

Isobaric tags for relative and absolute quantitation (iTRAQ) -based proteomics for the investigation of the effect of Huguangzhi on non-alcoholic fatty liver disease in rats

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## Isobaric tags for relative and absolute quantitation (iTRAQ)

### -based proteomics for the investigation of the effect of

### HuganQingzhi on non-alcoholic fatty liver disease in rats

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#### Abstract

##### *Ethnopharmacological relevance*

Hugan Qingzhi tablet (HQT), a traditional Chinese medicine formula has been adopted for preventing and treating nonalcoholic fatty liver disease (NAFLD).

##### *Aim*

In order to explore the anti-NAFLD mechanisms of HQT, iTRAQ-based proteomics was employed to investigate the expression profiles of proteins in NAFLD rats induced by high-fat diet after HQT treatment.

##### *Materials and methods*

The NAFLD rat model was administration of high-fat diet (HFD) for 12weeks and administering HQT in a daily basis to the HFD groups. Biochemical markers, liver histology, pro-inflammatory cytokines, and oxidative stress/antioxidant biomarkers were assayed to evaluate HQT effects in HFD-induced NAFLD rats. Furthermore, the techniques of iTRAQ labeling coupled with strong cation exchange-non-liquid chromatography-tandem mass spectrometry (SCX-non-LC-MS/MS) analysis were employed for explore the mechanisms of HQT's protective effect against NAFLD in

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