Non-invasive monitoring of stress in male Alpine Ibex (*Capra ibex*): preliminary results and possibile applications.

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An increased release of glucocorticoids by the adrenal cortex is found in mammals under stress. A non-invasive method for monitoring stress by measurement of glucocorticoids metabolites in faeces was validated for Alpine Ibex. A group of cortisol metabolites, 11,17-dioxoandrostanes (11,17-DOA), was measured by enzyme immunoassay (EIA). The physiological relevance was evaluated with an ACTH test to stimulate adrenocortical activity, in order also to establish delay time between stressing stimulus and peak of 11,17-DOA in faeces. Such measurement avoids blood sampling and can be useful to test stress responses to different events (i.e. capture, transportation).
High levels of glucocorticoids for long periods are known to suppress immunological defence. Considering that host immunity can affect parasite fecundity, a study is in progress in Gran Paradiso National Park on marked males Alpine Ibex to investigate the relationship between stress levels and number of eggs of parasites per gram of faeces.