

produced. There are many corpora in such ovaries—not the small crop characterizing pregnancy prolan. The histological picture of many of these corpora resembled that of the earliest stages of normal corpora just after shedding of the egg, and this fact together with the presence of distended oviducts led us to section the latter, where ova were encountered. In one case 83 eggs were found in 2 oviducts.

Smith and Engle<sup>1</sup> first reported experimentally induced superovulation in normal immature mice and rats after the implantation of rat anterior pituitary tissue. The phenomenon was again encountered by Leonard and Smith<sup>2</sup> on administering to hypophysectomized rats a mixture of the gonadotropic substances found in menopause and pregnancy urines respectively.

Irrespective of the interpretation or explanation adopted, menopause urine when administered alone is here shown to contain not infrequently a hormone or hormones capable of causing luteinization and, moreover, superovulation in normal immature test animals.

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### Synergism or Augmentation Produced by the Addition of an Hypophyseal Synergist to Menopause or Castration Urine.

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Corpora lutea are frequently produced in immature test animals by the administration of menopause or castration urine alone; indeed, superovulation may result. It is to be admitted that the effect of the majority of such urines is characterized by the growth of follicles only in the test animals. Nevertheless, most of the latter urines also produce abundant corpora and moderately large ovaries in test animals when combined with an hypophyseal fraction (synergist) which by itself gives infantile ovaries in the 96-hour period. This phenomenon has been observed in 30 out of 34 tests on 20 castrate or menopause patients. The ovaries stimulated by this combination weighed from 50 to 150 mg.; the synergism reached as much as 290% and averaged 108%.

<sup>1</sup> Smith, P. E., and Engle, E. T., *Am. J. Anat.*, 1927, **40**, 159.

<sup>2</sup> Leonard, S. L., and Smith, P. E., *PROC. SOC. EXP. BIOL. AND MED.*, 1933, **31**, 283.