

## **IMPACT OF ENDOCRINE DISRUPTORS ON THE MOLTING AND EMBRYOGENESIS IN MYSID SHRIMP (CRUSTACEA; MYSIDACEA)**

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Invertebrates account for over 95% of the known animal species, yet surprisingly little effort has been made to evaluate and understand the effect of environmental endocrine disruptors (EDs) on these organisms. Increased knowledge of invertebrate-specific endocrine regulated processes and their disruption by chemicals, is required to fully evaluate the effects of EDs on ecosystems. Mysid shrimp have been proposed as suitable test organisms for the evaluation of endocrine disruption by several researchers and regulatory bodies (e.g. USEPA).

In this context, we have evaluated the use of two new endpoints, molting and embryogenesis, for assessing endocrine disruption in the mysid shrimp *Neomysis integer*. Embryos and juveniles <24h old were exposed to 0.01, 1 and 100 $\mu\text{g l}^{-1}$  of the insecticide methoprene for 3 weeks. Methoprene delayed molting significantly at 100 $\mu\text{g l}^{-1}$ , whereas the embryogenesis was significantly affected at 1 and 100  $\mu\text{g l}^{-1}$  by delayed hatching and lowered hatching rates. These results demonstrate that methoprene affected the embryogenesis at lower concentrations than those observed to impact molting. Furthermore both endpoints may be useful invertebrate-specific endpoints to examine endocrine disruption in *N. integer*.