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Multigenerational effects of 3, 4-dichloroaniline of *Daphnia magna*

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Most multigenerational studies on acute and chronic toxicity tests are initiated with *Daphnia magna* (*D. magna*) derived from unexposed female. However, this approach could ignore potential transfer of toxicity from mother to offspring. Thus, we observed the influence of 3,4-dichloroaniline (3,4-DCA) on two consecutive generation of *Daphnia magna* (*D. magna*) through chronic toxicity test with various concentration range (0, 0.3125, 0.625, 1.25, 2.5, and 5 ug/L) of 3,4-DCA. We evaluated survival, reproduction, and population growth of *D. magna* after 21 days exposure test, and examined the sensitivity between offspring (from third to fifth) from mother exposed to 3,4-DCA. Results showed that cumulative fecundity decreased with increasing concentration of 3,4-DCA, though the given concentrations of 3,4-DCA did not affect to the survivorship of *D. magna*. Although age at first reproduction of *D. magna* increased along the increasing concentrations of 3,4-DCA, the age at first reproduction was decreasing along the consecutive offspring. Our results indicated that offspring might adapt to the 3, 4-DCA toxicity. This study reflects actual environmental exposure.



Biography

Hyemin Kim has her expertise in Microbial Ecology and Environmental Toxicology. She has completed her PhD from Seoul National University.

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