

----- Forwarded by Maryann Starus/DUL/USEPA/US on 11/30/2010 11:05 AM -----

Meeting: OECD Workshop on Using Mechanistic Information in Forming Chemical Categories to Fill Data Gaps for Regulatory Purposes

Dates: 8-10 December 2010

Location: US EPA, One Potomac Yard, Arlington, VA 22202

GPRA: Safe Communities/ SP2

Poster Title: Tiered Approach to Thyroid Research Using an Adverse Outcome Pathway Framework, Hornung, Tietge, Degitz

Abstract: The potential for chemicals in the environment to alter the endocrine systems of humans and wildlife is an area of ongoing concern. Whereas significant research has focused on the estrogenic and androgenic activity of a wide range of chemicals, much less is known about chemicals with potential thyroid activity. Disruption of thyroid hormone (TH) function may occur via multiple pathways including altered TH receptor binding, altered TH metabolism and elimination, and altered TH synthesis. The goal of this research is to develop higher throughput, mechanism-based, predictive tools based upon known Adverse Outcome Pathways which will support the development of structure activity relationship models for thyroid hormone disrupting activity.

Impact Statement: This research supports the need in the Agency to assess chemicals for thyroid hormone disrupting activity and provides an example of how using a tiered research approach can begin to link predictive in vitro assays to in vivo effects.