

SCH

ALTERATIONS OF PROTEINASES IN LUNG CANCER

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It is suggested that proteinases may play an important role in the development of cancer. Therefore we investigated kininase I (KI), kininase II (KII), leucocyte elastase (LE) and elastase I (EI) in serum or plasma of patients with histologically proven lung cancer. The following results (mean \pm SEM) were obtained: KI 187.1 ± 5.1 U/l, n = 105; KII 7.0 ± 0.4 U/l, n = 105; LE 224.1 ± 2.4 μ g/l, n = 84; EI 363.4 ± 17.7 ng/100ml, n = 57. Compared to the healthy controls KI, LE and EI were significantly ($p < 0.05 - 0.001$) elevated and KII was diminished ($p < 0.05$) so that we presume that these enzymes are involved in the pathogenesis of lung cancer. The results also indicate that the determination of these proteinases can be used for the diagnosis of lung cancer. (Supported by the DFG, Schw. 309/2-1)

SED

RELATION OF POLY (ADP-RIBOSE) SYNTHESIS TO POST-REPLICATION REPAIR OF DNA.

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It has been postulated that poly(ADP-ribosylation) of chromatin proteins is involved in efficient excision repair but probably not in post-replication repair.

In our experiments with UV-irradiated Chinese hamster V79 cells, poly(ADP-ribose) synthesis was inhibited by theophylline or 3-methoxybenzamide. This resulted in a slight reduction of the newly synthesized DNA ligation. The data are consistent with the view that the poly(ADP-ribosylation) plays a role in various processes associated with the ligation of DNA pieces, including post-replication repair.

SER

THE INFLUENCE OF FIBROSARCOMA BEARING RAT SERUM ON THE ADHERENCE AND PHAGOCYTTIC CAPACITY OF MONONUCLEAR CELLS

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The influence of serum factors in tumour bearing rats on the phagocytic capacity and adherence of the peritoneal mononuclear cells (MNC) has been studied. Autologous serum significantly depressed the adherence of MNC from healthy and tumour bearing rats in comparison to newborn calf serum (NCS); differences have been established between the tumour bearing and healthy rats. Similarly, autologous serum depressed the MNC phagocytosis, although the difference between the experimental and control group was not significant. But the sera of the tumour bearing rats significantly stimulated the phagocytic capacity of MNC from healthy animals when compared with NCS. The existence of soluble factors, possibly produced by tumour or the reacting host organism, in the serum was confirmed. The reported observation is additionally supported by a significant positive correlation between the weight of the tumour and enhancement of the phagocytic capacity of mononuclear cells from healthy animals caused by the sera of the tumour bearing animals.
