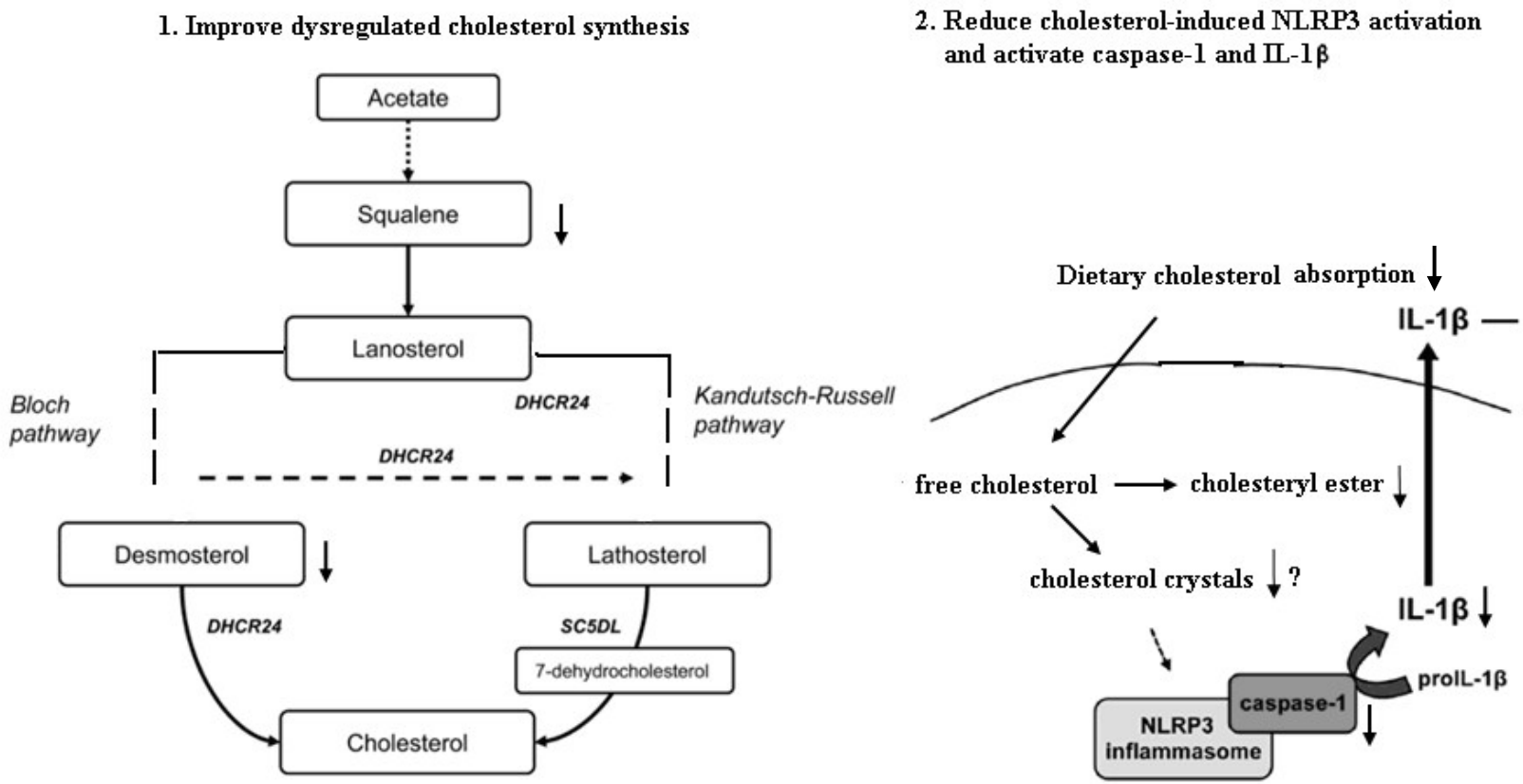
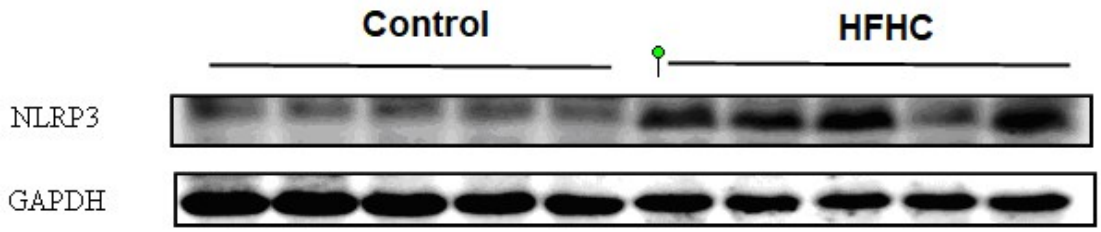
Electronic Supplementary Material (ESI) for Food & Function.

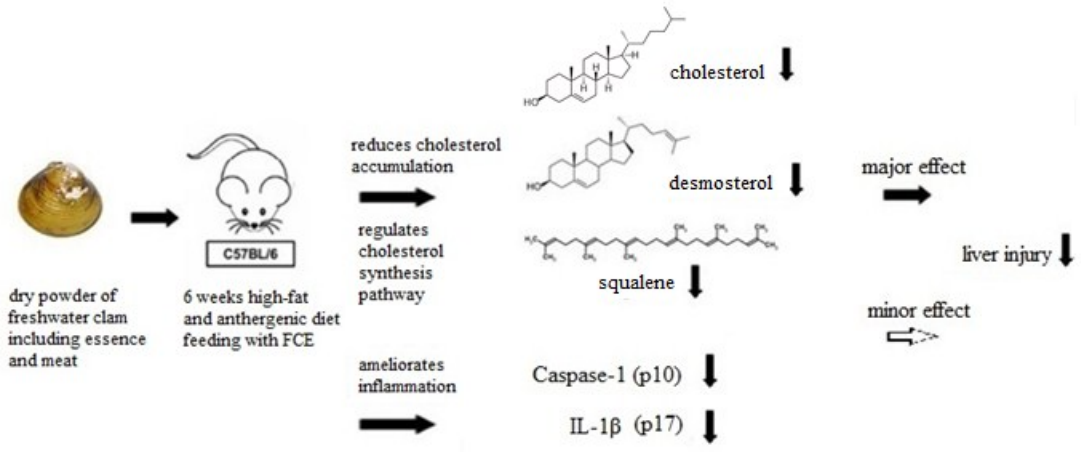


Supplementatry data 1. FCE improved dysregulated cholesterol synthesis pathway (1) and suppressed cholesterol-induced NLRP3 inflammasome activation (2) in liver. In this study, FCE reduced squalene and desmosterol accumulations in liver, suggesting cholesterol synthesis pathway was dysregulated. 24-Dehydrocholesterol reductase (DHCR24) is the enzyme that catalyze the formation of cholesterol from desmosterol. In addition, FCE reduced dietary cholesterol absorption and liver total cholesterol, especially cholesteryl ester, and might reduce cholesterol crystals-induced NLRP3 activation and liver inflammation.



Supplementary data 2.

Mice fed the HFHC diet induced NLRP3 protein expression compared with low-fat control diet (the same diet composition in this study).



Supplementary data 3.

Graphic abstract of this study.