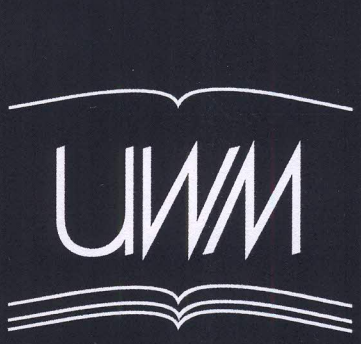
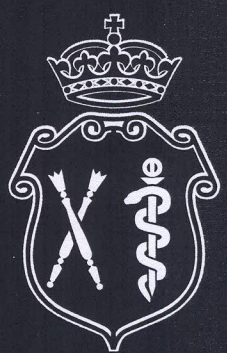
27th Meeting of the European Society of Veterinary Pathology and European College of Veterinary Pathologists





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DIMETHYLBENZ[A]ANTRACENE-INDUCED HEPATOTOXICITY AND EXPRESSION OF THE MITOCHONDRIAL 18 KDA TRANSLOCATOR PROTEIN IN RAT LIVER

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Introduction

Metabolic activation and detoxification of DMBA *in vivo* occurs primarily in the liver. In three bioassay experiments, we studied whether 7,12 dimethylbenz[α]antracene (DMBA) triggered oxidative stress in the liver.

Materials and methods

Different DMBA regimes in three groups of rats were used: a single dose of 10 mg DMBA (DS 10); a single dose of 20 mg DMBA (DS 20), and four doses of 5 mg DMBA (DR 20) in weekly intervals. All animals were sacrificed 18 weeks after the first DMBA administration.

Results

Regarding the liver histology, hepatocytes were glossy in appearance with heterochromatic nuclei. Erythrocytes were also clumped. These changes were more pronounced in group DR 20. DMBA appeared to decrease translocator protein expression (TSPO) in the liver of all groups treated with DMBA.

Conclusions

Changes in TSPO expression correlated well with increased protein oxidation products in liver tissue and visible cell swelling in hepatocytes.