

Phenotypical Identification of Susceptibility to Antibiotics for *Aeromonas* Strains Isolated from Tambaqui Fish (*Colossoma macropomum*)

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INTRODUCTION: Tambaqui fish (*Colossoma macropomum*) is a native fish of great relevance in the Brazilian pisciculture. *Aeromonas* genus bacteria are the most common to affect Tambaqui fish. The inappropriate use of antibiotics can lead to the selection of resistant bacterial strains and harm the economy based on Tambaqui.

OBJECTIVE: To verify, *in vitro*, the susceptibility profile of *Aeromonas* spp. strains isolated from *C. macropomum* towards antibiotics from different classes.

MATERIALS AND METHODS: Thirty *Aeromonas* bacterial strains were used to test five antibiotics, from different classes: nalidixic acid, amoxicilin+clavulanate, cefepime, linezolid and meropenem. The bacteria were standardized to obtain a turbidity of 0.5 McFarland and then were smeared onto Mueller-Hinton agar plates. Subsequently, the antibiotic discs were placed onto the smeared plates. After incubation at 37°C for 24h, inhibition zones were evaluated around the discs and the measurement of the diameter determined the bacterial susceptibility profile.

DISCUSSION AND RESULTS: The susceptibility assay was performed to verify to which antibiotics the bacteria isolated from Tambaqui fish were resistant or sensible. All bacterial strains were resistant to linezolid and to amoxicilin+clavulanate; all of them were susceptible to cefepime and to meropenem; and only one strain was resistant to nalidixic acid, while 29 were susceptible. According to these results, it is possible to state that it is necessary the rational use of antibiotics on Tambaqui so that resistant strains of bacteria are not selected to harm the fish. **CONCLUSION:** The phenotypical evaluation showed the efficacy of two classes of antibiotics; the other two classes were not effective against *Aeromonas* spp. Quinolone was appropriate for treatment but one strain was resistant, what reinforces the idea of rational use of antibiotics in the treatment of Tambaqui.

Key words: Resistance, *Aeromonas*, Tambaqui

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