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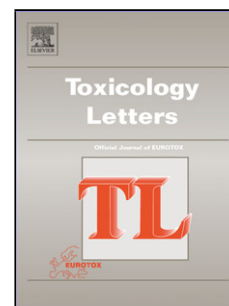
Title: Toxicology studies of furosine in vitro/in vivo and exploration of the related mechanism

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Toxicology studies of furosine in vitro/in vivo and exploration of the related mechanism

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Highlights

- Furosine is toxic to mice in a the dose-effect manner.
- Liver and kidney are the main target organs of furosine toxicity.
- Furosine poses toxic effects through induction of apoptosis and activation of inflammatory necrosis response.

ABSTRACT

Aim: Furosine is one of the Maillard reaction products (MRPs) and is found in a variety of heat-processed food. Yet its toxicity is still unclear. The present study was designed to assess furosine toxicity in cell models and in CD-1 mice, respectively.

Methods: In vitro, the effects of furosine on the cell viability, cell cycle and apoptosis (Hek293, HepG2, SK-N-SH and Caco2) were detected and evaluated, sensitive cell lines and proper dosage of furosine for further animal experiment were determined, and the mechanisms of toxicity were explored. In vivo, the acute toxicity studies were

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