

elements is highly significant. The data leave little doubt that the augmentive power of these blood samples was much greater from the formed elements than from the plasma. The mean ovarian weight of the rats which received plasma in addition to the pituitary extracts was not significantly greater than that of those which received pituitary alone (mean difference 7.0 ± 6.5 mg.). In only one case (FMA) did the plasma show definite indication of an augmentive quality.

Earlier studies² had indicated that the augmentive properties of blood serum were not destroyed by boiling. Because of this degree of heat stability tests were made to determine if the "augmenter" were organic or inorganic in nature. The formed elements were incinerated and tested as above at a dosage of 1.67 cc. blood equivalent. Two samples were tested, each on 3 rats. The average ovarian weights of those rats which received incinerated formed elements in addition to pituitary extract were 14 and 37 mg., whereas for the control groups on pituitary alone, they were 30 and 36 mg. The incinerated elements, therefore, did not show evidence of augmentive ability.

Conclusions. The ovary-stimulating effect of certain pituitary preparations is augmented by the blood of cattle; division of the blood into formed elements and plasma shows that the greater part of the augmentive action is attributable to the formed elements. Further, this activity is due to an organic rather than an inorganic substance.

8454 C

Studies in Hodgkin's Disease. II. Unsuccessful Experiments to Transmit Hodgkin's Disease to Dogs by Intralymphatic Injection.

E. M. CHAPMAN. (Introduced by L. Dienes.)

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The transmission of Hodgkin's disease to animals has so far failed and auto-transplantation in man has also failed. Direct injection of Hodgkin's tissue into the lymphatics has not been tried. This method, applied to dogs, seemed of promise as Hodgkin's disease has been described in dogs.¹

¹ MacMahon, H. E., *Am. J. Path.*, 1934, **10**, 309.

Using the method of Drinker the paw lymphatic of 3 large shepherd dogs was cannulated and fresh saline emulsions of diseased lymph nodes were injected. In 2 dogs the injections were repeated so that in all the material from 5 patients with Hodgkin's disease was used. After this the dogs were observed clinically from 7 months to 3 years and then killed. On necropsy of each dog no evidence of disease resembling Hodgkin's could be found.

8455 P

Uterine Temperature of the Rat; a Measurement of Internal Body Temperatures in Unanesthetized Animals.

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Measurements of internal body temperatures have been obtained in unanesthetized animals after previous implantation of fine thermocouples upon the part to be tested. Prolonged investigation may be carried out with a minimal introduction of error if the animals are permitted 48 hours to recover from the effects of visceral exposure and operative anesthesia which are incident to application of any thermometric device. Seven abdominal organs have been studied in various animals during normal conditions, physiological changes (*i. e.*, uterine temperature during oestral rhythms), hypothermia, and hyperthermia. The details of thermocouple implantation, instruments and results will be described in a later paper.

Physiological Changes in the Uterus. Concomitant measurements of uterine and body (colonic) temperatures revealed that the uterus conformed to the level of body heat during all stages of the oestral cycle in the rat. Two-hour tests made daily previous to mating, throughout gestation, and for 18 days postpartum showed that the pronounced organic changes occurring in pregnancy and the subsequent states of lactation and involution also failed to give differential organic temperatures. Even the severe muscular contractions present during parturition did not disturb the agreement of organic and body temperatures, although measurements were taken of one rat during delivery of a remarkably large litter of 17 young. Neither the injection of theelin in doses large enough to cause

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