

the body of an immature host the pituitary appears to be physiologically self-differentiating and capable of thyrotropic activity independently of specific nervous or hormonal stimulation from any other gland in the body. Further the concept is suggested that the thyroid is dependent upon the quantity of pituitary and not on qualitative alteration of pituitary activity during development.

8215 C

Further Purification of Galactin,* The Lactogenic Hormone.

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Since the first reports of the extraction of the lactogenic hormone by Gardner and Turner,¹ and Riddle, Bates and Dykshorn² involving the isoelectric precipitation of the active material from either an alkaline or acid digest of fresh or desiccated ground anterior pituitaries of sheep, cattle or hogs, little progress in purification has been reported.

The present paper presents the details of a method of further purification by which approximately a ten-fold concentration of the active principle may be effected.

The isoelectric precipitate obtained over a range of pH of 6.5 down to 5.5 from the alkaline digest is centrifuged for 20 minutes and the filtrate decanted. The precipitate is then dehydrated by repeated treatment with acetone and dried in a desiccator. It is then ground into a fine powder.

Four grams of the acetone dried powder is then thoroughly mixed with twice its volume of glacial acetic acid, centrifuged, and the brown supernatant liquid decanted into 12 times its volume of ethyl ether. This glacial acetic acid treatment is repeated 4 times or until the brown color no longer appears in the supernatant liquid. The supernatant acid from each of the extractions is decanted into the preceding acid-ether mixture. Lengthy acid treatment is to be

* Also called prolactin and mammatropin.

† Contribution from the Department of Dairy Husbandry, Missouri Agricultural Experiment Station, Journal Series No. 406.

¹ Gardner, W. U., and Turner, C. W., *Mo. Agr. Exp. Sta. Res. Bul.* 196, 1933.

² Riddle, O., Bates, R. W., and Dykshorn, S. W., *Am. J. Physiol.*, 1933, **105**, 191.

avoided. A white flocculent precipitate containing the active principle settles out when the extraction liquids are added to the ether. The acid-ether liquid is decanted, fresh acetone is added to the precipitate and the mixture allowed to stand for 45 to 60 minutes. After centrifuging the acetone is decanted and the precipitate placed in the desiccator. After it is dry it may be ground to a fine white powder. The yield is usually about 0.4 gm. or 10% of the original precipitate. In amounts tolerated, the glacial acetic acid insoluble fraction appears to be inactive.

The active extract gives a biuret test for protein. A total of 3 mg. administered to common pigeons weighing from 300 to 325 gm. over a period of 4 days in daily injections will cause the crop glands to increase from an average of 1.5 gm. to between 1.7 and 3.8 gm. (average 2.73 gm.) showing also very distinct evidence of the proliferation of the crop gland.

8216 P

Cytology of Psittacosis Virus in the Sparrow (*Zonotrichia*).

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The great susceptibility of the representatives of the bird family Fringillidae for the psittacosis virus has previously¹ been emphasized. In the course of systematic studies relative to the various birds which might possibly serve as hosts for the virus, a series of white crowned (*Zonotrichia leucophrys gambeli*) and golden crowned sparrows (*Zonotrichia coronata*) were injected intraperitoneally with 0.3 to 0.5 cc. of a 10% organ suspension in broth of a mouse or Java bird—passage virus (mouse M.L.D. 10^{-8}). Many of the injected sparrows, which as a rule died in from 8 to 12 days, revealed at autopsy a diffuse plastic exudate teeming with free and intracellular Levinthal-Cole-Lillie bodies. The exudate covered both the pericardium and abdominal viscera. Victoria blue 4 R. was particularly useful to demonstrate the free elementary bodies. The liver necroses and the splenic tumor so commonly observed in the representatives of the Psittacidae and some of the Java birds in-

¹ Meyer, K. F., and Eddie, B., *Klin. Wchnschr.*, 1934, **13**, 865; *Berl. tierärztl. Wchnschr.*, 1934, **50**, 577; *Proc. Soc. Exp. Biol. and Med.*, 1934, **31**, 917.