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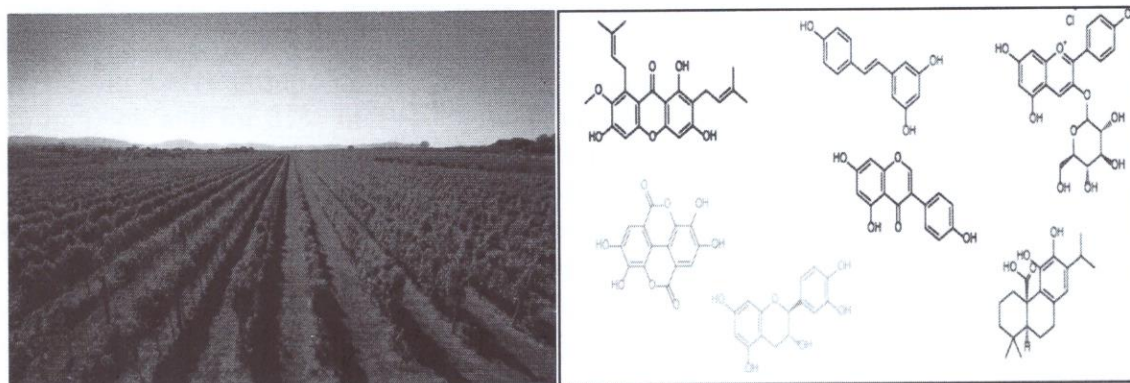
THIRD JOINT MEETING OF NATIONAL PHYSIOLOGICAL SOCIETIES

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MORPHOMETRIC ANALYSIS OF PITUITARY GONADOTROPIC CELLS AFTER ADMINISTRATION OF NANDROLONE DECANOATE AND SWIMMING IN ADULT RATS

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The study included 32 Wistar albino male rats, 10 weeks old, divided into 4 groups: control (T-N-), nandrolone (T-N+), swimming (T+N-) and swimming plus nandrolone (T+N+) groups. The T+ positive groups swam for 4 weeks, 1 hour/day, 5 days/week. The N+ positive groups received nandrolone decanoate (20 mg/kg b.w.) once per week, subcutaneously. Five micrometre thick sections were immunohistochemically stained LH and FSH cells were exposed to the morphometric analysis. Circulating level of LH, FSH and testosterone were measured. Body weight did not significantly decrease in all experimental groups compared to control. Absolute pituitary weights were decreased in T-N+ and increased in T+ positive groups. Relative pituitary weights were increased in all experimental groups compared to control. Volume density of LH cells was decreased for 48% in T-N+, for 22% in T+N- and for 35% in T+N+ group. Number of LH cells on mm² was decreased for 36% in T-N+, for 3% in T+N- and for 27% in T+N+ group. Volume density of FSH cells were decreased for 39% in T-N+, for 5.5% in T+N- and for 30% in T+N+ compared to control. Number of FSH cells was decreased for 13% in T-N+, for 1% and 15% in T+N+ group compared to control. Serum level of LH were decreased in N+ positive groups, while FSH level were increased in T+N- group. Serum level of testosterone was increased in all experimental groups compared to control value. Nandrolone alone or combined with swimming decreased morphometric parameters of gonadotropic cells.