tion is in mesoblastic cells of the stroma—*i. e.,* fibroblasts and macrophages. Such selective concentration might denote a special physiologic property of a portion of the visceral entoderm in the type of placentation represented in the rat.

Goldmann[3] in his studies on intravital staining showed that trypan blue was concentrated in all of the entoderm in mice. However, storage of this dye was also observed by him in all of the reticuloendothelial system, of the mother, because of the relative enormous doses of the dye administered. Such very large doses precluded the demonstration of selective affinity for the dye on the part of certain tissues, as for example, the subplacental visceral entoderm. In his excellent monograph entitled "The Localization of Disease" Burrows[4] illustrates in colors the exposed viscera of a pregnant rat injected with isamine blue. The uterine horns have not been opened and the dye appears localized in and about the placenta. The illustration was published to indicate specific concentration of the dye in the placenta. From our own studies in which the gross appearance of the unopened pregnant uterus was similar to that depicted by Burrows, we would raise the question of whether the dye he used was also concentrated not in the placenta primarily, but rather in the subjacent visceral entoderm as occurred with Evans blue in the observations reported above.

11357 P

Use of Orally Administered Desiccated Thyroid in Production of Traumatic Shock.

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In an attempt to study the effect of adrenal cortical extracts on traumatic shock, we observed that normal anesthetized dogs, following repeated trauma to the limbs, testicles and gut, did not go into shock at least within 8 hours. We discussed this problem with Dr. Ivy,[1] who had produced shock in dogs by trauma, and he suggested that a possible reason for his ability to induce shock in dogs might

3 Goldmann, E., *Beitr. zur Klin. Chirurg.*, 1909, **64**, 192.

4 Burrows, H., *Localization of Disease*, Wm. Wood & Co., London, 1932.

1 Ivy, A. C., *Am. J. Physiol.*, 1920, **51**, 197.

have been due to the fact that most of the dogs he worked on had hyperplastic thyroid glands.

Following this information we performed the following experiments:

1. Thirty apparently normal dogs were anesthetized with ether, and blood pressure recorded by connecting the carotid artery with a mercury manometer. The limbs and testicles of these dogs were traumatized by 100 blows with a wooden mallet. We also manipulated the gut from ½ to 1 hour.

2. In another series of experiments 18 dogs were fed .4 g of desiccated thyroid tissue per kg of body weight per day for 1 week, then were anesthetized, and treated as in the first series, blood pressure recorded, and their intestines manipulated from 15 to 20 minutes. The average results of both series of experiments are recorded on the graph (Fig. 1).

The graph shows that normal dogs after severe trauma, did not go into shock, while experimental hyperthyroid dogs, with much less trauma died of shock within 3¼ hours. The dogs which were fed thyroid were in apparently good condition. Although we did

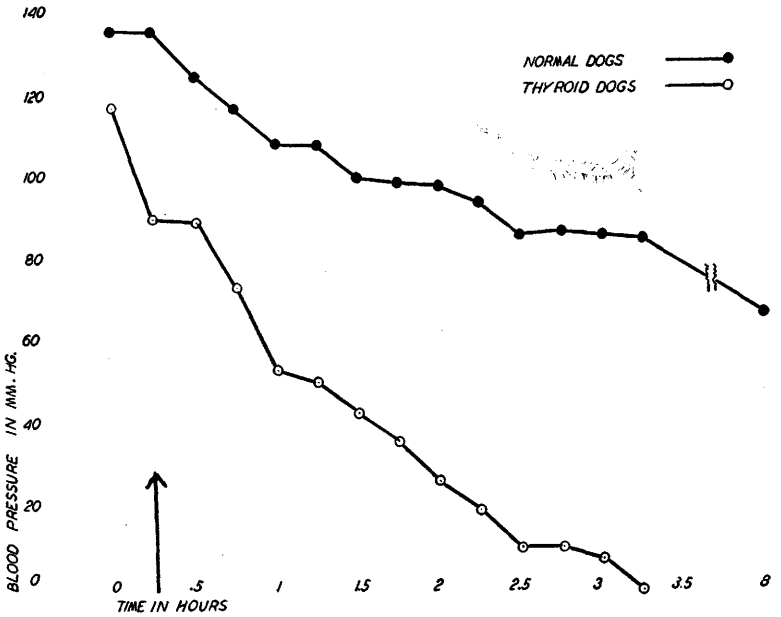

FIG. 1.

Upper line shows average blood pressure of 30 normal dogs. Lower line shows average blood pressure of 18 hyperthyroid dogs. The arrow indicates the blood pressure 15 minutes after trauma.

not measure the B.M.R.'s of these dogs, studies on other dogs showed that this amount of thyroid usually increases the B.M.R. from 15 to 20%.

Unbeknown to us, Hepler and Simonds[2] had reported that dogs which were fed thyroid showed a greater drop in blood pressure than did normal dogs, when the hepatic veins were occluded for short intervals.

Further studies are being carried on to determine what changes occur that make it possible to produce traumatic shock in experimental hyperthyroid dogs.

Summary. The authors found that prolonged manipulation of the intestines of normal anesthetized dogs, does not produce shock. However, when dogs are fed .4 g of desiccated thyroid per kg of body weight per day for 1 week, these animals on manipulation of the intestines from 15 to 20 minutes, go into shock quite readily.

We wish to thank Dr. Carlson for his interest and advice during the course of these experiments.

11358 P

Accessory Growth Factor Requirements of Some Members of the Pasteurella Group.

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Most members of the Pasteurella group of bacteria develop satisfactorily in meat infusion-peptone media but fail to grow in simpler media made from hydrolyzed purified protein or in synthetic media. The substances in infusions of meat, other tissues or yeast which are needed for growth have not been previously identified. Accordingly we wish to report preliminary results of a study of the accessory growth factor requirements of some members of this group of organisms in which it will be shown that nicotinamide, pantothenic acid and, in some cases, the butyl factor for Clostridia are needed for prompt development.*

Seventeen typical *Pasteurella* strains were used. These were stock

2 Hepler, Opal E., and Simonds, J. P., *Arch. Path.*, 1938, **25**, 149.

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