

## Poster #5

### **Ovarian Features in Xenoestrogen-determined Females of *Caiman latirostris*.**

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Selection of sentinel species and biomarkers is critical to design strategies to evaluate environmental contamination. *C. latirostris*, a species with temperature sex determination, is widely distributed in South American aquatic ecosystems and features characteristics to be selected as sentinel of xenoestrogens exposure. Bisphenol A (BPA), a documented xenoestrogen, is a plasticizer used in polycarbonates and epoxy resins. Recently, we reported sex reversal effects and/or gonadal histoarchitecture disruption on *C. latirostris* exposed *in ovum* to 17 $\beta$ -estradiol (E<sub>2</sub>) or BPA. In the present study, we assessed ovarian features in sex-reversed females of *Caiman latirostris*. Eggs from 5 nests were harvested immediately after oviposition from pristine areas and incubated at 30°C (female producing temperature) or 33°C (male producing temperature). To obtain sex reversed females, eggs incubated at 33°C received either E<sub>2</sub> (1.4ppm) or BPA (140ppm). Treatments were applied topically to the eggshell at stage 20 of embryonic development. Control eggs received vehicle. Serial sections of paraffin-embedded gonads of 10-day and 12-month old females were stained with a trichromic stain. In hatchling samples, ovarian dynamics was evaluated by quantification of the different stages of oocyte growth and maturation (oogonia, previtellogenic oocytes stages I to III). In 12 month-old caiman ovaries, polyovular follicles incidence was estimated. Ovaries from sex-reversed female hatchlings exhibited a significant reduction in stage III oocytes and polyovular follicles were more frequent in 12-month olds than controls. These results demonstrate that gonadal characteristics of xenoestrogen-determined females differ from those of temperature-determined females, which could affect reproductive performance.

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