

I will be presenting (instead of Rodney Johnson) at a SETAC Focused Topic Meeting called Endocrine Disruption: Chemical Testing, Risk Assessment Approaches and Implications in RTP, February 4-6. Below is the title, abstract, etc of the brief presentation.

Title: The Proposed Tier 2 Medaka Extended One Generation Reproduction Test (MEOGRT)

Presenter:

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Contributors:

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Abstract:

The Food Quality Protection Act of 1996 requires EPA to develop and implement a program using valid tests for determining the potential endocrine effects from pesticides. The EPA established advisory group, the Endocrine Disruptor Screening and Testing Advisory Committee (EDSTAC), recommended EPA develop a two-tiered approach: Tier 1 would identify the potential of a substance to interact with the endocrine system whereas Tier 2 would further identify and characterize chemical-induced interactions with estrogen, androgen and thyroid hormones for risk assessment to inform regulatory decisions. One of the Tier 2 tests being developed by the EPA is a fish test that encompasses critical life stages and allows for the potential that the endocrine disruption could be expressed later in life, with particular interest on the reproductive period. This test will be used to evaluate the adverse consequences of putative endocrine disrupting chemicals, especially those active within the hypothalamic-pituitary-thyroid (HPT) and hypothalamic-pituitary-gonadal (HPG) systems, on the development, growth and reproduction of fish. The MEOGRT is intended to serve as a higher tier test with a fish for collecting definitive concentration-response information on adverse effects suitable for use in ecological risk assessment. The general experimental design entails medaka (*Oryzias latipes*) to five different concentrations of a test chemical and a control over two generations with an optional third generation possible. The exposure starts with F0 adults, continues through the entire lifecycle of the F1 generation, and either concludes with hatch of the offspring from F1 or another complete lifecycle of the F2 generation. There are six replicates in each test concentration and 12 replicates for the control until the reproductive assessment at which time the replication structure is doubled to 12 replicates in each test concentration and 24 replicates for control. Endpoints evaluated during the course of the exposure include those indicative of generalized toxicity, *i.e.*, mortality, abnormal behavior, pathology and growth determinations (length and weight), endpoints designed to characterize specific endocrine toxicity modes of action targeting estrogen (E)-, androgen (A)-, or possibly thyroid (T)-mediated pathways, and finally fecundity, a population relevant measurement.