



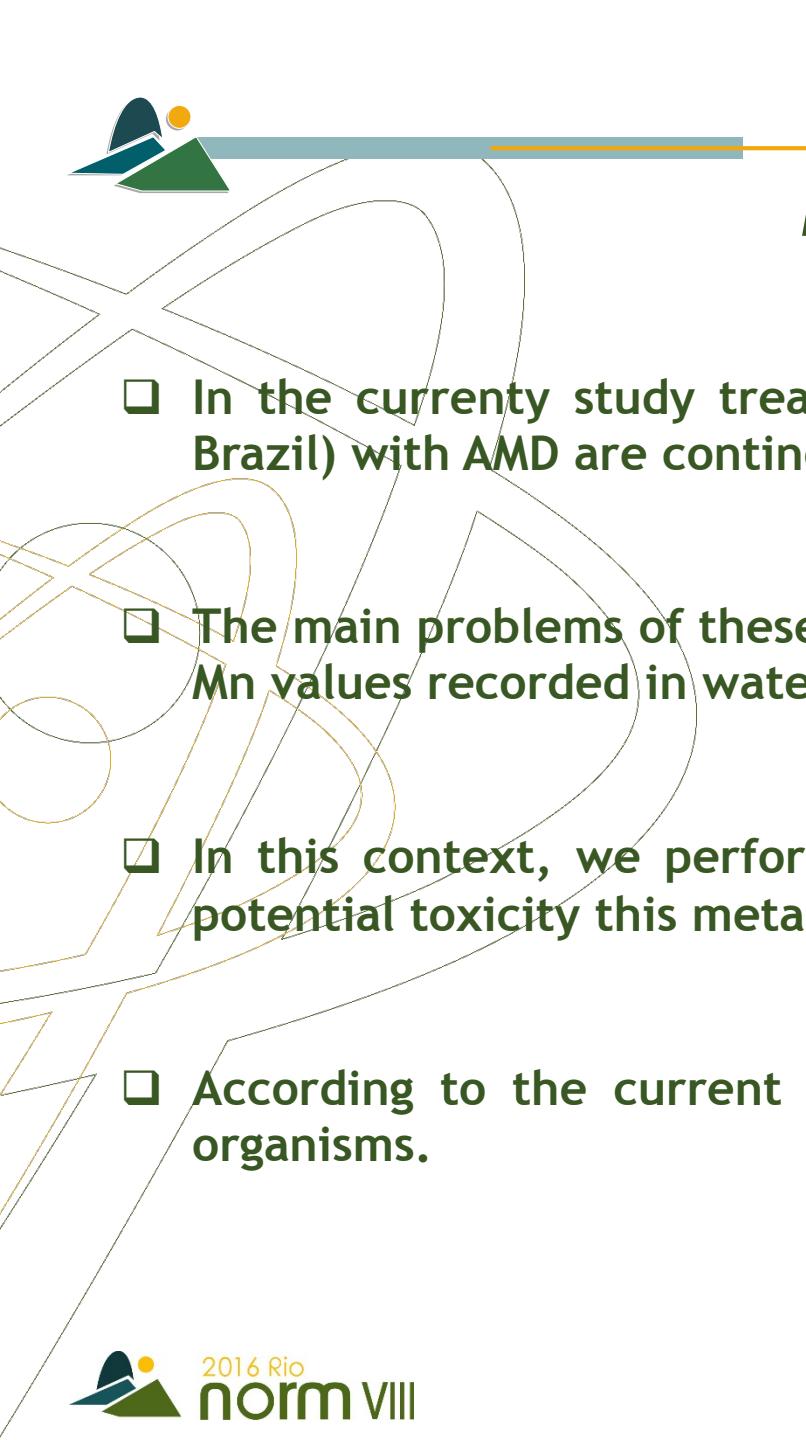
ACUTE TOXICITY OF MANGANESE TO *Ceriodaphnia silvestrii* AND *Daphnia magna* IN BIOASSAYS AND THE POTENTIAL TOXICITY OF THIS METAL IN THE URANIUM MINE EFFLUENT

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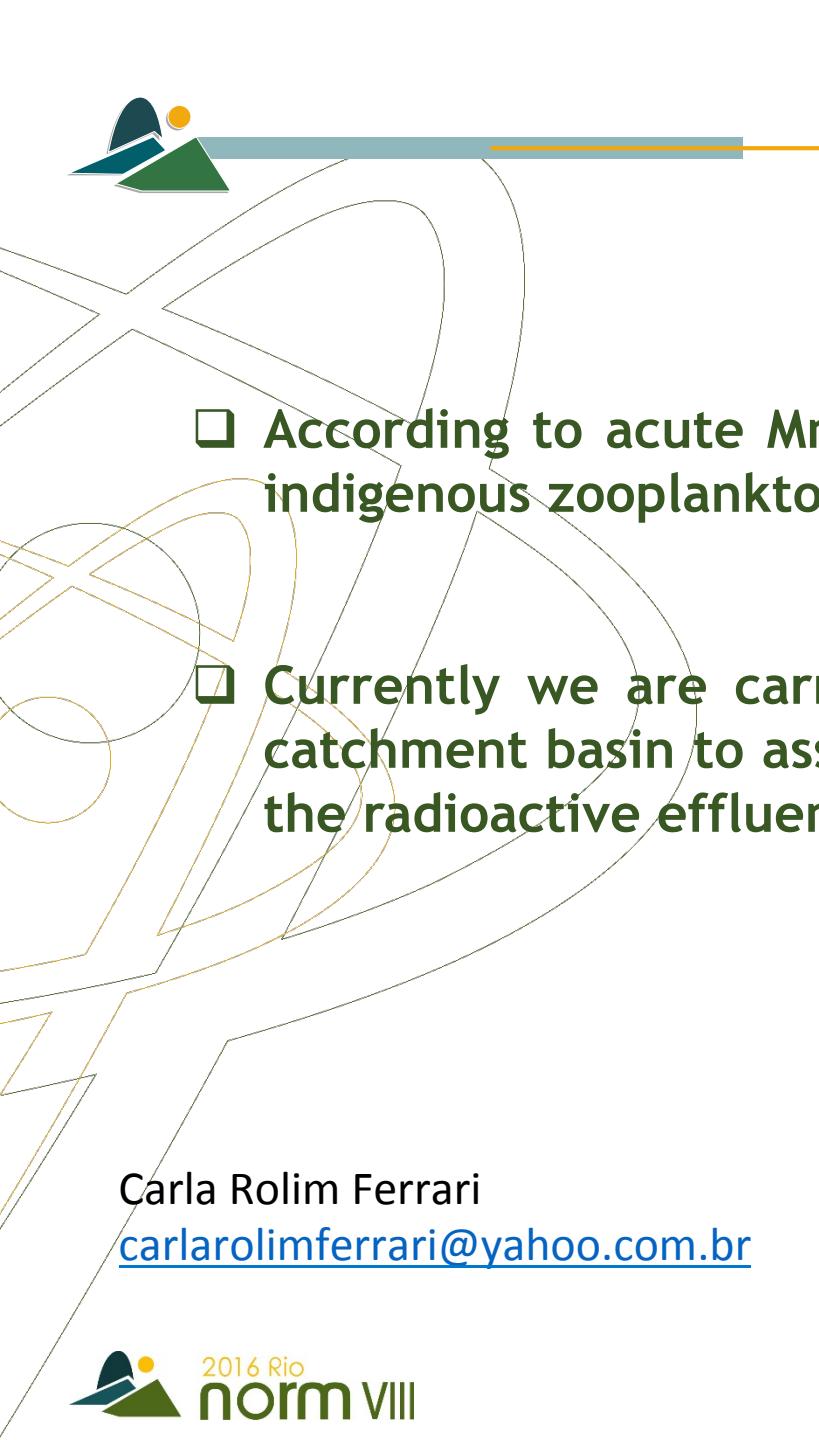
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Introduction and Objectives

- In the currenty study treated effluents coming from the uranium (Ore Treatment Unit, Caldas, Brazil) with AMD are continuously discharged into the Ribeirão das Antas catchment basin.
- The main problems of these effluents released are the metal mixtures (U, Zn, F⁻ and Mn), with high Mn values recorded in water and sediments samples, often above current Brazilian Legislation.
- In this context, we performed acute Mn toxicity tests using bioindicators species to assess the potential toxicity this metal present in the uranium mine effluents.
- According to the current Brazilian Legislation effluents should not present toxicity to aquatic organisms.



Main Remarks

- According to acute Mn toxicity results this metal was considered toxic to freshwater indigenous zooplankton *C. silvestrii* with average LC₅₀ value of 5.9 mg Mn L⁻¹.
- Currently we are carrying on ecotoxicological monitoring at the Ribeirão das Antas catchment basin to assess the potential toxicity of the chemical mixture that compose the radioactive effluents

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