Cite this as: Junming Wang, Yuchen Sheng, Lili Ji, Zhengtao Wang. 2014. Ferulic acid prevents liver injury and increases the anti-tumor effect of diosbulbin B *in vivo*. *Journal of Zhejiang University-SCIENCE B (Biomedicine & Biotechnology),* 15(6):540-547. [doi:10.1631/jzus.B1300250]

Ferulic acid prevents liver injury and increases the anti-tumor effect of diosbulbin B *in vivo*

Key words: Ferulic acid; Diosbulbin B; Hepatotoxicity; Oxidative stress injury; Anti-tumor activity

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- *Dioscorea bulbifera* L. is traditionally used to treat thyroid disease and tumors in China. However, its potential hepatotoxicity has seriously limited the clinical application of *Dioscorea bulbifera* L.

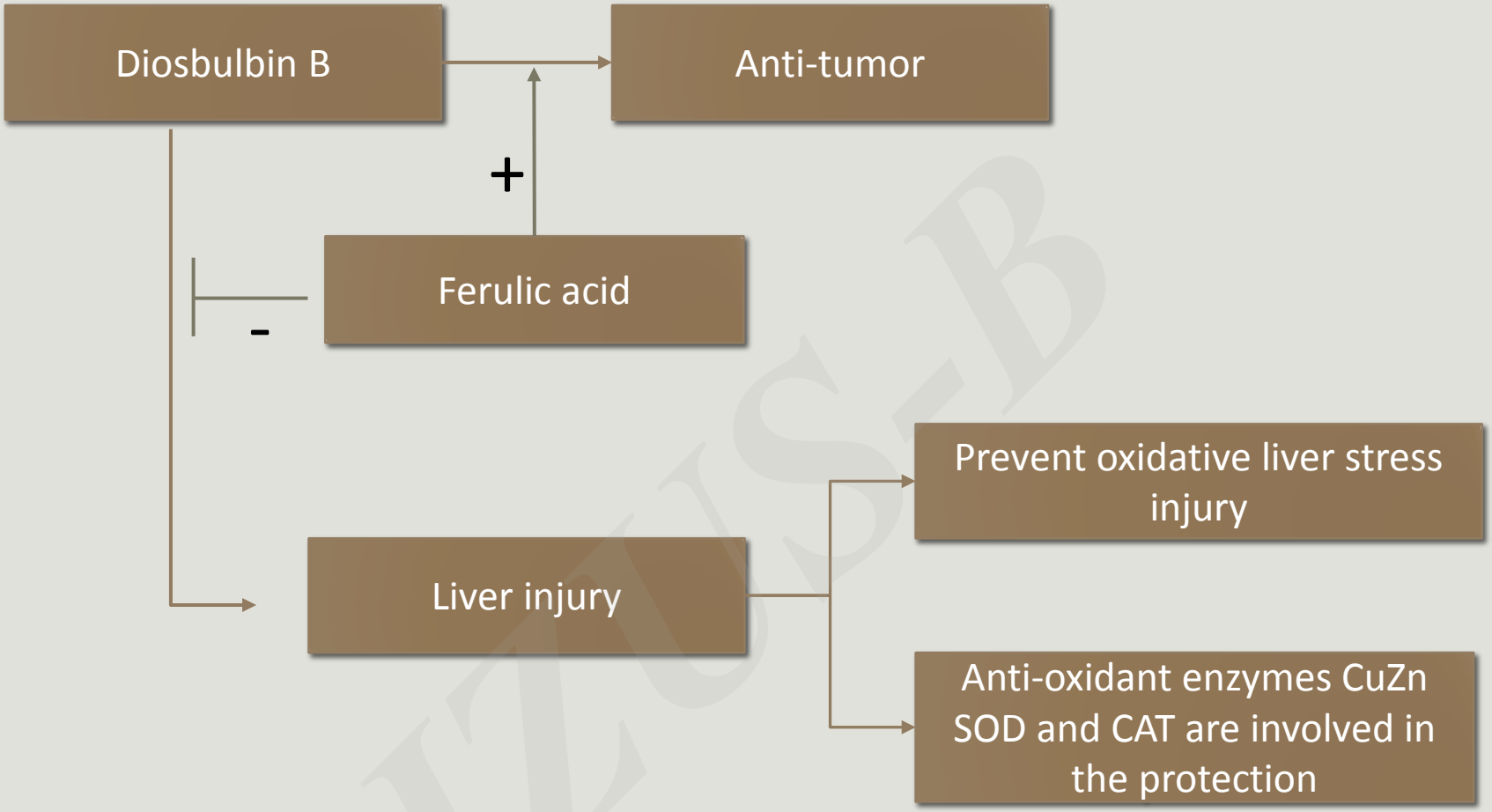
- Diosbulbin B, a diterpene lactone, has been found to be the main toxic component in *Dioscorea bulbifera* L.

- Ferulic acid is one of the main bioactive molecules in *Angelica sinensis* (Oliv.) Diels, and is reported to have various activities such as anti-oxidant, anti-tumor, anti-fatigue, etc.

- The present study demonstrates that ferulic acid prevents diosbulbin B-induced liver injury via ameliorating liver oxidative stress injury.

- The anti-tumor experiment in vivo demonstrates that ferulic acid augments diosbulbin B-inhibited tumor growth.

- This study provides strong experimental evidences for the detoxification of ferulic acid against diosbulbin B-induced liver injury , and the combined application of ferulic acid and diosbulbin B for cancer therapy in clinic.


Diosbulbin B
Anti-tumor
+
Ferulic acid
-
Liver injury
Prevent oxidative liver stress injury
Anti-oxidant enzymes CuZn SOD and CAT are involved in the protection