

Antimicrobial Activity of Trichoderma Species towards Gram-positive and Gram-negative bacterias the Collection of Fungi Amazon - CFAM

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Abstract:

Species Trichoderma are known to produce a diverse secondary metabolites with ample spectrum of activity antimicrobial, which present varied effect on fungi and bacteria, of medical interest. In this study it was evaluated that the production of secondary metabolites of eight isolated cultures of Trichoderma of kept Amazonian substrata has at least six years under the method of Castellani the Collection of Fungi Amazon - CFAM of the Leônidas Institute and Maria Deane- ILMD/FIOCRUZ. The cultures had been reactivated in solid medium agar potato dextrosado- BDA and submitted the fermentation in solid state in agar leavening extract czapeck (YES) and incubated to the 28 oC for seven days. The cultures had been reactivated in solid medium agar potato dextrosado- BDA and submitted the fermentation in solid state in agar leavening extract czapeck (YES) and incubated to the 28 oC for seven days. At the ending of this extration, the resulting extracts had been filtered in Whatman paper nº 30 and concentrated for posterior determination of the activity antimicrobiana using the method of the diffusion in agar, towards Escherichia coli (Ec), Staphylococcus aureus (Sa), Pseudomonas aeruginosa (Pa) and Klebsiella sp. (km), as specialized literature. It was not possible to detect the production of micotoxinas in the eight (100%) of the analyzed cultures, whereas for activity antimicrobiana, can be verified that 50% (4) had expressed inhibition halo front at least one of the microrganismo tested. However the culture of Trichoderma aureaviride CFAM 799 inhibited the growth of Ec, Sa, km and Pa, with halos of 35mm, 30mm, 30mm and 40mm respectively, whereas the other cultures of Trichoderma had only presented action front the Pa, with halos varying between 20 and 40 mm of diameter. Of these eight (08) analyzed cultures, four already had been tested previously how much its antimicrobiana action front to these same microrganismos tests, with these results it can infer that the preservation method did not intervene with the viability of the metabolic ways of the culture how much its antimicrobiana property. To explore the potential of these extracts as archetypes of new farmaceutics in the therapy of infectious illnesses the accomplishment of additional studies becomes necessary on active chemical constituent that had expressed activity antimicrobiana.

Key words: Trichoderma;, Antimicrobial Activity, Micotoxin