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Induction of Ovarian Growth with an Extract Made From Blood of Pregnant Women.*

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In a previous communication¹ a method was described for preparing a crude but highly active extract of an ovary-stimulating principle from blood of pregnant women. It was also pointed out that this extract readily induced luteinization in the ovaries of immature rats, but as had already been observed with the "anterior-pituitary-like" principle from the placenta (Collip, *et al.*²) and with prolan (Evans, Meyer, and Simpson³), it does not stimulate the rapid development of graafian follicles such as results from the implantation of fresh anterior pituitary tissue. In 5-day experiments it has thus not been possible to produce any increase in ovarian weight beyond the limit found in normal adult animals.

It has now been found, however, that marked ovarian growth may be induced by using larger doses over longer periods of time. A total of 50 animals were given 2 daily injections of the extract in doses equivalent to 0.22 ccm. of the original blood plasma and the administration continued for periods up to 29 days. The treatments were begun in rats 21 or 22 days of age. In a group of 4 rats injected for 3 weeks the average body weight was 58 gm. and the weights of the ovaries varied from 126 to 174 mg., while after 4 weeks the body weight of 6 rats averaged 94 gm. and ovarian weights of from 84 to 293 mg. were obtained. The average weight of the 2 ovaries in a series of 13 uninjected control rats, 49 days of age, body weight 79 gm., was 19 mg. The average ovarian weights of 9 of these which had not reached sexual maturity was 15 mg., while it was 30 mg. in 4 whose vaginal orifice had become established.

These results would seem to show that a marked increase of ovarian weight may be produced in immature rats by adequate dosage

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¹ Fluhmann, C. F., *Proc. Soc. Exp. Biol. and Med.*, 1932, **29**, 1193.

² Collip, J. B., Thomson, D. L., McPhail, M. K., and Williamson, J. E., *Can. Med. Assn. J.*, 1931, **24**, 201.

³ Evans, H. M., Meyer, K., and Simpson, M. E., *Am. J. Physiol.*, 1932, **100**, 141.

and the prolonged administration of an ovary-stimulating extract made from the blood of pregnant women. The "time factor" in this phenomenon is thus an important feature in comparing the effects of this hormone with those of fresh anterior hypophyseal implants.

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Lipolytic Activity of Rat Tissues in Experimental Leprosy.*

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Walker and Sweeney¹ suggested that an indirect or physiological method of therapeutic action of chaulmoogra oil in leprosy might be stimulation of non-specific lipolytic activity of the tissues which would attack the fatty capsule of acid-fast bacilli. We have undertaken the study of the lipolytic activity of leprous tissue in experimental rat leprosy in comparison with that of normal tissues of the same animal, and the determination of whether or not the observed ratios may be altered by treatment. We decided to ascertain first, however, what effect the presence of leprosy in the body might have on the tissue distribution of lipase in comparison with that noted in non-infected normal animals. Our observations on this point are reported herewith.

Estimations of the lipolytic activity of representative tissues were made by Loevenhart's method² on 8 healthy adult female rats and on 22 female leprous rats. The latter had been inoculated with a buffered saline suspension of finely ground rat leprous tissue from 140 to 194 days previously by Dr. E. L. Walker and Miss M. A. Sweeney. The source of this material was spontaneous leprosy in wild rats obtained from the U. S. P. H. Plague Laboratory in San Francisco, transferred about every 6 months through the Burlingame strain of albino rats for 10 generations without apparent al-

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¹ Walker, E. L., and Sweeney, M. A., *J. Inf. Dis.*, 1920, **26**, 238.

² Kastle, J. H., and Loevenhart, A. S., *Am. Chem. J.*, 1900, **24**, 491; Loevenhart, A. S., *Am. J. Physiol.*, 1902, **6**, 331.