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Contributions of Micoteca da Universidade do Minho To Food Mycology

Paula Rodrigues^{1,2}, Célia Soares¹, Otniel Freitas-Silva^{1,3}, Cledir Santos¹, R. Russell M. Paterson¹, Zofia Kozakiewicz¹, Armando Venâncio¹ and Nelson Lima¹

¹IBB – Instituto de Biotecnologia e Bioengenharia, Centro de Engenharia Biológica Universidade do Minho, Campus de Gualtar, 4710-057 Braga, Portugal ²CIMO – Escola Superior Agrária de Bragança, Bragança, Portugal ³Embrapa – Agro Indústria de Alimentos, Rio de Janeiro, Brasil

Micoteca da Universidade do Minho (MUM) is a collection of fungi established in 1996 where research into secondary metabolites in the form of mycotoxins is paramount. An objective is to maintain and provide authentic strains for research in biotechnology, life sciences and challenge testing. Knowledge, information and training in mycology are promulgated by the biological resource centre. MUM is involved in projects which address the health and quality risks from fungal contamination of grape products (e.g. wine), apples, cheese, chillies, nuts and corn: Fungi in drinking water are of particular concern. Aspergillus ochraceous, Aspergillus flavus, Penicillium expansum and Fusarium graminearum especially are relevant to our work: Associated mycotoxins are ochratoxin A, aflatoxins, patulin, citrinin and zearalenone. We study the earthy off-flavours in wine from Botrytis cinearum and P. expansum. The analytical techniques employed are PCR, HPLC, GC-MS and MALDITOF MS for strain characterization. MUM participates in several European and national projects. Post-graduate studies on mycotoxigenic fungi and food security particularly are important. A key objective is international collaboration. MUM strains are well characterized for toxigenicity, making the collection relevant to its mission and industry. This presentation will describe the progress made in this innovative Portuguese laboratory over 10 years.

Keywords: mycotoxins, biological resource centre, Aspergillus, Penicillium