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III International Conference of PhD Students
**MULTIDIRECTIONAL RESEARCH
IN AGRICULTURE AND FORESTRY**



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III International Conference of PhD Students

MULTIDIRECTIONAL RESEARCH IN AGRICULTURE AND FORESTRY

1. These are materials from III International Conference of PhD students in Cracow.
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University of Agriculture in Cracow
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Thesis supervisor: Miklós Mézes and Balázs Kovács

SHORT-TERM EFFECTS OF T-2 TOXIN AND DEOXYNI- VALENOL ON GLUTATHIONE-S-TRANSFERASE GENE EXPRESSION IN CHICKEN LIVER

The objective of study was to determine the short-term effects of dietary T-2 toxin and DON on hepatic gene expression and activity of glutathione-S-transferase (GST) in chicken. One and three-weeks-old male chickens were assigned to one of the three dietary treatments (control, T-2 toxin and DON) in two replicates. The diets contaminated with 5.77 mg T-2 toxin or 4.86 mg DON kg⁻¹ feed. Liver samples were collected 5 times during a 16 h period after toxin exposition of 5 chickens in each group. GST expression was down-regulated by T-2 toxin after 2, 4 and 12 h in the 1-week-old, while up-regulation was detected in 3-weeks-old group in several sampling time. DON has no the same effect. T-2 toxin and DON exposure also resulted in varied enzyme activity related to altered GST gene expression. In addition, daily fluctuation of gene expression in the control and significant up regulation was measured in the morning period in both age.

Agnieszka Leśniak-Walentyn, Anna Hrabia

Thesis supervisor: Anna Hrabia

IMMUNOHISTOCHEMICAL LOCALIZATION OF CHOSEN MATRIX METALLOPROTEINASES IN THE CHICKEN OVIDUCT BEFORE AND AFTER MATURATION

Towards a better understanding of matrix metalloproteinase (MMP) system involvement in the proper development of the avian oviduct, the immunohistochemical localization of matrix metalloproteinase-2 and -9 (MMP-2,-9) in the wall of the chicken oviduct several weeks before and just after the onset of egg laying was assessed. Four parts