EVALUACION OF ANTIMICROBIAL CHARACTERISTICS OF *Amanita Muscaria* IN PATHOGENIC BACTERIA, FUNGI OBTAINED BOSQUE ESCUELA RUCAMANQUE, REGION DE LA ARAUCANIA, CHILE.

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Amanita muscaria it´s one of the most recognized fungi in the south of Chile because the distinguished color and as mycorrhizae on trees of *Pinus*, making it visible at long distances. It`s considered highly toxic, even when in low doses it can't produce mortality in humans. In the case of insects the fungi produces a sedative effect making it mortal when the insect get close to the mushroom cap. For this reason was proposed as research objectives to evaluate the effects of *Amanita muscaria* against human and plant pathogenic bacteria and the fungicide effect against *Botrytis cinerea* and *Fusarium* sp, both with agricultural importance. For this study, we made aqueous extracts from *Amanita muscaria*, the extracts were stored in fresh at 4°C and frozen at -20°C. The pathogenic bacteria used were *E.coli*; *St. aureus*; *Listeria* sp.; *Salmonella* sp.; *Ps. syringae*; *Ps. fluorescens* and *Pectobacterium* sp. The evaluation of antimicrobial activity was realized using Kirby-Bauer Agar Diffusion Method (1966). The bacteria were cultivated under standard Optical Density of 0,1 measured at 560nm. The extract effects were measured at zero time corresponding to fresh extract and then every 7, 14 and 28 days maintained frozen at -20ºC.The results obtained shown a considerable inhibition of *St. aureus* bacteria against one of the aqueous extract containing the scales from the mushroom cap, giving an inhibition halo of 0,5± cm equivalent to the control of Gentamicin (0,2mg/ml) maintaining its effect when conserved at -20ºC. In the case of fungi, no positive results were obtained. The next step it's the characterization of extracts starting with polyphenols using HPLC-MS that allow us to identify some of the compounds that would realize the observed inhibition to propose future uses in the commercial field.

Keywords: *Amanita muscaria*, antimicrobial, pathogenic bacteria, aqueous extract, optical density, fungi, scales.

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