10436 P

## Effect of Luteinization on the Survival of Adrenalectomized Rats.

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Several papers by Gaunt and his coworkers have recently appeared reporting upon the efficacy of progesterone in maintaining the life of adrenalectomized animals. We felt it would be interesting to determine whether one could induce a sufficient secretion of this hormone by the ovaries themselves to produce a similar effect.

Rats 35 days old at the time of adrenalectomy and weighing about 50 g were used. During the 10 days preceding adrenalectomy the ovaries were stimulated by injecting Gonadin* in doses of 2 r.u. or 6 r.u. daily per rat, for the first 5 days, and the same doses of Follutein* for the ensuing 5 days. The effect of Gonadin is chiefly upon follicular development while Follutein has mainly a luteinizing action. At the end of this preparatory period the ovaries of the animals on the larger dose weighed about 200 mg, those on the smaller dose, 20 mg. No further injections were given following adrenalectomy. The results are shown in Table I.

The results indicate that the progestin secreted by the corpora lutea of these animals significantly lengthened their time of survival. If the ovaries are removed at the time of adrenalectomy the survival time is no greater than that of the controls; the secretion of testosterone induced by similar stimulation is ineffective. Gaunt, Nel-

TABLE I.

| No. of Rats | Treatment | % surviving After 10 days | % surviving After 20 days |
|---|---|---|---|
| 10 Females | None | 0 (Avg, 5.6 days) | |
| 10 " | 2 r.u. Gonadin, 2 r.u. Follutein, each, daily, for 5 days | 80 " 12.3 " | |
| 5 " | As in previous group; ovaries removed at adrenalectomy | 0 " 5.2 " | |
| 10 " | 6 r.u. Gonadin, 6 r.u. Follutein, each, daily, for 5 days | 80 | 50 |
| 5 " | As in previous group, ovaries removed at adrenalectomy | 0 " 5.2 " | |
| 10 Males | As in fourth group | 0 " 5.8 " | |

* For the Gonadin and Follutein used, the authors are indebted to Dr. Wonder of the Cutter Laboratories and Dr. Morrell of E. R. Squibb and Sons.

son, and Loomis[1] state that 1-2 mg of crystalline progesterone daily are required to maintain the adrenalectomized rat. It is interesting, in view of the toxic effects of estrin in such animals, that the flourishing corpus luteum produces a sufficient amount of progestin to replace cortical hormone and also to overcome the effects of whatever estrogenic substance is being produced. The ovaries of the animals on the lower dose were apparently able to secrete progestin equivalent to 5% of their own weight daily. Further experiments are under way to determine, by means of continued injection, for how long a time the corpora are able to maintain this high level of progestin output.

## 10437 P

## Sulphanilamide and Related Compounds in Experimental Tuberculosis.

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It was previously[1] shown that sulphanilamide—300 mg per animal per day—had an inhibitory effect upon the development of experimental tuberculosis in the guinea pig when the drug was administered before the injection of virulent human tubercle bacilli. These results were similar to those of Rich and Follis,[2] and Buttle and Parish.[3] However, we found no difference in the extent of macroscopic tuberculosis in treated and control animals when sulphanilamide was administered 17 and 24 days after the establishment of the tuberculous infection. But Ballon and Guernon[4] did find definite differences when the drug was given both 5 and 10 days after the infection. The latter 2 authors also found some evidence of bacteriostasis *in vitro*.

[1] Gaunt, Robert, Nelson, W. O., and Loomis, Eleanor, PROC. SOC. EXP. BIOL. AND MED., 1938, **39**, 319.

[1] Greey, P. H., Campbell, H. H., and Culley, A. W., PROC. SOC. EXP. BIOL. AND MED., 1938, **39**, 22.

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[3] Buttle, G. A. H., and Parish, H. J., *Brit. M. J.*, 1938, **2**, 776.

[4] Ballon, H. C., and Guernon, A., *J. Thoracic Surg.*, 1938, **8**, 184 and 188.