

Antibacterial activity of edible fungi *Cyttaria espinosae* and *Grifola gargal*

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Since very old times in ancient cultures, fungi have been used not only as food but also as medicine to treat various diseases. Examples of this would be China and Japan, cultures in which a large variety of fungi is known and has been used since year 100 A.D. On the other hand, the West has only recently begun to attach importance to the nutritional and pharmacology properties of fungi. In southern Chile it is possible to find the *Cyttaria espinosae* Lloyd fungus, commonly known as dihueñe. Similarly, though harvested in a lesser amount, it is possible to find the *Grifola gargal* Singer, a fungus of exquisite aroma that is very desired by the international cuisine and which is known for having some antimicrobial properties related to the genus *Grifola*. Due to the need of reducing the use of synthetic chemical products for the benefit of health and the environment, a study about the antimicrobial properties of *C. espinosae* and *G. gargal* was suggested with the final purpose of these products being used in the future knowing their properties. The results indicate that the dihueñes of Rucamanque obtained during season 2012 and 2014 have bactericidal activity against *Pseudomonas siryngae* and *Pectobacterium caratovororum* harvested unlike 2013 which had no bactericidal activity, which is directly related to the characteristics a year dry compared to the other two seasons. The bactericidal activity in the *Grifola gargal* samples obtained in 2013 from Valdivida, Osorno and Carahue didn't show any antimicrobial activity, and the ones collected from Rucamanque in 2013 and 2015 show bactericidal activity only faced with *Staphylococcus aureus*. The Gargales collected in 2014 from Rucamanque only showed bactericidal activity on *Listeria sp.* Although all of these results are provisional, they require further investigation to determinate the factors that affect the bactericidal activity, especially because of the characteristics found in both fungi, which are related to the season they were collected in.

Keywords: Antibacterial, antimicrobial, edible mushrooms.

Funding: Project Fondef-IDeA CA12i10134