The normal canine liver has a fairly constant glycogen content. Stained by Best's carmine method, the parenchyma is usually seen to be fairly well filled with red granules. The granules are usually largest and most numerous in the central portions of the lobules. Quantitative determinations by the official method adopted by the American Agricultural Chemists show a glycogen content varying from 4 percent to 7 percent of the gross liver weight, an average of 5.3 percent in our series.

During typical canine anaphylactic shock (kymograph control), the hepatic glycogen practically disappears. The central half of each lobule often becomes free from stainable granules within three minutes. The whole liver becomes microscopically glycogen-free by the end of fifteen minutes. Less than 0.01 percent glycogen can usually be isolated from the liver at this stage.

No conclusion is as yet drawn as to the mechanism of this glycogen disappearance, nor as to its bearing on fundamental theories of anaphylaxis. Our findings, however, are in line with the initial hyperglycaemia in guinea pig anaphylaxis, recently reported by Zunz and La Barre.[1]

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Preliminary note on the effect of a constant magnetic field on morphogenetic processes.

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It is generally supposed that a *constant* magnetic field has no effect upon life processes. Observers who have dealt with this question seem on the whole to be in quite general agreement that all attempts up to the present to demonstrate an effect have been complete failures, or else the conditions of the experiment have been too poorly defined to demonstrate an effect. In view of such a situation it is clear that any contrary statement of value must be supported by results obtained under clearly defined experimental conditions.

[1] Zunz, E., and LaBarre, J., *Compt. Rend. Soc. Biol.*, 1924, xci, 121.

Along the bottom of a narrow, long glass trough 1x1.5x15 cm., through which a slow current of fresh sea water was kept flowing, were placed sets of internodes of the hydroid Obelia.[1] On opposite sides of one end of the trough were placed the N and S poles of an electromagnet, through which passed a direct electric current kept constant during any one experiment. The internodes were therefore fixed in definite positions along an intensity gradient of magnetic field. The small electric current (2 to 100 milliamperes in different experiments) passing through the coils of the magnet did not produce noticeable temperature change in the magnet; and the stream of running sea water had the same temperature to within 0.1° C. in all parts of the trough.

In brief, the experiments gave a clear proof that growth was entirely inhibited, and inhibition was followed by death in the high field-intensity opposite the poles of the magnet. The degree of inhibition decreased with increase in distance from the poles, until in a position in the outer end of the trough twelve centimeters from the center of the pole faces, no perceptible effect occurred. Thinking that the effect was due to the flow of sea water which generated electric currents in the magnetic field, experiments were performed in which the trough was filled with sea water kept at rest. The effects were the same as in the current of sea water. The effective threshold of field-intensity lies in a range between 6 and 50 Gauss.

Experiments with cut pieces of Tubularia stem have yielded similar results. Cell cleavage and development of the Fucus egg may be inhibited under the same conditions of experiment. However, in field-intensities of similar magnitude, no inhibitary effects were observed on cell division in Paramecium, in the development of the eggs of the fresh water perch, frog, and pond snail, Planorbis. In the case of the frog's egg, exposure for seven hours—beginning at the two cell stage—to a constant field of 6150 Gauss had no trace of any effect on development. Results from experiments on the sand dollar (*Echinarachnius*) egg are at present in doubt.

Methods for an accurate quantitative study of the phenomena have been worked out, but limits of space prevent their full presentation here, and the discussion of all the results which have been obtained.

[1] Lund, E. J., *J. Exp. Zool.*, 1924, xxxix, 357.