

The Importance of Qualitative and Quantitative Biological Methods for Evaluation and Screening of Mycotoxins

Ivona Kirovska¹, Nevenka Velickova^{2*}

¹ General hospital – Ohrid, R. of North Macedonia

² Faculty of medical sciences, University “Goce Delcev” – Stip, R. of North Macedonia

Abstract

Mycotoxins are toxic compounds and the secondary products of the metabolism of various fungal species that grow and develop on substrate of animal or plant origin. The chemical nature (of most mycotoxins) makes them highly liposoluble compounds, that can be absorbed by the gastrointestinal and respiratory tracts and through the blood stream, where they can be passed throughout the body and accumulated in different organs such as the liver and kidneys. The degree of intoxication varies between individuals, mostly depending of the amount of food contaminated with mycotoxins, ages of the subjects, sex, their general health, physiology and immunity. Having in mind the confirmed hepatotoxic and carcinogenic effect of the

mycotoxins on the one hand and the conclusions arising from the latest research on the other hand, it is very important to emphasis the need for constant monitoring, the importance of evaluation and screening of the mycotoxins in food, especially in cereals and dairy products, with only one intention to prevent mycotoxicosis. The intention of biomedicine and food biotechnology is to find a faster, much simplified and exact methods for rapid evaluation and screening of mycotoxins, which can be very useful for permanent human biomonitoring and a healthy population.

Keywords: mycotoxins, intoxication, biological methods, evaluation, screening