

Tambaqui (*Colossoma macropomum*) is not sensitive to endocrine-disruption chemicals during gonad development.

PAIXAO, Rômulo Veiga¹; SILVA, Gilvan Ferreira ²; ALMEIDA, Fernanda Loureiro³

1Universidade Federal do Amazonas - UFAM; 2, 3 Embrapa Amazônia Ocidental – CPAA

The aim of this study was to better understand the physiological roles of estrogens during the process of gonad differentiation in *Colossoma macropomum* as it is known that ovary formation in this species takes place with no transcription of *cyp19a1a* (the gene that codes for aromatase). We treated sexually undifferentiated tambaqui with tamoxifen (Fz; 50mg/kg of food), an estrogen receptor blocker, and fadrozole(Tx; 200 mg/kg of food), an aromatase inhibitor during 40 and 60 days, respectively. After the treatment, each group was transferred to a net cage for further growth, where they remained until sampling of the gonads for sexing. Based on sex ratio data, there were no masculinization effect in Fz (55% female, 45% male) and Tx treatments (48,8% female, 51,2% male) compared to the control group (44% female, 56% male). However, in both treatments, differences in size became significant from controls five months after the end of chemical administration and remained until the end of experiment. Yet the weight of Fz group ($260,41 \pm 74,91$ g) 12 months after termination of treatment was significantly higher than control ($207,73 \pm 77,02$ g; p value $<0,0001$) and Tx group ($201,80 \pm 58.74$ g; p value $<0,0001$). In conclusion, this study was able to provide further valuable evidence that tambaqui are not sensitive to endocrine-disrupting chemicals that specifically interferes with estrogen synthesis and action (via receptor binding) such as tamoxifen and fadrozole during gonad development. It remains to be clarified if not estrogen dependent, how ovary differentiation is triggered in this species.