

buffers, the mobility previously obtained for the complement-fixing antigen was respectively 5.2, 5.4, and 7.8×10^{-5} .¹

It appears, therefore, that the mobility of the virus and that of the antigen at alkaline pH are, if not identical, at least of the same order of magnitude. Below pH 5.6 the virus was rapidly destroyed so that its mobility could not be investigated in the acid range. The experiments did not suggest that the boundaries were less sharp than those of any protein-fraction studied optically, nor that any considerable endosmotic streaming had taken place, such as was observed by McFarlane⁴ with vaccinia virus. It is probable that the absence of important convective currents was due to the concentration-gradient created by the other proteins present in the suspension.

Summary. The electrophoretic mobility of influenzal A-virus has been found to be about -5.5×10^{-5} cm² V⁻¹ sec⁻¹ at pH 7 to 9, ionic strength 0.1; and about -8×10^{-5} at pH 10, ionic strength 0.04. It appears to be the same as that of the complement-fixing antigen.

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Early Localization of the Thyroid Anlage in *Hyla regilla*.

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Since the initial work of Vogt¹ on the localization of anlagen in the young amphibian gastrula, investigators have continued to map out on the anuran or urodele gastrula the presumptive areas which in normal development give rise to particular organs or structures. Although Holtfreter² has added considerably to the knowledge of these areas by explantation, the major number of the studies have utilized the technique of vital staining.

In a 3mm, tail-bud embryo of the Pacific tree frog, *Hyla regilla*, the thyroid is visible as a ventral outgrowth just anterior to the yolk mass which forms the floor of the archenteron. Röhlich³ has shown that for *Triton* at least, the major part of the foregut arises from the dorsal lip of the blastopore. The location of the thyroid in the older embryo, however, gives no indication whether its origin is from the dorsal or the ventral lip.

⁴ McFarlane, A. S., *Tr. Faraday Soc.*, 1940, **36**, 257.

¹ Vogt, W., *Arch. f. Entw-mech.*, 1925, **106**, 542.

² Holtfreter, J., *Arch. f. Entw-mech.*, 1938, **138**, 522.

³ Röhlich, K., *Arch. f. Entw-mech.*, 1933, **129**, 794.

Gastrulae were obtained in which the future crescentic blastopore was indicated only by heavier pigmentation or by a slightly puckered appearance of the cells. After removal of the jelly layers, but not the chorion, the embryos were placed in wax-bottomed watch glasses, with the blastopore uppermost. Bits of agar impregnated with Nile blue sulphate according to the method of Stone⁴ were placed on the embryo and held firmly in place by a celluloid bridge. After half an hour the agar was removed and the embryo transferred to a dish of pond water. Two days later the animal was either dissected to locate the stain or was fixed by Yntema's method⁵ for future sectioning. A total of 40 animals was thus studied, of which 27 were dissected, 8 were sectioned and stained, and 6 were discarded because the stain was too faint for accurate observation.

Results of the study show that the cells which later form the thyroid lie in the median plane and *within* the early blastoporal groove, slightly more toward its ventral lip. The location was clearly demonstrated in 14 embryos. Stain placed on either side of the midline (5 embryos) is found, if at all, only on one side of the thyroid bud. Stain placed dorsal to the groove (5 embryos) later lies in the anterior wall of the foregut, and stain placed ventral to the groove (8 embryos) is pushed caudad by the ventral union of the heart anlagen.

To Vogt's classic map it is therefore possible to add, within the early crescentic blastopore and in the midline of the embryo, the location of the small area which in *Hyla regilla* will give rise to the thyroid gland.

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Effect of Low Body Temperature on Toxicity of Drugs.

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Low body temperature is known to produce a stuporous condition in different animals, accompanied by extremely slow respiration and pulse rate, and a decrease in the basal metabolism. Little work has been done on the effect of toxic doses of drugs in animals whose body

⁴ Stone, L. S., *Anat. Rec.*, 1932, **51**, 267.

⁵ Yntema, C. L., *J. Exp. Zool.*, 1937, **75**, 75.