

## A network-based pharmacology study of the potential hepatotoxicity of two common hepatoprotective Chinese herbal medicines

Ming Hong and Yibin Feng

The University of Hong Kong, China

Liver injury caused by hepatotoxic agents is a major health problem that challenges not only health care professionals but also the drug regulatory agencies and the pharmaceutical industry in recent years. Traditional Chinese herbal medicines such as Xiao chai hu tang (XCHT) and Heshouwu are widely used for chronic liver diseases and generally regarded as safe due to their extensive clinical use. However, in recent years, there have been increased clinical case reports regarding the long-term hepatotoxicity risks of these two hepatoprotective Chinese herbal medicines in patients with liver dysfunctions. Herein, based on the network pharmacology framework, we analyzed the potential hepatotoxicity of XCHT and Heshouwu by predicting the hepatotoxic ingredients and identify the molecular targets of hepatotoxicity in XCHT and Heshouwu. As a result, two drug-target networks of hepatotoxicity of XCHT and Heshouwu were constructed and analyzed through network pharmacology assays. This network pharmacology research on herbal hepatotoxicity may provide a forceful tool for exploring the potential toxic ingredients and related intracellular mechanisms of Chinese herbal medicines. However, further experimental verification of the potential hepatotoxicity compounds is needed to validate the accurate interactions between these herbal ingredients and protein targets predicted by the *in-silico* method.

### Biography

Ming Hong is a fourth year PhD student at the University of Hong Kong. His researches are mainly focused on Chinese medicines and liver diseases.

[hong1986@connect.hku.hk](mailto:hong1986@connect.hku.hk)

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