

first cycle with absence of the luteal phase. Long and Evans<sup>68</sup> have stated that the first cycle may be a non-fertile one. Fig. 3 and 4 represent sections of the ovaries of two immature rats brought to maturity with the hormone treatment. Each was sacrificed at the first oestrus period. Corpora lutea are absent in the first ovary and present in the second. The first animal received an absolute alcohol soluble fraction, the second a 50 per cent acetone extract. Corpora lutea may not be found in certain animals even after the second cycle.

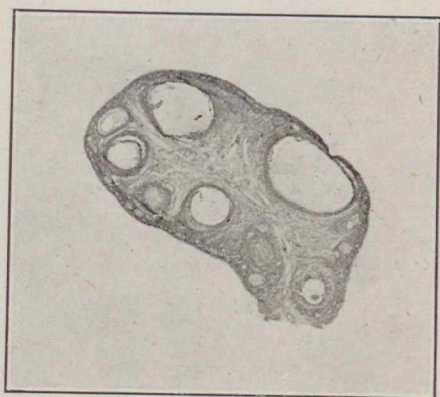


FIG. 1.—Ovary of the adult rabbit after 21 daily injections of 80 units. Note the absence of corpora lutea.

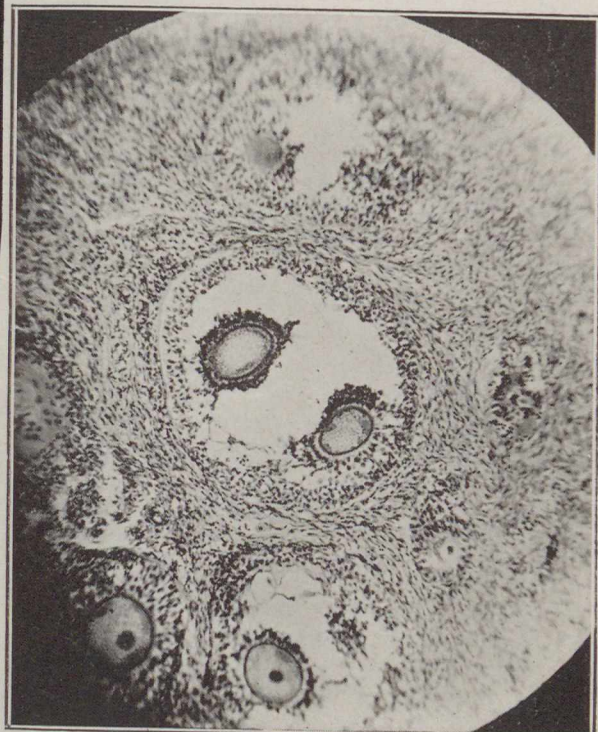


FIG. 2.—Ovary of female dog 4 days after 200 units daily. Note the absence of corpora lutea. Twin ova are seen in a single follicle.

We have noted, in our rat colony, some exceptions to the general type of cycle, which it may be of interest to mention at this time. We have had one rat which was given the equivalent of one gram of placenta daily, starting at 26 days of age, and 34 grams in weight. This animal manifested a continuous cornification of the vagina for 17 days. The injections were stopped and a state of dioestrus was instituted which lasted until injections were resumed 28 days later. Cornification of the vaginal mucosa reappeared and was continuous for 12 days, at which time injections were again stopped. The animal was sacrificed 8 days later and the ovary was found to be of normal size and free of corpora lutea.

In another instance a senile rat which was studied daily by the vaginal smear method showed a continuous cornification phase. After



FIG. 3.—Ovaries of a rat 27 days old, 30 gm. Injected with alcohol soluble fraction in potency test. Strong positive reaction. Killed on the fifth day. Note the mild hypertrophy and wealth of follicles. Corpora lutea absent.



FIG. 4.—Ovary showing corpora lutea. Rat 28 days old; 37 gm. weight. Injected with the equivalent of 3 gm. placenta, as a relatively crude extract made by use of 50 per cent acetone.