5616

Difference Between Gonad-Stimulation by Extracts of Pregnancy-Urine and of Pituitary Body.

ZONJA WALLEN-LAWRENCE AND H. B. VAN DYKE.

From the Pharmacological Laboratory, University of Chicago.

The source of the gonad-stimulating substance of pregnancy-urine is still undecided; the weight of evidence, however, indicates that it is extra-hypophyseal in origin. In studies of the comparative effects of extracts of sheep or pork pituitary bodies and of pregnancy-urine or oestrin-free extracts of pregnancy-urine or chorionepithelioma urine, it was found that the minimal effective doses of the urinary preparations were practically the same for both the male and the female. In the cases of crude or refined extracts of pituitary bodies, however, the minimal effective dose for the female was but a fraction (less than 10%) of that required for the male.

Assay was performed on rats exactly 21 days old when the first injection was made; one injection was made daily for 4 days; necropsy was performed at the age of 26 days or 120 hours after the first injection. Assay-results were appraised by the weights of both ovaries or of both seminal vesicles and coagulatory glands. The extracts of sheep and pork pituitary bodies are described elsewhere;[1] urinary preparations were made by repeated alcoholic precipitation or by Dicken's method. Although both the pituitary and the urinary extracts were subjected to various treatments no evidence of the separation of sex-specific gonad-stimulating substances was obtained. Our results indicate either that there are sex-specific gonad-stimulating principles or that the gonad-stimulating principle of the hypophysis is different from that of pregnancy-urine.

The conclusion reached is based upon assays on 352 immature animals (146 females; 206 males).

[1] Wallen-Lawrence, Z., and van Dyke, H. B., *J. Pharm. Exp. Ther.*, in press.