Cohabitation of a *Brucella melitensis* infected Alpine ibex (*Capra ibex*) with domestic small ruminants in an enclosure in Gran Paradiso National Park, in western Italian Alps.

E.Ferroglio[1], M. Pasino[2], S. Bergagna[2], A.Dondo[2], S.Zoppi[2], A.Trisciuoglio[1], B.Bassano[3], M.S.Gennero[1]

[1]Dipartimento di Produzioni Animali, Epidemiologia ed Ecologia, Facoltà di Medicina Veterinaria Università di Torino, Italy, [2]Istituto Zooprofilattico Sperimentale di Piemonte, Liguria e Valle d'Aosta, Italy, [3] Ente Parco Nazionale del Gran Paradiso Piemonte e Valle d'Aosta, Italy

Brucellosis is a highly contagious zoonotic disease, and it has been reported to be sporadic in wild ruminants in Europe. Alpine ibex (*Capra ibex*) are considered to be susceptible to brucellosis as the infection in this species has been reported (Ferroglio *et al.*, 1998; Journal of Wildlife disease 34(2) pp 400-402). After the first report of *B.melitensis* infection from a 7-yr-old alpine ibex buck living in Gran Paradiso National Park (GPNP), further studies demonstrated the presence of the infection in ibex and chamoises of the GPNP territory. Considering that livestock herds keep on sharing pastures with more than 3900 ibexes and 9000 chamoises living in the park, our aim was to demonstrate under controlled conditions the real possibility of *Brucella* infection passing from wild ruminants to domestic ones.We have built, in an ibex and chamois high frequented area of the GPNP, a big enclosure of above 5000 m^2 surrounded by a wire netting 300 m long and 2,7 m tall. High ridged rocks, forest trees, shrubs and grazing ground have been included in our enclosure. We put into our close a 7 years old male alpine ibex anamnestically serologically positive to *Brucella melitensis* (>1:80 diluition), with a visible precarpal igroma and testicular monolateral enlarging together with 3 little goats (above 1 mth y.o.), 2 rams and 2 pregnant goats. Due to poor condition ibex was suppressed at day 40, domestic ruminants stayed into the enclosure potentially contaminated by ibex's feces, urine and saliva for further 38 days. During this whole period we had monitored our animals taking blood from all domestic ruminants above every 15 days and tested the serum to official Rose Bengal agglutination test and Complement Fixation test.Furthermore we conduced behaviour observations to verify the occurring of direct or indirect (spatial and temporal superimpositions) contact between wild and domestics. Results: Domestic animals tested negative at serology at all sampling time. Ibex necroscopy confirmed macroscopically those in life visible lesions: we found a precarpal bursitis on right leg which showed a thick connective capsule containing necrotic and suppurative tissue; we noticed enlargement and hardening of a testicle which showed on the cutting surface granulomatous calcified purulent confluenting necrosis foci into a diffuse fibrosis of the parenchyma. *B.melitensis* was iso**lated from these ibex tissues.** Conclusions: Our data show that spill-back of infection from ibex to wildlife is not easy as someone suggests. After 40 day of strict cohabitation and 38 days of permanence in an area where infected ibex live, non one of the sentinel domestic animals contract infection. The possibility that infected ibex could be a *B.melitensis* source for an outbreak in sympatric domestic could not be refused but it appears, at least, to be very remote.