

# Dietary licorice enhances *in vivo* cadmium detoxification and modulates gut microbial metabolism in mice

Zheng, Xin, Wang, Likun, You, Linhao, Liu, Yong-Xin, Cohen, Michael,  
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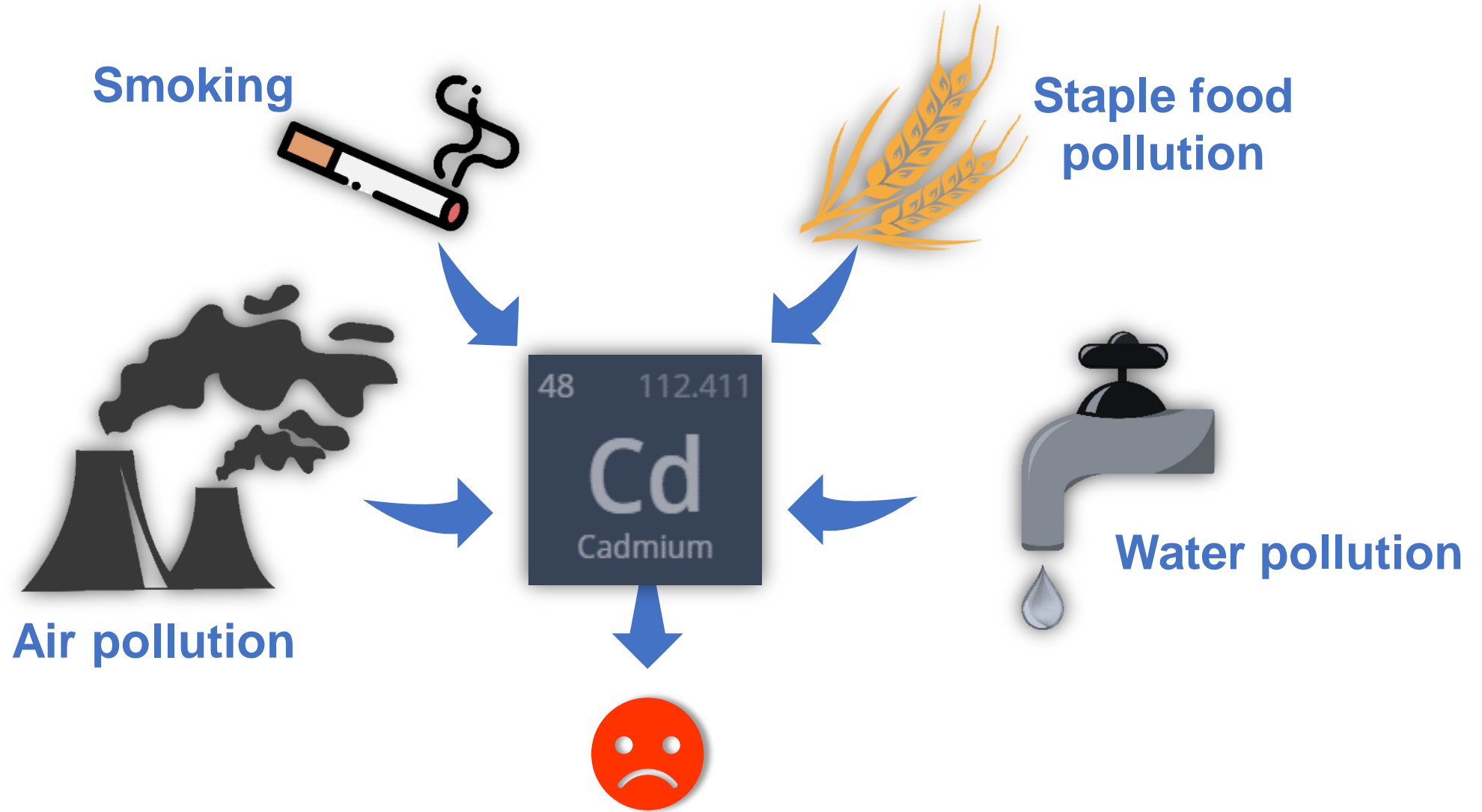
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Zheng, Xin, Likun Wang, Linhao You, Yong-Xin Liu, Michael Cohen, Siyu Tian, Wenjun Li, and Xiaofang Li. 2022. “Dietary Licorice Enhances In Vivo Cadmium Detoxification and Modulates Gut Microbial Metabolism in Mice.” *iMeta* e7. <https://doi.org/10.1002/imt2.7>



# Human are exposed to excess cadmium in various pathways



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# Dietary intervention is useful for population-level health problems

Alzheimer's disease

Endometriosis

Weight gain in childhood

Acute lymphoblastic leukemia

Cardiovascular disease

Depression

Type II diabetes

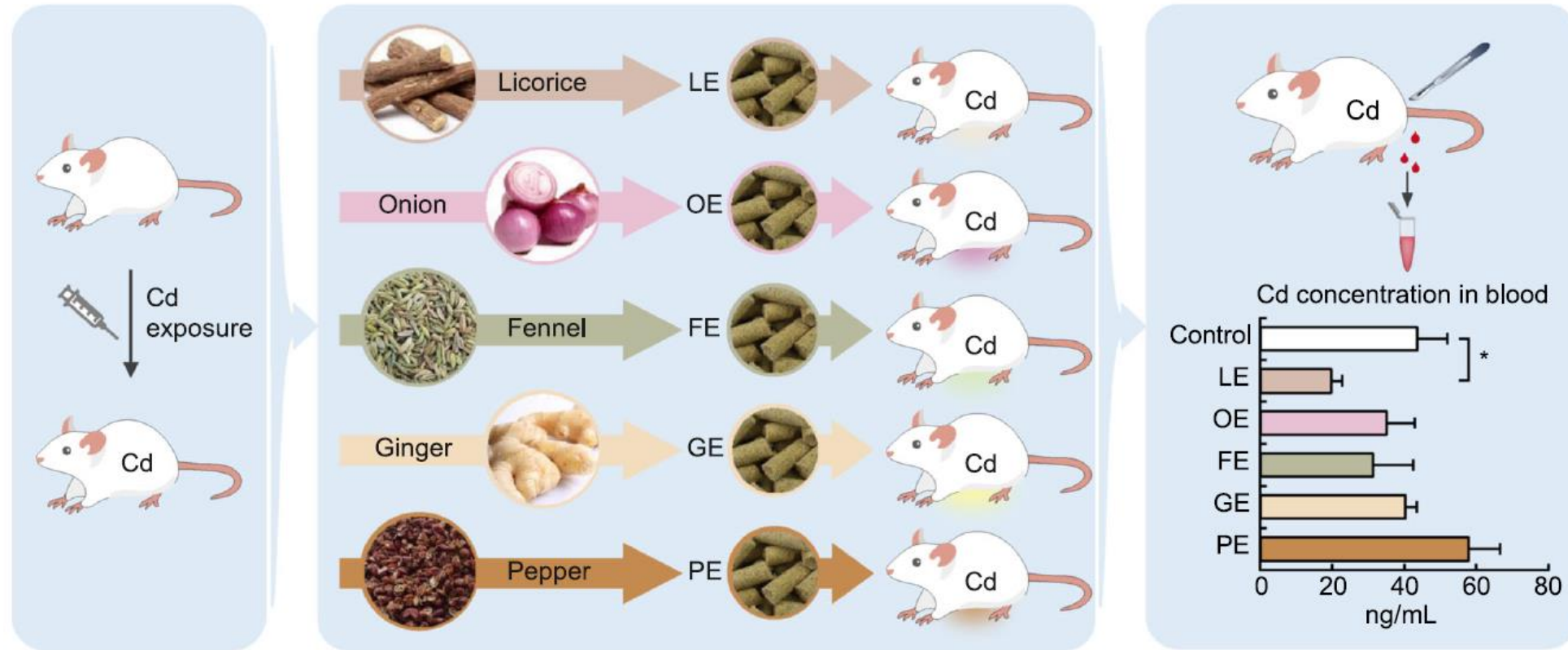


## Can Chinese traditional herbs used for dietary intervention on blood cadmium poisoning?

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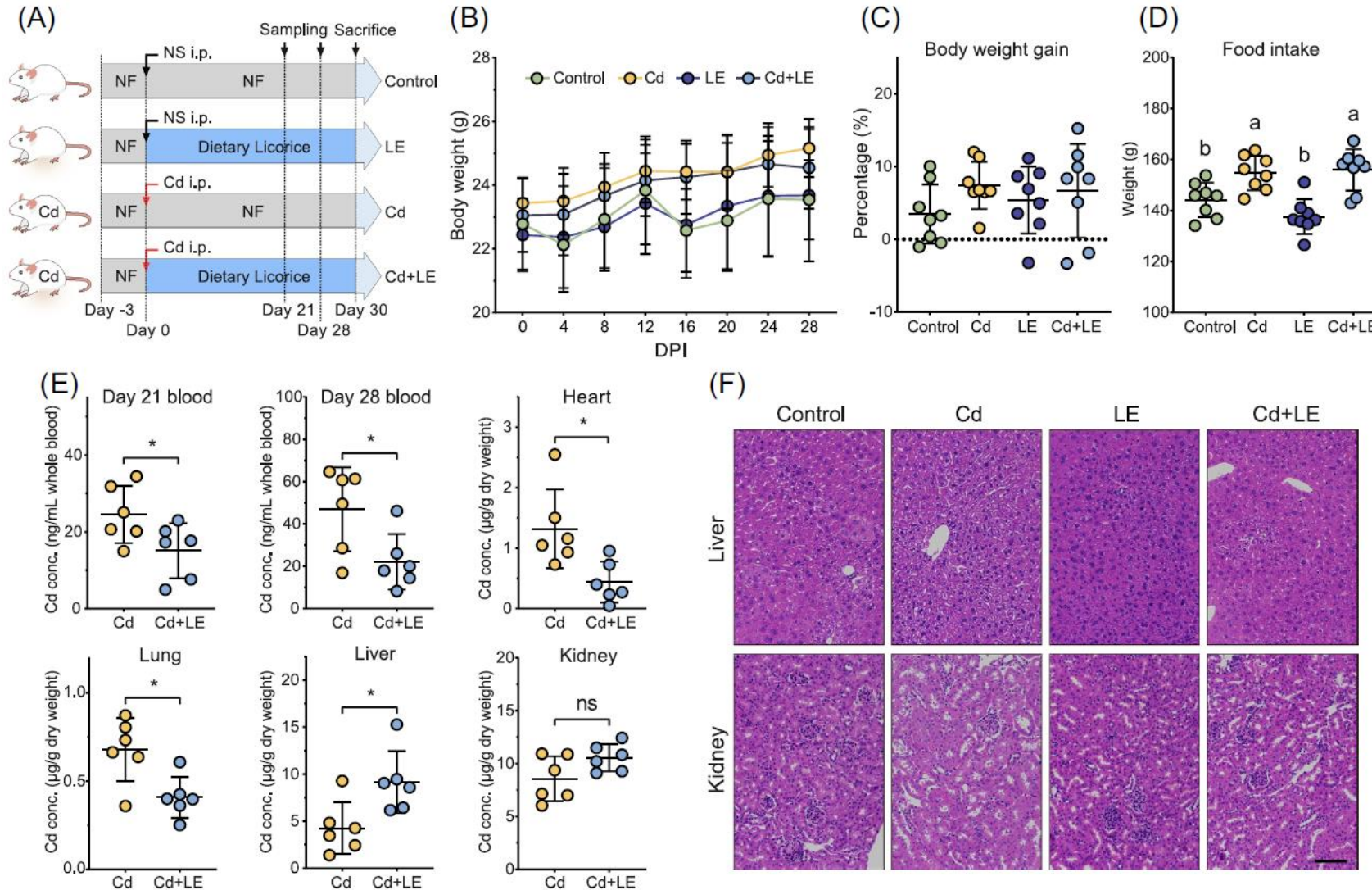
# Screening of functional dietary herbs for cadmium detoxification



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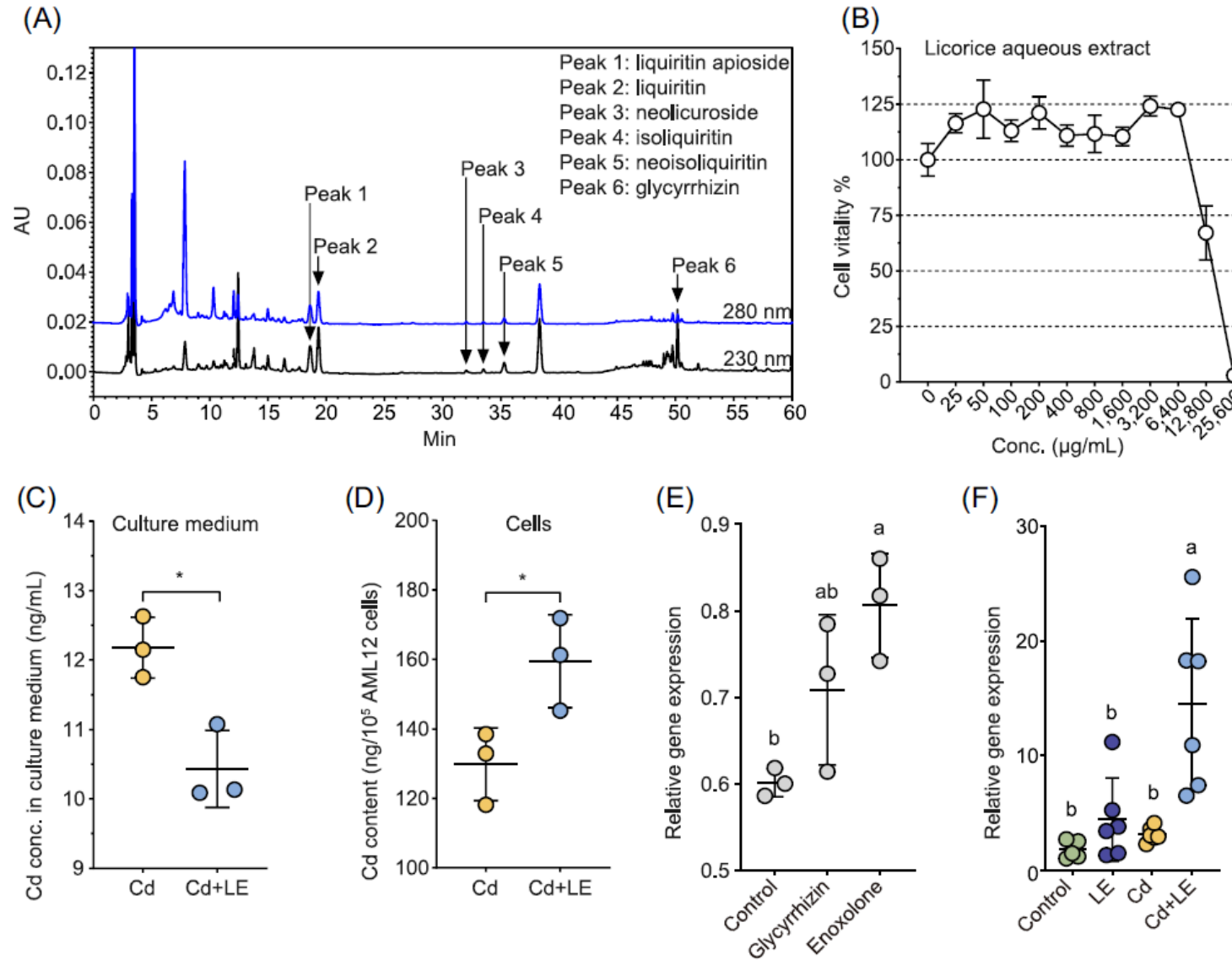
# In vivo cadmium detoxification effects of dietary licorice



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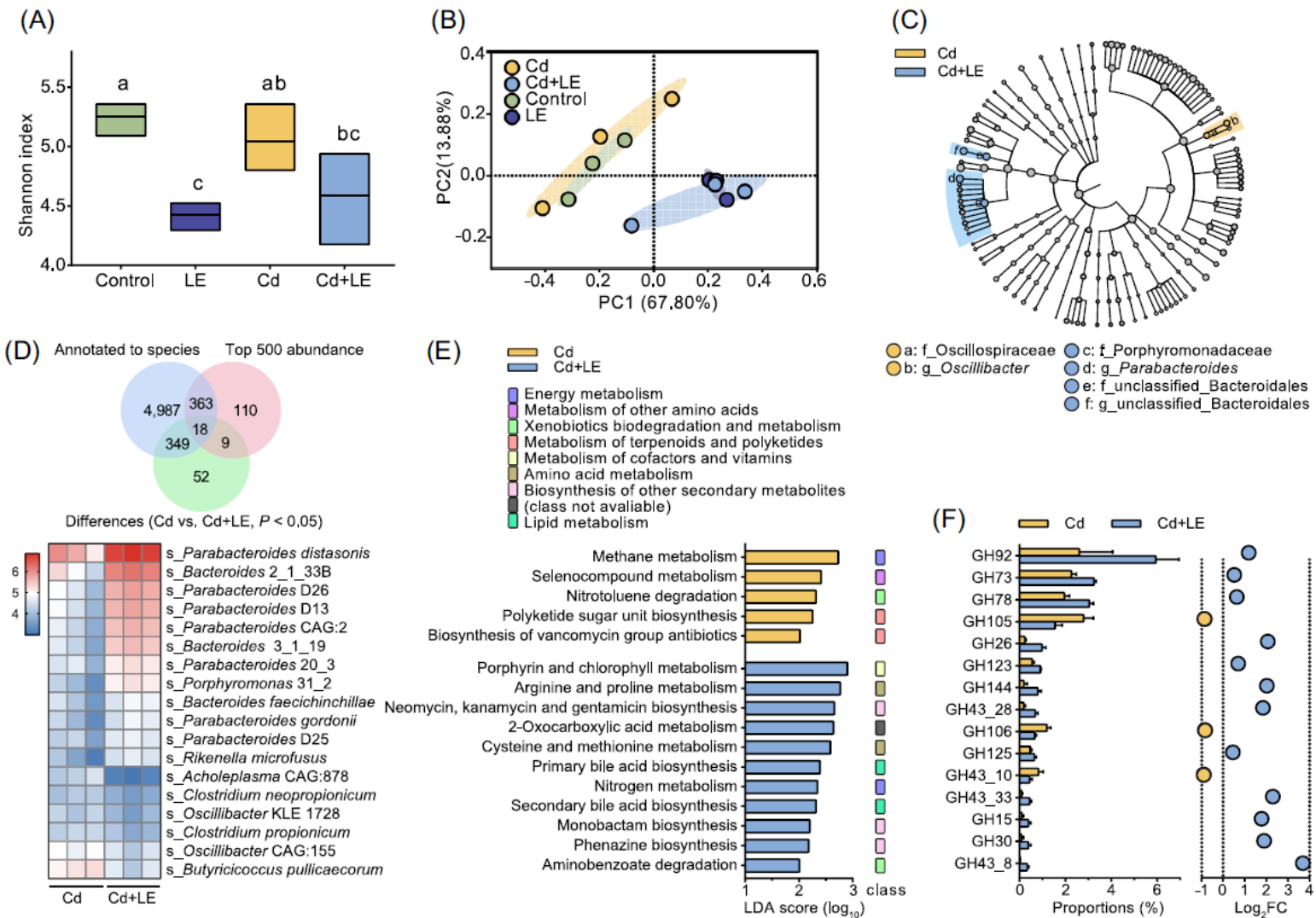
# Fingerprint analysis of licorice extract and in vivo test of toxicity to hepatocyte



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# Dietary licorice altered gut microbial composition & function in Cd-poisoned mice

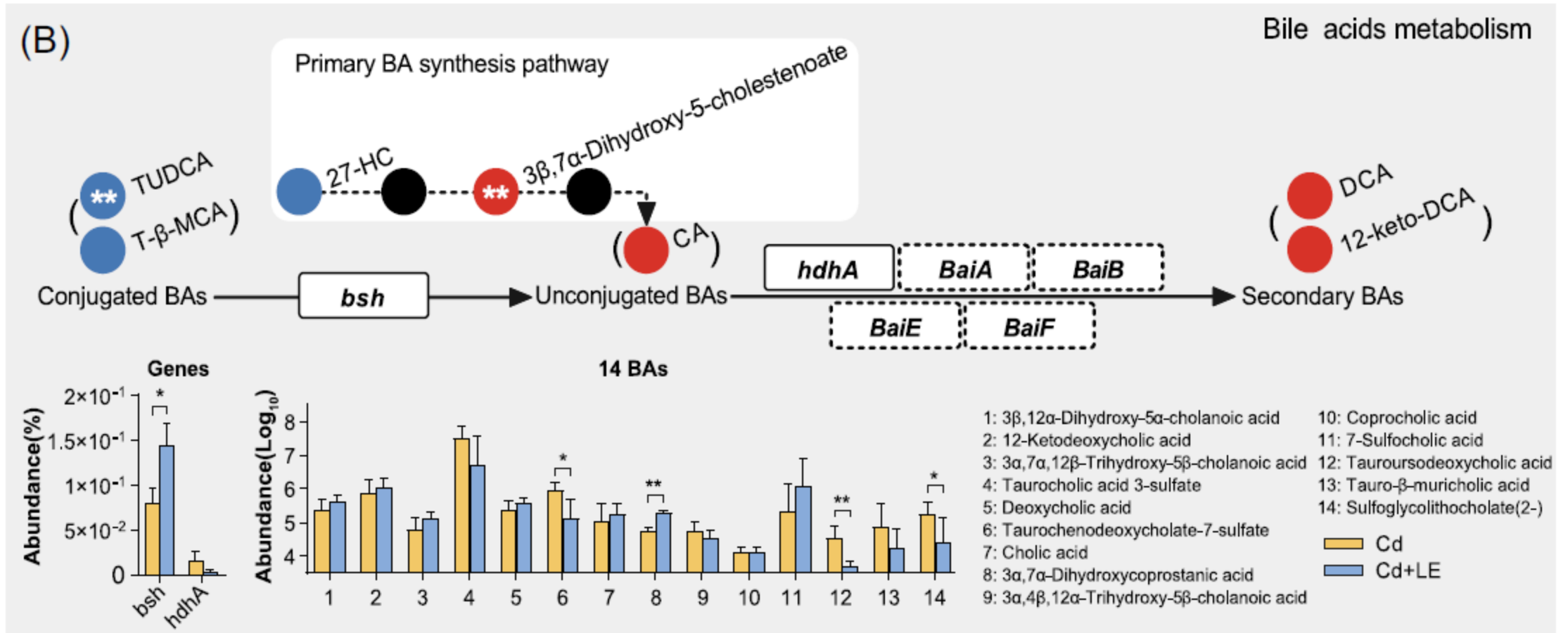


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# Potential metabolic pathways of gut microbiota associated with the dietary licorice

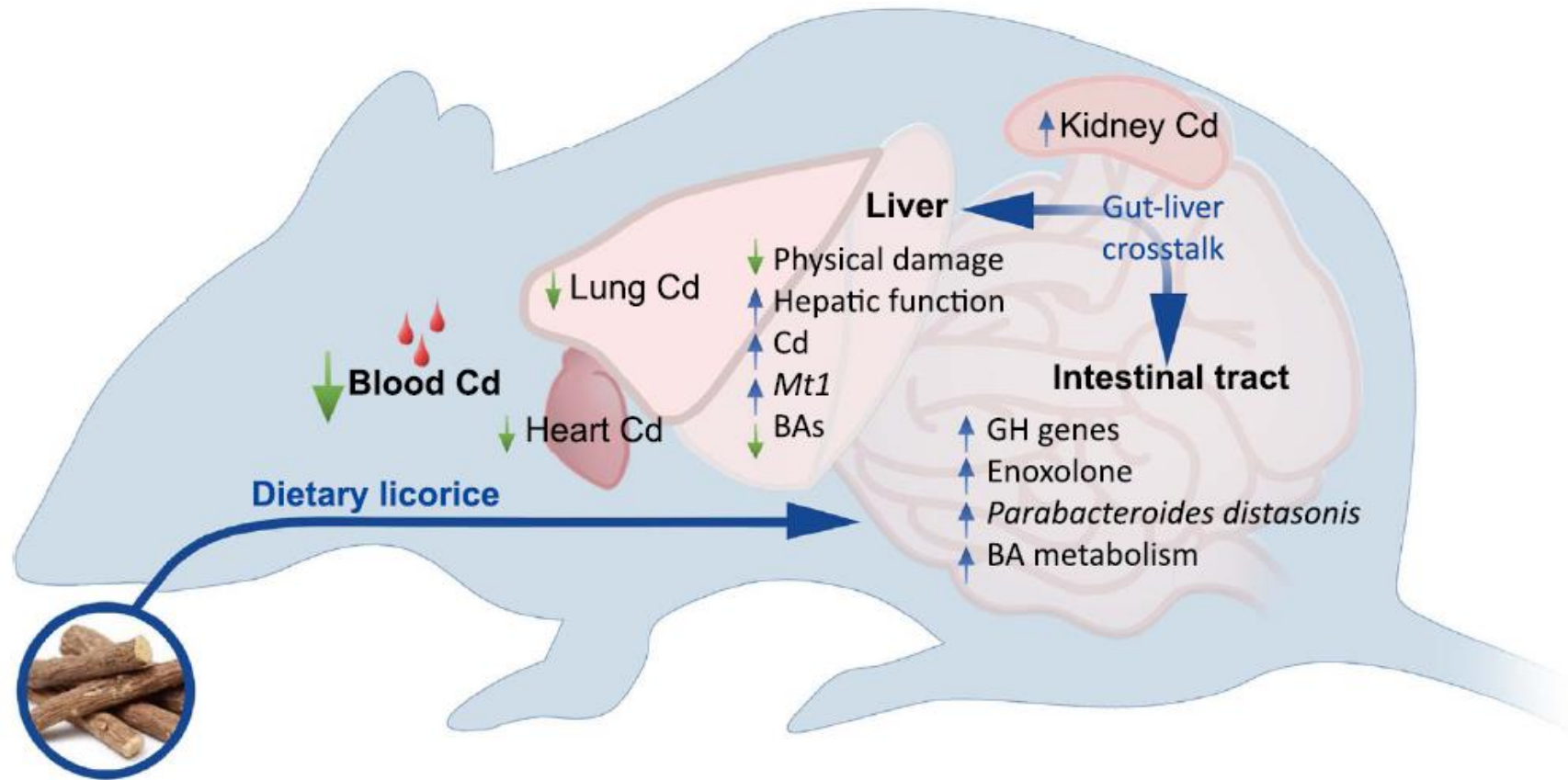


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# Summary

Proposed mechanism of dietary licorice intervention on health under Cd stress



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