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PII: S0378-8741(18)32163-9
DOI: <https://doi.org/10.1016/j.jep.2018.08.037>
Reference: JEP11495

To appear in: *Journal of Ethnopharmacology*

Received date: 15 June 2018
Revised date: 15 August 2018
Accepted date: 31 August 2018

Cite this article as: Wen-Jing Yang, Yan-Ru Li, Hui Gao, Xue-Yi Wu, Xiao-Ling Wang, Xiao-Ning Wang, Lan Xiang, Dong-Mei Ren, Hong-Xiang Lou and Tao Shen, Protective effect of the ethanol extract from *Ligusticum chuanxiong* rhizome against streptozotocin-induced diabetic nephropathy in mice, *Journal of Ethnopharmacology*, <https://doi.org/10.1016/j.jep.2018.08.037>

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Protective effect of the ethanol extract from *Ligusticum chuanxiong* rhizome against streptozotocin–induced diabetic nephropathy in mice

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Abstract

Ethnopharmacology relevance:

Rhizome of *Ligusticum chuanxiong* Hort. (Abbreviated as LC) is a frequently prescribed component in plenty of traditional Chinese medicine (TCM) formulas which are used to treat diabetic nephropathy (DN). The aims of the present study are to investigate the protective effect of the ethanol extract of LC rhizome (EEL) against DN *in vivo*, evaluate its potential mechanism, and find the evidence supporting its ethnopharmacological use as an anti-DN agent.

Materials and methods:

Hepa 1c1c7 murine hepatoma cells, human breast carcinoma MDA-MB-231 cells, human renal glomerular endothelial cells (HRGEC), and RAW 264.7 murine macrophages were adopted to test the effects of EEL and its active constituents on inhibitions of oxidative stress and inflammation *in vitro*. A streptozotocin (STZ) -induced DN C57BL/6 mice model was established and used to investigate the preventive effect of EEL against DN *in vivo*.

Results:

EEL demonstrated potential inhibitory effects against oxidative stress and inflammation *in vitro*.

¹ These two authors contributed equally.

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