and sulphur excretion, and 30-45% increase in uric acid excretion following aspirin medication, suggesting an effect on metabolism. Fine and Chace[11] observed an increase in the uric acid excretion with a compensating decrease in blood uric acid following the ingestion of sodium salicylates, which was attributed to an increase in kidney permeability. In line with these findings are those of Zilva[8] to the effect that following ether anesthesia the tissues of the animals studied gave no indication of a decreased vitamin C fixation, since the ascorbic acid content of these tissues was comparable to those of normal animals. On the other hand, ether anesthesia appears to affect muscle metabolism since not only is nitrogen[12] and phosphorus excretion increased, but the blood phosphorus also is increased (Bolliger[13]), the result according to Stehl and Bourne[14] of a withdrawal from the muscles.

Further studies of conditions affecting ascorbic acid elimination may explain the frequently observed association of scurvy and rheumatoid arthritis (Rinehart[15]) in cases where sodium salicylate has been the choice of medication.

8839 C

Thyrotropic Hormone in Non-Pituitary Tissue.

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Sturm and Schöning[1] recently published data which indicated that certain organs, notably the ovaries and adrenal cortices contained large quantities of thyroid-stimulating substance. They reported from 11,000 to 56,000 guinea pig units (Junkmann and Schoeller) per 100 gm. desiccated ovaries and up to 36,000 units per 100 gm. desiccated adrenal cortex. While these non-hypophyseal extracts were said to exert atypical thyrotropic effects in that increasing doses were not followed by correspondingly increased thyroid hyperplasia and that the minimally effective doses were inconstant, the physiological significance of thyrotropic sub-

11 Fine, M. S., and Chace, A. F., *J. Biol. Chem.*, 1915, **21**, 371.

12 Hawk, P. B., *J. Biol. Chem.*, 1908, **4**, 321.

13 Bolliger, A., *J. Biol. Chem.*, 1926, **69**, 721.

14 Stehle, R. L., and Bourne, W., *J. Biol. Chem.*, 1924, **60**, 17.

15 Rinehart, J. F., *Ann. Int. Med.*, 1935, **9**, 586, 671.

1 Sturm, A., and Schöning, W., *Endokrin.*, 1935, **16**, 1.

stances in such tissues was considered of great theoretical and practical importance.

Ballif and Gherscovici[2] repeated the work of Sturm and Schöning using ovaries as well as other non-hypophyseal tissues. They found that Loeser extracts (used by Sturm and Schöning) of ovaries were inactive in total doses equivalent to 30 mg. desiccated gland while parallel anterior lobe extracts caused typical histological changes in guinea pig thyroids in doses corresponding to far less tissue.

We have repeated these experiments using 4 types of extracts. (1) A crude Loeser 1.25% NH_4OH extract[3] of acetone-desiccated beef, sheep and hog ovaries; this was neutralized to pH 7.0. (2) A crude dilute acetic acid extract of beef, sheep and hog ovaries, also neutralized. (3) A powder made from beef ovaries according to the Loeser method; this type of preparation was used by Sturm and Schöning. (4) A powder prepared from beef and hog ovaries by a method which when applied to beef or hog anterior lobes yields, uniformly, material of 8 to 10 guinea pig units per mg.

The Junkmann and Schoeller technic was varied slightly by injecting 180-200 gm. guinea pigs on 4 successive days, instead of 3, and removing the thyroid glands on the 6th day. Several regions of each gland were observed.

The maximal total amount of crude NH_3 (Loeser) or acetic acid extract injected was 4 cc., equivalent to 300 mg. of desiccated ovarian tissue. The largest dose of the Loeser acetone precipitate of beef ovaries was 30 mg., equivalent to 10 gm. of desiccated ovaries. Of our own preparation from beef and hog ovaries the largest amount injected was 40 mg., equivalent to 1.7 and 4.2 gm. of desiccated tissue respectively. At least 4 animals on each level were used. In no case did positive thyrotropic responses occur.

An explanation of the results of Sturm and Schöning cannot be found unless they overlooked the fact that in guinea pigs of 200 gm. weight, a histological picture of the thyroid described by Junkmann and Schoeller as indicating early or initial thyrotropic activity of pituitary extracts is seen in a fairly large portion of control groups. We have found, in fact, that ¼ of our control animals show +1 reactions on a scale in which +4 is a maximal reaction at least as judged by appearances in certain portions of a section. One out of 20 control guinea pigs have +2 thyroids. We find, therefore, that it is necessary in evaluating thyrotropic activity to require for a unit effect a +2 reaction in 3 of 4 animals on a given dosage level

[2] Ballif, L., et Gherscovici, I., *Compt. Rend. Soc. Biol.*, 1936, **121**, 1437.

[3] Loeser, A., *Arch. f. exp. Path. u. Pharm.*, 1932, **166**, 693.

and a confirmatory +3 response on the next higher dosage group.

Conclusion. No anterior-pituitary-like thyrotropic activity could be demonstrated in beef, sheep or hog ovaries.

8840 C

Presence of Estrin in Rat Pregnancy Urine.*

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Many efforts have been made to demonstrate the presence of estrin in the urine of pregnant rats, particularly because of the wide use of this animal in the study of the physiological effects of estrogenic substances. We have previously made several unsuccessful attempts. Since it has been learned that acid hydrolysis greatly increases the yield of estrin from human pregnancy urine it seemed worth while to repeat the experiment.

The urine was collected by placing towels in the cages and covering them with screening. Record was kept of the number of animals and the length of time spent in the cages; the results are

TABLE I.

Material Injected	Rat/Days Urine Inj'd per Rat	No. Rats Inj'd	Results
Normal Female Urine	70	2	1 Negative 1 Weakly Positive
" " "	35	4	All Negative
1st Week Pregnancy	37.5	1	Positive
" " "	26.25	4	All Negative
2nd " "	49	1	Positive
" " "	37	1	"
" " "	26	2	"
" " "	24	2	1 Positive 1 Weakly Positive
" " "	13	2	Both Negative
3rd " "	60	1	Positive
" " "	52.5	1	"
" " "	30	2	"
" " "	27.5	2	"
" " "	24.5	3	"
" " "	15.5	4	All Negative
Hydrolyzed Plac.	48 Plac. per Rat	1	Negative
" "	24 " " "	2	"
Unhydrolyzed Plac.	48 " " "	1	"
" "	24 " " "	2	"

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