

# 12<sup>th</sup> World Congress on **Pharmaceutical Sciences and Innovations in Pharma Industry**

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### **Taurine and tea polyphenols combination ameliorate nonalcoholic steatohepatitis in rats**

Siwen Chen

General Hospital of PLA, China

**Background & Aim:** Nonalcoholic steatohepatitis (NASH) is a progressive form of nonalcoholic fatty liver disease, for which there is currently no safe and effective drug for therapy. In this study, we explored the effects of taurine, tea polyphenols (TPs), or a combination thereof, on NASH rats.

**Methods:** Rats were divided into a normal group, a high-fat diet induced model group and a treatment group (including taurine, TPs, or taurine+TPs treatment for 8 weeks). Twelve weeks later, all rats were sacrificed, and serum transaminase, lipid and lipopolysaccharide levels and hepatic oxidative stress levels were determined. Histological changes were evaluated.

**Results:** In NASH rats, hepatocyte damage, lipid disturbance, oxidative stress and elevated lipopolysaccharide levels were confirmed. Taurine treatment alleviated hepatocyte damage and oxidative stress. TPs treatment improved lipid metabolism and increased hepatic antioxidant activity. The therapeutic effects of taurine+TPs treatment on hepatocyte damage, lipid disturbance, and oxidative stress were superior to those of taurine and TPs treatment, respectively. Taurine, TPs and their combination all decreased serum lipopolysaccharide levels in NASH rats, but the combination of the compounds caused these levels to decrease more significantly than taurine or TPs treatment alone.

**Conclusion:** Taurine combined with TPs treatment could relieve NASH by alleviating hepatocyte damage, decreasing oxidative stress and improving lipid metabolism and gut flora disturbance partly. Taurine and TPs combination may act as a new effective medicine for treating NASH patients.

#### **Biography**

Siwen Chen is working as an Associate Chief Physician, Gastroenterology Department, NanLou Clinic, General Hospital of the People's Liberation Army. He has specialization in Gastroenterology and Hepatology. His research interests includes discovery of novel pharmaceutical products that can be developed to novel drugs for nonalcoholic steatohepatitis and research on the effective constituents of tea polyphenols to treat hepatic fibrosis.

chensiwenfj@126.com

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