



4<sup>TH</sup> MEETING OF  
MEDICINAL  
BIOTECHNOLOGY

## PLENARY SESSION

# Fungi and Mycotoxin Contamination In *Capsicum* Pepper And In Its Derivatives

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Mycotoxins are low-molecular-weight secondary metabolites produced by filamentous fungi. These grow in a wide range of agriculture crops (e.g., cereals, soybeans, grapes, tree nuts, groundnuts, coffee, cocoa and spices) and can produce one or more mycotoxins (Costa et al., 2019).

In Chile, berry fruits of *Capsicum annuum* L. cv. "Cacho de Cabra" are used for the manufacture of a traditional smoky flavour pepper powder known as Merké. This is a product intrinsically associated with the ancestral Mapuche Amerindian Ethnicity and, in the year 2015, the total Chilean exportations of Merké reached 4.4 million US dollars, representing an increase of 11.3% compared to 2014.

The agricultural practices used by Merké local producers are empirical and do not consider the prevention of mycotoxigenic fungi (Costa et al., 2019). In January 2017 mycotoxin contaminations in Merké, mainly Ochratoxin A (OTA), has been reported by the Chilean Ministry of Health (Minesal, 2017).

In this context, in the present work the results of the mycotoxigenic potential of the mycobiota belonging to the genus *Aspergillus* and *Penicillium* isolated in both the different points of the traditional production chain of *Capsicum annuum* L. cv. "Cacho de Cabra" and in the Merké powder will be presented and discussed. Moreover, the possible points of contamination with OTA will be presented and the ecological interactions between mycotoxigenic fungi and *Capsicum annuum* L. cv. "Cacho de Cabra" and Merké powder will be discussed.

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### References:

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