ABSTRACT POSTERS

Isolation of filamentous fungi from beans, maize and peanuts from Cuanza Sul, Angola

Bruna Sepúlveda[1*], Teresa Vale Dias[1,2,3], Lafayete Maco[4], Zelda Lucamba[4], Sandra Afonso[4,5], Paula Rodrigues[3], Armando Venâncio[1,2]

[1]CEB - Centre of Biological Engineering, University of Minho, 4710-057 Braga, Portugal; [2]LABBELS – Associate Laboratory, Braga/Guimarães, Portugal; [3]CIMO, LA SusTEC, Instituto Politécnico de Bragança, Campus de Santa Apolónia, 5300-253 Bragança, Portugal; [4]ISPCS- Instituto Supeior Politécnico de Cuanza Sul, Angola;[5]CNIC- Centro Nacional de Investigação Científica, Luanda, Angola

Presenter: Bruna Sepúlveda

Mycotoxins are toxic secondary metabolites produced by certain filamentous fungi, posing serious health risks to humans and animals through contaminated food products. This study aimed to isolate and identify fungi and detect mycotoxins from beans, maize, and peanuts in Cuanza Sul, Angola. Ten samples of each commodity were collected in 2023, and twenty-five kernels from each sample were surface-disinfected and plated on Dichloran Rose-Bengal Chloramphenicol (DRBC) medium. Fungal colonies were isolated after 5 to 7 days at 25 ºC. DNA

extraction was carried out to proceed with molecular identification through sequencing of the ITS region.

Preliminary results revealed diverse fungal communities across all food commodities, including presumptive species from the *Aspergillus* and *Penicillium* genera—both commonly associated with mycotoxin production (Greeff-Laubscher et. al., 2019). Fungal contamination was observed in 75.2% of maize kernels (188/250), 64.4% of peanut kernels (161/250), and 36.4% of bean kernels (91/250), based on the subsamples where counts were completed. A total of 97 fungal isolates were obtained from maize, 162 from peanuts, and 81 from beans. These isolates are currently being preserved and prepared for molecular identification and future assessment of their toxigenic potential.

These findings highlight a high incidence of fungal contamination in staple foods from Cuanza do Sul, contributing to a better understanding of food safety challenges in Angola and other tropical regions.

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Reference:

Greeff-Laubscher, M. R., Beukes, I., Marais, G. J., & Jacobs, K. (2019). Mycotoxin production by three different toxigenic fungi genera on formulated abalone feed and the effect of an aquatic environment on fumonisins. Mycology, 11(2), 105–117. https://doi.org/10.1080/21501203.2019.1604575