SUSCEPTIBILITY PROFILE OF ANTIMICROBIAL *Klebsiella pneumoniae* AND *Proteus mirabilis* ISOLATED OF AN URBAN STREAM, PERNAMBUCO-BRAZIL

Silva, S.M.¹; Araújo, L.C.A.¹; Andrade, C.B.¹; Almeida, C.J.L.R.¹; Correia, M.T.S.¹; Silva, M.V.¹; Oliveira, M.B.M.¹

¹Department of Biochemistry, Federal University of Pernambuco, Pernambuco, Brazil.

**Introduction:** One of the problems that affect the aquatic environment is resistant to contamination by bacteria from humans and animals exposed to antibiotics. *Klebsiella pneumoniae* and *Proteus mirabilis* belonging to the Enterobacteriaceae family occur in water, soil, the gastrointestinal tract, among others. These gram-negative species, both community and hospital origin, may have different infections caused by contaminated food and environments. **Objective:** This study aimed to investigate the antimicrobial susceptibility profile of *K. pneumoniae* and *P. mirabilis* isolated from Cavouco stream, Pernambuco, Brazil. **Materials and Methods:** They were analyzed for susceptibility profile to antimicrobial five isolates of *K. pneumoniae* and *P. mirabilis* three. The tested antibiotics: Ampicillin (10mg), Oxacillin (1μg), Cefazolin (30μg), Cephalothin (30μg), Cefepime (30μg), Cefotaxime (30μg) Cefoxitin (30μg), Cefuroxime (30μg), Meropenem (10mg), Imipenem (10mg), Gentamicin (10mg), Amikacin (30μg), Ciprofloxacin (5μg), Nalidixic Acid (30μg), Tetracycline (30μg), Trimethoprim (5μg), Vancomycin (30μg), Chloramphenicol (30μg), Nitrofurantoin (300μg) and Clindamycin (2mg). The experiments were performed in triplicate by the antibiogram by the diffusion method in disks, according to pertinent CLSI (2014) and *Escherichia coli* UFPEDA 224 species was used as quality control. **Results:** *K. pneumoniae* isolates demonstrated resistance to Ampicillin, Oxacillin, Tetracycline, Clindamycin, Trimethoprim and Vancomycin and are sensitive to other antibiotics tested. As the isolates of *P. mirabilis*, was observed resistance profile for Oxacillin, Clindamycin and Vancomycin; halos of inhibition intermediaries for Imipenem and Tetracycline antibiotics, and sensitivity to other antimicrobials. **Conclusion:** The work points to the implementation of control strategies in the spread of resistant bacteria in the environment, since they represent a potential risk to human health.

**Keywords:** antimicrobials; bacterial resistance; susceptibility

**Acknowledgements:** CAPES; PROPESq/UFPE