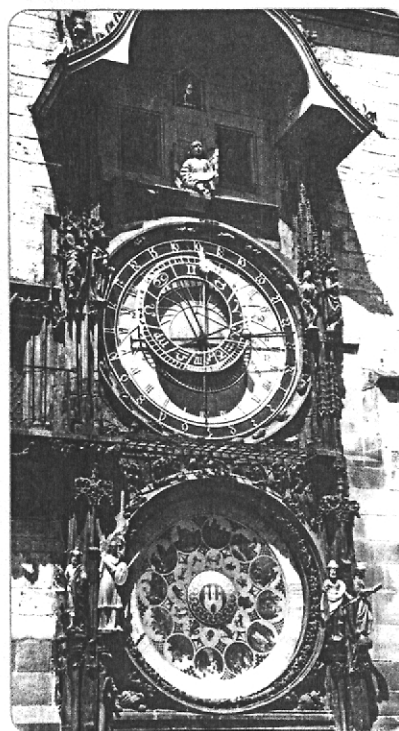
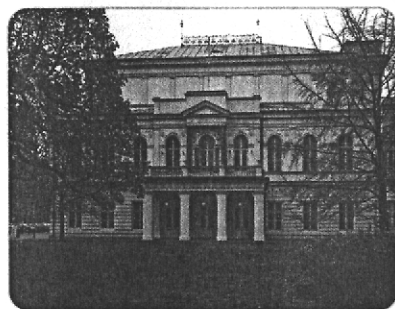


The 3rd International Conference on Tumor Microenvironment: Progression, Therapy and Prevention

Prague, Czech Republic, October 12-16, 2004

PROGRAM AND ABSTRACTS



Website:

<http://cancermicroenvironment.tau.ac.il/>

ALTERED PATTERN OF IFN- γ , IL-18 AND NITRIC OXIDE PRODUCTION IN BREAST CANCER AT DIFFERENT CLINICAL STAGE

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Besides well-known tasks in specific and non-specific defense against microbes, mononuclear phagocytes have an important role in the immunobiology of neoplastic tissues. However, there is strong evidence that during neoplasm's development tumor cells, either directly or indirectly (by soluble immunomodulating molecules), may induce systemic disorders of many important immunological function. Hence, it is not surprising that tumor growth may alter complex mechanisms of monocyte/macrophage anti-tumor activity, resulting in the functional instability of these cells.

Therefore, investigation was designated to evaluate IFN- γ , IL-18 and nitric oxide (NO) changes in patients with breast cancer at different clinical stage.

The differences between the values obtained in cancer and those obtained in healthy subjects are highly significant. The results were analyzed statistically and it has been found out that the serum levels of IFN- γ , IL-18 and NO are significantly increased in the presence of cancer. Moreover, highest increase in serum levels of all tested biomarkers were observed in patients with localized breast cancer and this rise may indicate active host defense against tumor. Yet, lower values were observed in the terminal stage of the disease when the defense capacity of the organism has broken down. In addition, *in vitro* production of IFN- γ , IL-18 and NO in 48h culture of peripheral blood mononuclear cells are significantly increased in patients with localized breast cancer. However, mononuclear cells from advanced breast cancer shown reduced capacity to produce these bioactive molecules and values obtained in this group of patients were lower than control once. Changes of IFN- γ , IL-18 and NO production patterns detected in patients with breast carcinomas, are in close correlation with clinical stage and could reflect the dynamic situation between the host and the tumor during neoplasm's progression (serve as an indicator of the extent or activity of the disease).