

lectin-histochemical approaches.

Cellular composition of isolated kidney and spleen tissues was further analyzed by flow cytometry and light microscopy. Activity of different enzymes (non-specific esterase, acid phosphatase, alkaline phosphatase) was determined on cytopins. Isolated haematopoietic cells were characterized with PNA (peanut agglutinin)-lectin staining for flow cytometry. Moreover, lectin histochemistry were performed on spleen and kidney sections.

Robust acid phosphatase activity was observed only in myeloid cells. Haematopoietic cells were distributed into erythroid, myeloid and lymphoid populations by flow cytometry. We observed the highest PNA positivity in myeloid cells, less positivity was found in lymphoid population, while erythroid cells were exclusively negative. In addition, PNA-staining of spleen sections confirmed the results obtained by flow cytometry.

Our preliminary data is supportive to characterize zebrafish haematopoietic cells in morphological point of view.

**P-08**

**The effect of the sympathetic nervous system and dehydration on salivary lactate concentration**

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Measuring of salivary lactate (SL) level is a possible new method to determine training efficiency.

The aim of this study was to investigate the correlation between salivary and blood lactate (BL) concentration in athletes (SG) and non-athletes (NG)

after maximal exercise, and to determine the possible differences in RR-variability and total body water on SL.

Sixteen volunteers (22.80±3.18yrs) performed a maximal Astrand treadmill test. Before and after the exercise saliva and blood samples were collected and SL content was assessed with spectrophotometric analyses. BL concentration was measured from fingertips with a portable lactimeter. Anthropometric characteristics, body composition (total body water -TBW-, body fat percent) and physiological parameters (RR-variability, HR) were assessed before the test.

In SG we registered two SL peaks at different time points (SG: 1 min and 8 min, NG: 4 min and 12 min) in NG group we found high individual differences among subjects. Pearson correlation analyses between BL and SL concentration showed significant correlation in both groups. We noted relationships between several measured parameters (SL - TBW, SL - RR-variability, maximal SL - maximal heart rate during exercise).

According to our results hydration status and the function of autonomic nervous system affect post-exercise salivary secretion.

**P-09**

**Plant tissue based biosensor with improved sensitivity. Dopamine determination under optimized working conditions.**

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Amperometric enzyme sensor prepared with reaction layer made of banana tissue slice is nicknamed „bananotrode”. Owing to the enzyme content of banana tissue the electrode could be used for selective measurements of polyphenolic compounds, like dopamine. Good stability and cost efficient fabrication would permit broad scale of application in different areas of chemical analysis. The dynamic range of this biosensor, however often does not match the concentration range needed. In our studies efforts were made to increase the sensitivity of bananotrode. A model of the reaction layer of it was made and the concentration profiles of different species involved in catalytic reactions were investigated using scanning chemical microscopy (SECM). Dynamic voltammograms recorded with flow injection analytical (FIA) apparatus were used to find the optimal