intestinal mucous membrane. All developed typical symptoms of the disease with the exception of one. In another experiment 13 fowls were inoculated with a Berkefeld filtrate of an emulsion prepared with the contents of the crop. Of these, 10 fowls developed typical symptoms of the disease while 3 appeared to be resistant. The virus is apparently present in the blood stream of infected fowls only in the early stages of the disease. Bacteria isolated from the feces of infected animals appear to be innocuous. Injection of liver, kidney and lung tissues from infected fowls into healthy fowls produces the disease in some instances. Bile in 1 instance has proved infective. Brain emulsions prepared from brain tissue of birds which have died of the disease have in all instances proved negative.

No attempts to cultivate the virus of this disease have as yet been made. From these preliminary experiments there appears to be strong evidence that this disease is caused by a filterable virus and that the disease represents a disease of fowls heretofore unknown. Since January the spread of the disease has been effectively checked by rigid quarantine measures. The causative filterable virus has been passed serially through a large number of fowls and a more complete study of the virus, the disease, and its pathology is contemplated.

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Recovery of Excitability in the Turtle Ventricle.

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Ashman and Hafkesbring[1] report a progressive increase in the excitability of turtle ventricle with repeated stimulation, *i. e.*, a treppe of excitability. One of us in a recent study[2] on the recovery of contractility in turtle ventricle, has indicated that the treppe in contractility depends upon the alteration of the rate of recovery after contraction. And further, that this rate of recovery varies with 2 factors: (1) the amplitude of the preceding contraction, and (2) the interval between the 2 preceding contractions. In the course

[1] PROC. SOC. EXP. BIOL. AND MED., 1928, xxv, 525.

[2] Blum, H. F., *Am. J. Physiol.*, 1927, xxxii, 157.

of the experiments leading to these conclusions certain observations were made on excitability which were not published at that time.

In these experiments ventricular strips were caused to contract rhythmically by the application of electrical stimuli. It was found that when an extra contraction was produced following one of the regular rhythmical responses (by the introduction of an extra stimulus), the absolute refractory period following this contraction is shorter than that following the regular rhythmical contractions. As an example: Ventricular strip responding rhythmically every 4.4 seconds. Very strong stimuli ineffective during interval of 2.1 seconds following the rhythmic responses. Response obtained at 2.2 seconds after one of the regular contractions. Following this response another was elicited with the same strength of stimulus after only 2.0 seconds.

The foregoing experiment indicates that the recovery of excitability is more rapid after 2 contractions which follow closely upon each other than when these contractions are separated by a longer interval of time. Thus it appears that the rate of recovery of excitability depends upon the interval between preceding contractions. These findings parallel those for the mechanical responses,[2] and are quite in accord with those of Ashman and Hafkesbring.

Further experiments are in progress which it is hoped may assist in the explanation of the treppe in excitability and the summation of stimuli.

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Iodine Poisoning Counteracted by Thiosulphate.

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Sabbatini[1] called attention to the action of thiosulphate of sodium in removing the stain of iodine from the skin. Thiosulphate is a component of the relatively non-toxic, so called colorless tincture of iodine. Its ability to bind with iodine apparently takes precedence over the combination iodine forms with the protein of the tissues. Sollmann[2] has reported upon "The Fate of Iodin, Iodids and Iodates in the Body," showing that free iodine is promptly bound and circulates as iodide, bound through protein. The possibility is pre-

[1] Sabbatini, L., *Gaz. Osp. e Clin.*, 1912, xxxiii, 58.

[2] Sollmann, T., *J. Pharm. and Exp. Ther.*, 1917, ix, 269.