Department of Food Chemistry and Toxicology

universität wien

Master Thesis

The combinatory effect of mycotoxin alternariol (AOH) and high glucose on the viability and invasiveness of colorectal cancer cells

The thesis in dedicated to evaluate the effect of high glucose on mycotoxin-induced changes in cells' viability and invasiveness of colorectal cancer cells.

Hyperglycaemia is one of the risk factors of colorectal cancer (CRC), whereas estrogens are believed to play a protective role in it. Mycotoxins present in everyday diet affect the hormonal homeostasis both in animals, as well as humans. Alternariol (AOH) is an emerging mycotoxin, considered as estrogenic and immunomodulatory. In this project we would like to evaluate if and how AOH effect might be exacerbated or restrained by high glucose in intestinal cells. Thus, the aim of this study is to evaluate the combinatory effect of high glucose intake and AOH on human colon cancer cells. The results of the study will help to estimate how two different environmental factors might affect the intestinal cells linking the ingested mycotoxins and the high glucose intake associated with obesity.

Requirements:

- BSc in chemistry or related field
- High interest in molecular biology
- Self-organized and reliable working habits
- Experience with cell culture and cell-culture based assays

Application:
Letter of motivation, CV

Contact:
Dr Karolina Kowalska
Univ. Prof. Dr. rer. nat. Doris Marko

Department of Food Chemistry and Toxicology
University of Vienna
Währingerstr. 38
A-1090 Vienna, Austria
http://lmc.univie.ac.at/