

## **Changes in serum metabolites of Apine ibex (*Capra ibex*) from Eastern Alps and possible management implications.**

*Sartorelli P.<sup>1</sup>, Fraquelli C.<sup>2</sup>, Zanghellini P.<sup>2</sup>, Lanfranchi P.<sup>1</sup>*

<sup>1</sup> DIPAV - Faculty of Veterinary Medicine- Italy, <sup>2</sup> Provincia Autonoma di Trento - Servizio Foreste e Fauna, Italy

Blood metabolite evaluation in wildlife can provide useful informations on health and nutritional status of individual animals and at population level. Moreover it can be used to monitor the habitat quality in relation to different stressors. Bias can arise for reference values paucity, sample size and preanalytical errors. In this work, values of serum metabolites of 41 alpine ibex from Monzoni-Marmolada area (Trento, Italy), captured by xylazine since 2001 until 2003, are referred. Only non haemolytic sera were analysed. Differences in relation to age, sex and season were investigated. The following results are stressed: 1) high individual variability was observed, but most serum parameters values were within the ranges reported in literature. In particular sodium levels were not indicative of carence; 2) high values of creatinine, indicative of muscular protein catabolism, were observed in March without a corresponding urea increase; urea/creatinine ratio, as marker of energy status, should be revised; 3) gamma globulins were significantly higher in 2003, than in 2002, indicating antibody response. Considering the outbreak of sarcoptic mange in ibex from study area in Spring 2004, and the reported increase of gamma globulins in *Capra pyrenaica* from sarcoptic mange infected areas (Lastras et al., Vet .Parasitol., 88:313-319, 2000), that increase could be considered a predictive index. As gamma globulins are indicative of any antigenic challenge, this parameter should be further investigated. In conclusion, metabolic studies throughout the years in the same study area can give a strong contribution to non-infectious and infectious diseases investigations, with management implications too.