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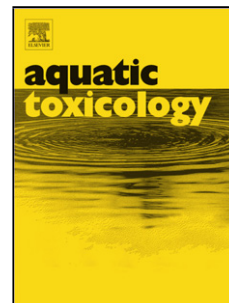
Title: A lipidomic approach to understand copper resilience in oyster *Crassostrea hongkongensis*

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A lipidomic approach to understand copper resilience in oyster *Crassostrea hongkongensis*

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Highlights:

- Relationships between Cu exposure and lipid metabolism in oysters were investigated.
- Lipidome profiling related to membrane dynamics, lipid signaling and energy metabolism was evaluated.
- Cu induced phospholipid remodeling and quick modulation in inflammatory responses.
- Cu exposure also induced extensive vesicle formation and autophagosome formation.
- Lipidomics approach provided a comprehensive lipid profile of possible alteration by Cu exposure.

Abstract

Copper (Cu) can cause oxidative stress and inflammatory responses, and there is arising evidence between Cu toxicity and lipid disturbance. In this study, we examined the relationships between Cu exposure and lipid metabolism in an estuarine oyster (*Crassostrea hongkongensis*) and aimed to understand the effects and resilience strategies of Cu on oyster metabolism. We exposed the oysters to waterborne Cu (10 and 50 µg/L) and measured the physiological changes

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