

Effects of Fadrozole, Ketoconazole, and 17 β -trenbolone on Ex Vivo Steroidogenesis in the Fathead Minnow

We examined the effects of the competitive aromatase inhibitor fadrozole (0, 3, and 30 g/L), the cytochrome P450 enzyme inhibitor ketoconazole (0, 40, 400 g/L), and the androgen receptor agonist 17 β -trenbolone (0, 33, and 470 ng/L) on fathead minnow (*Pimephales promelas*) steroidogenesis using 3 separate 16-day experiments. In each experiment, fish were chemically-exposed for 8 d, then held for an additional 8 d without chemical exposure to examine recovery. To determine the effect each chemical had on steroidogenesis, we measured ex vivo production of testosterone (T) and 17 β -estradiol (E2) by gonad tissue collected after 1, 2, 4, 8, 9, 10, 12, and 16 d, using radioimmunoassays (RIAs). The results from this study aid our understanding of direct and indirect effects of endocrine-disrupting chemicals on steroidogenesis.