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TESTICULE ET SPERMATOGENÈSE

EFFECTS OF FSH, LH AND PROLACTIN ON THE TESTIS AND ACCESSORY ORGANS OF OESTROGEN-TREATED RATS. — P. C. SIVELLE, D. LACY, A. S. McNEILLY. *London (G. B.)*.

Following the administration of ethinyl oestradiol (100 µg/100 g b wt/day/42 days) the ratio of step 7 spermatids to pachytene spermatocytes fell to 1 p. 100 of the control value; the weights of the testes and seminal vesicles fell to 16 p. 100 and 6 p. 100 respectively. Serum levels of FSH were significantly reduced but not those of LH or prolactin. When FSH was injected for 14 days the step 7/pachytene ratio was increased to 40 p. 100. There was no effect on the accessory sex organs. Injections of LH or prolactin produced no change.

THE EFFECT OF LOCAL IRRADIATION OF THE TESTES ON PLASMA HORMONE LEVELS AND TESTICULAR HISTOLOGY IN MALE RATS. — C. R. N. HOPKINSON, C. HIRSCHHAUSER, B. GAUSS, W. HILSCHER. *Düsseldorf (R. F. A.)*.

Adult male rats were subjected to 200 R or 300 R local irradiation of the testes. At intervals thereafter, plasma LH, FSH, testosterone and oestradiol 17β levels were measured by radio-immunoassay and the testes examined histologically. Plasma LH and FSH levels increased significantly after irradiation. Simultaneously, testosterone levels decreased significantly indicating an inability of the irradiated Leydig cells to respond to the increased gonadotrophin levels. Plasma oestradiol levels did not change significantly. Changes in plasma hormone levels will be correlated with histological changes in the testes.

PHOTOPERIODIC CONTROL OF REPRODUCTION IN THE RAM: TIME-LAGS FROM STIMULUS TO RESPONSE. — G. A. LINCOLN. *Edinburgh (Scotland)*.

Soay rams were exposed to alternating periods of 3 months 'long' days (16L/8D) and 3 months 'short' days (8L/16D) to stimulate annual photoperiods. Frequent measurements of plasma LH and testosterone, testis size, skin colour and behaviour — the latter recorded by a mechanical device — were made to monitor reproductive function. Abrupt transfer to 'short' days stimulated a hierarchy of responses with LH values rising first (day 1) followed by increases in testicular size and steroid output (day 10) and finally changes behaviour (day 50). Full development took at least 10 weeks. Short term secretory patterns of LH were also investigated.

THE EFFECT OF PINEALECTOMY AND SUPERIOR CERVICAL GANGLIO-NECTOMY ON THE TESTIS OF THE VOLE, *MICROTUS AGRISTIS*. — H. M. CHARLTON, C. A. GROCOCK, A. OSTBERG. *Oxford (G. B.)*.

Previous experiments have shown that when male voles are kept in short photoperiod conditions (6 hours light per day), testis growth is inhibited in juveniles or undergoes regression in adults. In this communication the effects on the testis of removing the pineal body or the superior cervical ganglia will be discussed. After removal of either of these organs, testis size