

TESTOSTERONE IS CORRELATED TO SOCIAL RANK BUT NOT TO AGGRESSION IN STUMP-TAILED MACAQUES

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Growing evidence shows that high testosterone levels might not be correlated with increased aggressiveness in primates. Moreover, testosterone levels in men are associated to cognitive-demanding behavior such as assertiveness and leadership, the relation with aggressiveness being unconvincing. In this work we investigated the relation between spontaneous male-male aggression and testosterone and cortisol levels in a captive group of stump-tailed macaques (n=29, males=11). The study comprised two periods, one of social stability and the other one with an alpha male takeover. To perform RIA of testosterone and cortisol, we collected 3 blood samples during the socially stable period and 2 throughout the takeover. Serum testosterone was correlated to social rank (P=0.03) but not to aggression rates (P=0.35) during the socially stable period, while cortisol and aggression were positively correlated (P<0.001). Testosterone showed a trend to correlate positively (P=0.07) with aggression rates during the takeover, but not cortisol (P=0.33). Besides its role as a masculine sexual hormone, our results suggest that rather than to mere aggression, testosterone is related with assertiveness and policing activities characteristic of high-ranking males. Conversely, as other studies show, cortisol is mostly related to social stress. This study complies with the Animal Behavior Society Code of Ethics and The Mexican Norm for the Use of Research Animals

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