

TITLE: ANTIMICROBIAL SUSCEPTIBILITY OF *STREPTOCOCCUS SPP.* ISOLATED FROM THE RIVER MEIA PONTE – GOIÁS, BRAZIL.

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ABSTRACT:

The genus *Streptococcus* spp. belongs to the bacteria group colonizing human commensal microbiota. However, when the human immune system is suppressed this genus can become an opportunistic pathogen. Some *Streptococcus* spp. are also known to cause streptococcosis in fish. The presence of *Streptococcus* spp. and other bacterial resistant genera in water are considered emerging contaminants. The resistance of the bacteria can be caused by pollutants, by the disposal of residues of antibiotics and by the exchange of genetic material between the environmental bacteria and those that make up the human microbiota may occur. The objective of this study was to isolate, identify and characterize the antimicrobial resistance profile of *Streptococcus* spp. in water and sediment of the Meia Ponte - Goiás river. The samples were collected at four different points along the river, for the isolation was used the azide agar. The identification was conducted by the phenotypic tests and the resistance bacterium was observed using the fusion disc method. Was isolated twenty-eight *Streptococcus* spp., being 46.4% (13/28) isolated from water and 53.6% (15/28) isolated from the sediment. The *Streptococcus* spp. presented the higher resistance for clindamycin 85.7% (24/28) and 71.4% (20/28) for penicillin G, on the other hand presented the low resistance for linezolid plus vancomycin 7.1% (2/28) and 3.6% (1/28) for ciprofloxacin plus chloramphenicol. After these results, it is possible to suggest that antimicrobial resistance is disseminating for many environments. Have found bacteria antibiotic resistant in this study, can be an alert for the health of the individuals who use this water. This is a problem that can cause fish pathogenicity with invaluable consequences. Further study is needed to amplify genes responsible for these resistances in *Streptococcus* spp. Our group are working and to investigate in detail the consequences of these findings.

Keywords: Antibiotics; Emerging contaminants; Resistance; Sediment; Water.

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