REN INFLUENCE ON THE IMMUNE SYSTEM OF SYNTHETIC PENTINS - NEW POSSIBILITIES FOR TUMOUR THERAPY?

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For some years, evidence has been accumulated which indicates that thymic hormones play an important role in the development of immunological competence in animals and man. Thymic polypeptides influence the maturation, differentiation, and function of T cells and can modulate the functional capacity of differentiated T cells. Different thymic hormones were used for therapy of patients with immunodeficiency diseases and infections. The screening of synthetic thymopentins, splenopentins, and some derivatives gave following results: 1)Augmentation of IFN production in vitro and in vivo; 2)The peptides induced restoration of immune perturbations towards normal balance after chemotherapy; 3)The peptides significantly decreased the number of tumour cells in EAC-treated mice.

REV SPONTANEOUS IN VITRO MALIGNANT TRANSFORMATION OF A HUMAN MONOCYTIC CELL LINE, CM-S

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CM-S is a precursor monocytic cell line established 5 years ago from the bone marrow of a patient suffering from congenital hypoplastic (Diamond-Blackfan) anemia. CM-S cells grow in suspension in liquid culture and, for over 150 continuous passages, could be induced to differentiate to resemble macrophages in response to a variety of suitable chemical agents, such as phorbol esters, endotoxins, etc. These cells were dependent for their continuous replication in vitro on growth factors, either exogenous granulocyte-macrophage colony stimulating factors or autologous growth factors produced by the same cells seeded at high density. We report the spontaneous in vitro malignant transformation of CM-S cells: generation and progression of the transformed phenotype occurred entirely in vitro with successive passages of the cells in culture. The transformed cells progressively required lower concentrations of growth factors for continuous replication, although they continued to respond to their addition, and became able to form colonies in agar and originate tumours when injected in athymic mice. Transformation correlated with the acquisition of non-random chromosome changes and increased expression of *myc*, *myb* and ras^N proto-oncogenes. In contrast, cells of the earlier passages of the CM-S line, which have a diploid-euploid karyotype, express low levels of these proto-oncogenes when compared with late passage CM-S cells, and consistently failed to form colonies in agar and to give rise to tumours in nude mice.

ŘÍH DDP - A POLYCLONAL STIMULATOR OF THE ANTIBODY RESPONSE

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Antibodies against cis-diamminedichloroplatinum (DDP) epitopes were prepared by injection of mice with DDP-lysozyme, DDP-ovalbumin or insoluble forms of DDP-polymers. The possibility for the use of these antibodies for pharmacological studies in DDP-treated patients is under investigation.

During these experiments it was determined that 0.83 mg/kg DDP injected i.p. or i.v. in Balb/c mice three times within a one week interval elicited antibodies of different specificities detectable by ELISA or by passive haemagglutination. Similarly, complexes of proteins with DDP were demonstrated in vitro. This polyclonal stimulation effect was detected by the induction of immunoglobulin producing cells (reverse plaques) in spleens of DDP-treated mice. The possible therapeutic effect of such immunostimulatory activity of DDP has been evaluated.
