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**Endocrine Toxicity of Trenbolone in the Western Clawed Frog, *Xenopus (Silurana) tropicalis***

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Trenbolone is a veterinarian pharmaceutical that acts as an androgen agonist and is used extensively in the beef industry. It is excreted from cattle as an active form and has been measured in aquatic systems associated with or near concentrated animal feeding operations. In an effort to characterize the effects of this endocrine toxicant in an amphibian species, we exposed *Xenopus tropicalis* to 17-beta-trenbolone during larval development, juvenile maturation, and as reproductive adults. Exposures occurred either via aqueous exposure or dosing through food. Trenbolone exposure during the tadpole stage resulted in almost complete mortality with a LOEC of 310 ng/L. This mortality only occurred in later stages of development and is consistent with alterations in the growth and development of the larynx. Larval exposure did not have an effect, however, on sexual differentiation of the gonads. Development of nuptial pads, a male secondary sex characteristic, was induced in metamorphosing tadpoles of both sexes and in juvenile females. Additional assessments on adult frogs exposed only during tadpole development will be presented as well.