial cells and metastatic breast adenocarcinoma cells in effusions from patients with known prior history of breast cancer. Expression of HLA-A, B,C, HLA-DR and β-2 microglobulin as well as the macrophage antigen Leu-M_3 and carcinoembryonic antigen (CEA) was evaluated by avidin-biotin immunoperoxidase staining. In 7 of 8 malignant effusions the cytologically malignant cells expressed very weak or undetectable levels of HLA. In one case the cytologically malignant cells demonstrated strong positive staining with HLA. Paucity of expression of HLA was valuable in diagnosing malignancy in 3 cases where a definitive diagnosis of malignancy could not be established. In contrast, mesothelial cells and macrophages from reactive effusions were uniformly positive for HLA and β-2 microglobulin. We conclude that paucity of HLA antigens provides a helpful marker in distinguishing metastatic breast carcinoma cells from reactive mesothelial cells in effusions.
