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Decristophoris P.M.A., von Hardenberg A. & McElligott A.G. (2007). Testosterone is positively related to the output of nematode eggs in male Alpine ibex (Capra ibex) faeces. Evolutionary Ecology Research, 9, 1277-1292.

Question: Does testosterone suppress the immune system of males in a strongly sexually dimorphic and long-lived ungulate?

Immunocompetence handicap hypothesis: Testosterone promotes the development of secondary sexual characteristics and simultaneously suppresses immunological defence.

Organisms: Free-ranging and individually identifiable male Alpine ibex (Capra ibex).

Methods: In fecal samples, measure testosterone levels (ng•g-1) and the number of parasiteeggs per gram of faeces (faecal egg counts). Determine social dominance by observing theoutcomes of agonistic interactions in the field. Weigh males at a salt-lick scale.

Data analysis:Path analysis to examine the relationships between testosterone levels,dominance, body mass, age, and faecal egg counts.

Conclusions: We found a strong positive effect of testosterone on the amount of parasite eggs in the faeces of males. The level of parasite infection did not depend on any other testedvariable. Testosterone therefore has an immunosuppressive effect in male Alpine ibex, assuggested by the immunocompetence handicap hypothesis

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