**TITLE:** DETECTION OF MULTIRRESISTANT BACTERIA IN URBAN EFFLUENTS IN BOA VISTA-RR

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## ABSTRACT:

Wastewater from urban effluents presents a high degree of contaminants, including the pathogenic bacteria. Through the urban effluents are eliminated drugs and bacteria resistant to these drugs, becoming it a health problem. The wastewater undergoes a self-purification treatment of the water to be discharged into receiving water bodies, so the need to understand how the bacteria stay in the environment, as well as how the resistance is maintained. Thus, the objective of this research was to detect bacteria and verify the resistance profile in effluents of the Sewage Treatment Station of Boa Vista-RR. Samples of superficial residual water were collected from two points: before and after treatment. The samples were seeded in MacConkey agar in two ways: directly from the collected sample and after dilution in 1:10 saline solution. After growth, the colonies were purified and later identified phenotypically through the biochemical series and the antibiogram was performed to trace the sensitivity profile to antibacterials. Among the collected samples, the species Enterobacter clocae (cephalotin), Klebsiella oxytoca (ampicillin), Escherichia coli (ampicillin, cephalotin, sulfatrimetropim) and Klebsiella pneumoniae (ampicillin, amoxicillin/clavulanic acid and cephalotin) were found in the pre-treatment. Klebsiella oxytoca (amoxicillin/clavulanic acid, cephalotin, cefuroxime and cefuroxime/axetil) and Citrobacter diversus (ampicillin, amoxicillin/clavulanic acid, cephalotin, nalidixic acid) were found for post-treatment. Analyzing these data, it is possible to observe that, after the species passing through treatment in the stabilization pond, it is found not only the maintenance of the species Klebsiella oxytoca and Citrobacter diversus but also their resistance to more than three antimicrobials, with the similarity of resistance between amoxicillin/clavulanic acid and cephalotin. These date shows that the investigation for a better understanding of how this resistance profile remained is important to seek alternatives to prevent the formation of multiresistance reservoirs in the natural environment.

Keywords: Gram-negative, antimicrobials, environment, sewage

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