

POSTER PRESENTATION

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Physiologic parameters variation in ICR mice during a chemical induced liver carcinogenesis experiment

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Hepatocellular carcinoma (HCC) is responsible for more than 600 000 deaths worldwide. HCC accounts for 85 to 90% of primary liver cancers [1]. Laboratory mouse is one of the best animal models to study cancer *in vivo* due to various features like the similarities to humans. Animal models that mimic human diseases are quite important to understand biopathology mechanisms underlying those diseases [2].

N-diethylnitrosamine (DEN) is a genotoxic carcinogen activated by a P450-dependent mono-oxygenase into a highly reactive molecule that will affect liver tissue [3].

The aim of this study was to evaluate the effect of DEN on 5 weeks old male ICR mice physiologic parameters. Mice were euthanized 7 and 14 weeks after last DEN injections. A thorough necropsy was performed and registered the weight and macroscopic evaluation of organs. Blood for hematocrit analysis was collected by cardiac puncture.

Some animals of the experimental group developed visible alterations in the liver. Significant values in biochemistry parameters between control/experimental groups were determined to alanine aminotransferase ($p = 0.044$) and total bilirubin ($p = 0.026$).

Mean weight values were also significant between groups in the first euthanized mice ($p = 0.048$).

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References

1. Schütte K, Bornschein J, Malfertheiner P: HCC: epidemiological trends and risk factors. *Dig Dis* 2009, **27**:80-92.
2. Leenders M, Nijkamp M, Rinkes I: Mouse models in liver cancer research: a view of current literature. *World J Gastroenterol* 2008, **14**:6915-6923.
3. Lahm H, Gittner K, Krebs O, Sprague L, Deml E, Oesterle D, Hoefflich A, Wanke R, Wolf E: Diethylnitrosamine induces long-lasting re-expression of insulin-like growth factor II during early stages of liver carcinogenesis in mice. *Growth Horm IGF Res* 2002, **12**:69-79.

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