

Antimicrobial Activity of Filamentous Soil Fungi Isolated From Ponta Negra Beach, Manaus-Am.

Ingrid da Silva de Souza⁽¹⁾; Josy Caldas da Silva⁽²⁾; Anni Kelle Serrão de Lima⁽²⁾; Ormezinda Celeste Cristo Fernandes⁽²⁾

¹ Instituto Leônidas e Maria Deane- ILMD/ FIOCRUZ.

The sands in a general way are possibly the source of infection of pathogenic microorganisms. Several studies have shown that sand beaches have a high amount of organic debris due to the association of solid residues left by goers, favoring the proliferation of microorganisms such as bacteria, fungi, parasites and virus that are potentially pathogenic to humans and animals. Therefore, the objective of this research was to evaluate the antimicrobial activity of 13 fungal cultures isolated from the soil of Ponta Negra beach, Manaus-AM, been 11 cultures of the genus *Aspergillus* spp. and 02 from genus *Penicillium* spp. The cultures were reactivated in Malt Extract Agar (MEA) incubated at 28 ° C for seven days to ensure cell viability and purity of cultures. After the reactivation period, the cultures were sown in a Erlenmeyer tube containing agar extract (YES) incubated at 28 ° C for seven days for cold extraction of biocompounds in Ethyl Acetate. At the end of the cold extraction biocompounds were subjected to a scraping technique submerged where they were resuspended with Ethyl Acetate to determine the Minimum Inhibitory Concentration - MIC , using as test microorganisms *Staphylococcus aureus* CBAM 324, *Escherichia coli* CBAM 002 grown on Müeller-Hinton agar for 24 hours at 37 ° C. By default it used the antibiotic Chloramphenicol. Of the 13 fungal cultures analyzed 61.5 % were positive against microorganisms tests, which 5 cultures showed inhibitory for *Escherichia coli* and 3 showed inhibitory cultures for *Staphylococcus aureus*. Highlighting the sample 9 NBB *Aspergillus* spp., Which was positive for both tested microorganisms. Therefore , this study proves antimicrobial ability of filamentous fungi , pointing out aspects the action of *Aspergillus* spp and *Penicillium* spp . , Since there is no prophylactic measures in the sands of the beaches , especially to avoid contamination by microorganisms that exist. It would be useful to assess possible prophylactic measures in the sands of recreational beaches in the city of Manaus, in particular to prevent contamination by microorganisms that exhibit high potential to cause disease in humans and animals.

Key words : Sand, Beach , Antimicrobial , Fungi

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