TITLE: Evaluation of enterococcippp isolated from fecal samples of seabirds recovered on the north coast of Rio Grande do Sul and from captive birds (*Columba livia domestica*)

AUTHORS:CHRISTIANO,F.D.P; DORNELLES,W.; TAVARES,M. FRAZZON, A.P.G

INSTITUTION: Department of Microbiology, Immunology and Parasitology. Federal University of Rio Grande do Sul.

ABSTRACT

The genus Enterococcus is present in the gastrointestinal microbiota of humans and other animals, in smaller or larger numbers, depending on the species. Studies evaluating genetic variability and the capacity of biofilm formation by enterococci isolated from seabirds and captivity are still scarce. Phylogenetic analysis has been applied both to identify the strains involved in epidemics and infections, and to measure the evolutionary distances between groups of enterococci. Techniques such as random amplification of DNA fragments (RAPD) have shown good applicability in epidemiological studies and genotypic variability, because it is simple, fast, requires little amount of DNA and reproducible. The ability of microorganisms to adhere to surfaces provides an evolutionary advantage that allows maturation, increased survival rate, and the establishment of symbiotic relationships through the biofilm microenvironment. In this sense, the present study aimed to: Evaluate the capacity of biofilm formation and analyze the genotypic profile by RAPD-PCR, comparing if there is difference between wild seabirds and captive birds. A total of 85 strains of enterococci were selected for the study, of which 55 came from seabirds being *E.casseliflavus*(14,55%),*E.hirae*(9,09%)*, E.faecalis (*47,27%), *E.faecium (*23,64%), *E.mundtii*(5,55%) And 30 of the pigeons *E. hirae (*53,33%), *E.faecalis (*13,33%) and *E.faecium (*33,33%). The results obtained so far, for the formation of biofilms obtained using the Crystal Violet method, showed that the isolated strains of seabirds were more moderate and weak biofilm forming, 21.82% and 22%, respectively.. and 16.36% were non-forming and 9.09%, strong biofilm forming. In isolated strains of captive birds, it was observed that 73.33% were non-forming and 26.67% were poor biofilm formers. The RAPD-PCR is being performed, we are initiating the duplicates and later a dendogram will be constructed using the unweightedpairgroup method with arithmetic mean (UPGMA). Isolates with up to 80% identity will be considered similar. As a conclusion so far, it can be observed that there is a greater capacity of biofilm formation in strains of wild birds compared to captive birds. We can consider that the environment in which birds are exposed contributes to an evolutionary issue regarding biofilm formation.

Keywords: Biofilm, *enterococcussp,* RAPD – PCR, Phylogenetic analysis.

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