

ABSTRACTS OF COMMUNICATIONS, PACIFIC COAST BRANCH

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Retardation of metamorphosis in the Colorado axolotl by the intraperitoneal injection of fresh bovine hypophyseal anterior lobe substance¹.

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As is well known, the axolotl in its native habitat may retain its larval condition for long periods, even becoming sexually mature (neotonous). When treated with thyroid, when placed in unfavorable conditions or when transported to a lower and warmer region it rather promptly metamorphoses. This delicate balance obtaining in the internal secretory glands (the thyroid and hypophysis here being of especial interest) of this form would appear to make it especially useful in the experimental modification of the activities of these glands. Since the experimental transplantation of the anuran anterior hypophysis into the hypophysectomized tadpole (Allen) and into the normal tadpole (Swingle) and the intraperitoneal injection of bovine anterior hypophyseal substance into the pituitaryless tadpole (Smith) appear to stimulate the thyroid, thus hastening or inducing metamorphosis, it would seem that the injection of this substance might be expected to accelerate metamorphosis in the axolotl. *The opposite reaction, however, is evoked, the larval condition being decisively prolonged.* The experimental injection of fresh bovine anterior lobe hypophyseal substance, intraperitoneally, into the Colorado axolotl during the months of May to September of the present year has resulted in a definite retardation in the metamorphosis of this form. Anterior lobe substance appears here to have given a "paradoxical" reaction and the usual effect of thyroid activity (which most investigators

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hold as immediately responsible for metamorphosis) has been greatly postponed. A pronounced darkening of the axolotl resulted from these injections of anterior lobe substance, the specimen becoming after repeated injections a jet black

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Reactions of the capillary endothelium in peptone shock.

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The fundamental reacting tissues in peptone shock are not the same as the fundamental reacting tissues in the acute anaphylactic shock of dogs. Canine anaphylactic shock is dependent upon liver function¹. Canine peptone shock is not dependent upon hepatic function, since reactions apparently identical with those of the intact animal are produced by intravenous injections of peptone into dehepatized (Dale and Laidlaw's Eck-fistula²) dogs and into eviscerated dogs.

Marked peptone reactions are demonstrable in isolated canine tissues. These reactions are produced by perfusing the tissues with Ringer's solution containing 1 per cent. Witte's peptone. More marked reactions are obtained by perfusing with defibrinated-blood-peptone mixtures, or with uncoagulated-blood-peptone mixtures. The principal reactions of the isolated canine tissues thus far studied are:

(a) *Liver*. Marked increase in perfusion resistance, reaching a maximum by the end of ninety seconds. The resistance then gradually decreases, and is almost completely restored to normal by the end of eight minutes.

(b) *Lungs*. Reactions similar to those of the liver, but more pronounced, with little or no tendency to recovery by the end of eight minutes.

(c) *Intestines*. Distinct decrease in perfusion resistance, reaching a maximum by the end of ninety seconds. Slight tendency to recovery by the end of eight minutes.

¹ W. H. Manwaring, *Zeitschr. f. Immunitätsf.*, 1911, viii, 1.

² H. H. Dale and P. P. Laidlaw, *Jour. Physiol.*, 1918-19, lii, 351.