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Neurological responses of embryo-larval zebrafish to short-term sediment exposure to decabromodiphenylethane

Key words: Decabromodiphenylethane; Flame retardant; *Danio rerio*; Neurotoxicity

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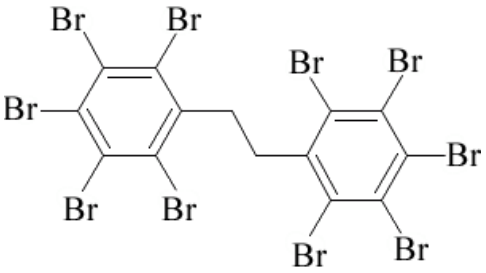
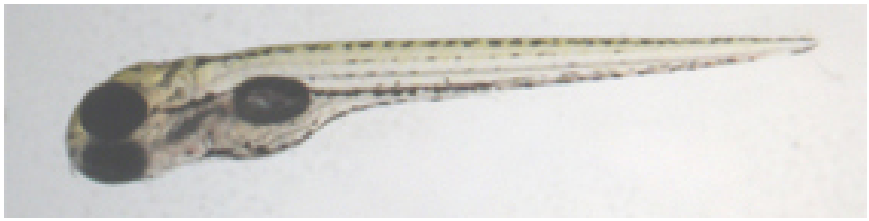
Research Summary

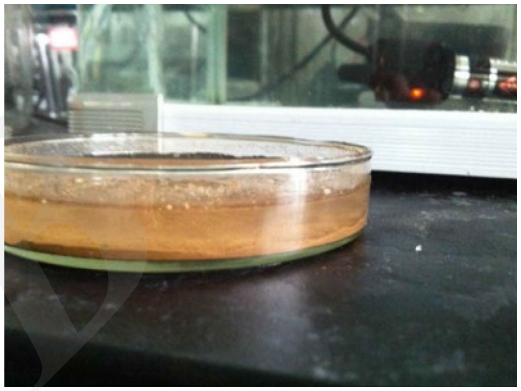
This study mainly focused on the neurological responses to DBDPE by sediment exposure routes using zebrafish as an in vivo model, and the following aspects were studied in detail:



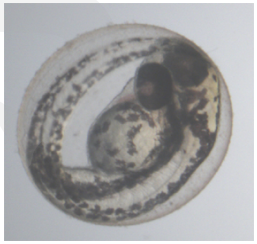
- **Mortality and malformation**
- **Behavorial responses**
- **Acetylcholinesterase activity**
- **Expression levels of two important nerve-related genes**
- **Cell apoptosis**

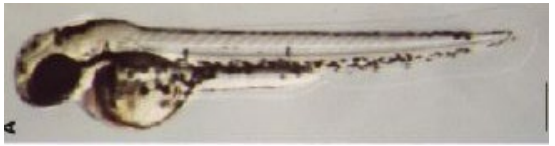


Innovation points

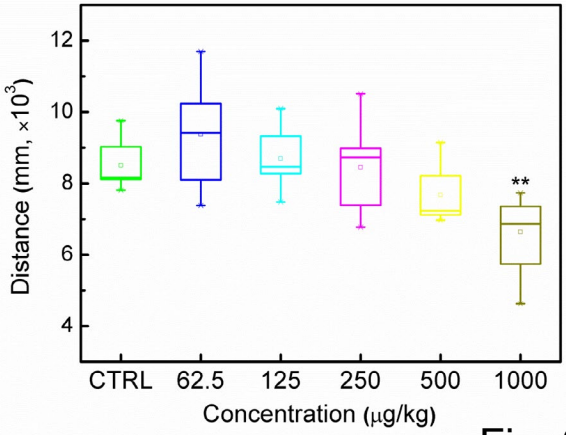


- **Exposure to DBDPE-contaminated sediment** resembles the real environment scenario.





- **Early-larval zebrafish** is a reliable and sensitive model in the evaluation of the neurotoxicity of various pollutants.



- **Behavior and hatching rate** are two sensitive endpoints.

Fig. 2

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