

AL21

Studies on Endocrine Disrupting Effects by Environmental Chemicals

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Three series of studies on endocrine disrupting effects by environmental chemicals have been done with co-workers successfully.

1. The screening methods for estrogen activity and reproductive effects for environmental chemicals were established for medaka, gold fish and xenopus laevis. In addition, we have developed the feeding diet which is contained the lower estrogen active component for fishes. In continuing series, we also developed fish diet (included *Xenopus laevis*) which can use for the evaluation hormone activity such as androgen and thyroid hormones because of their low hormone activity.

2. The establishment for the methods for reproductive effects on invertebrate such as nematode and myshid. First of all, we have developed acute toxicity test methods for *C. elegans* by environmental chemicals. The new endpoints of toxicity test methods are growth/maturation and reproduction. We also have introduced DNA microarray system for *C. elegans* and made up custom chip for detect environmental toxicity as more sensitive level.

3. We have tried to evaluate the eco-toxicological effects on fungicides and bisphenol related compounds. As fungicides, we have tried to evaluate eco-toxicity of triclosan. We have reported that several bisphenol compounds were leaching out plastic containers. And their ecotoxicological effects were estimated by medaka, myshid and nematode (*C. elegans*). In addition, we also estimated eco-toxicity of several environmental chemicals.