

* Replaced by
Dr. Herr to add
John Hedge 1-57-0

CHANGES IN RAT SERUM BIOINDICATORS AFTER SINGLE OR REPEATED DOSAGES OF FIPRONIL. D

W Herr¹, D F Lyke¹, R McMahan², M Strynar², J M Hedge¹, K L McDaniel¹, and V C Moser¹.

¹NHEERL, ²NERL, ORD, US EPA, RTP, NC.

Acute exposure to different classes of pesticides produces different patterns of changes in serum bioindicators (Herr *et al.*, Toxicologist, 2013). We now examined profiles of bioindicators after 1 or 14 treatments with 0, 5, or 10 mg/kg/day fipronil (po). Adult male Long-Evans rats were evaluated for EEG changes (Lyke *et al.*, Toxicologist, 2014), and were sacrificed after testing (6 h). There were no changes in serum ALT, AST, LDH, or SDH. Serum T3 decreased after 1 or 14 treatments (10 mg/kg). Serum T4 decreased after 1 (10 mg/kg) or 14 treatments (5, 10 mg/kg/day). Serum samples were processed by Myriad RBM (RodentMAP® and Rat MetabolicMAP®). One exposure produced changes in 4 of 73 analytes, while 14 treatments altered 8 different analytes. Biocrates AbsoluteIDQ™ p180 analysis of plasma showed changes in metabolites, and repeated dosing produced more effects. Increased serum levels of the fipronil sulfone metabolite, and decreased levels of fipronil, were found with 14 treatments vs. 1 exposure. Data show that repeated treatment with fipronil results in different patterns of bioindicators compared to a single exposure, and may reflect changes in involvement of biological pathways. *This is an abstract of a presentation and does not necessarily reflect EPA policy.*