sequently when the various proteins used for sensitization of the other eyes are injected intravenously.

6. It has been impossible to demonstrate sensitivity in the eye by the intravenous shocking route until at least the fifth day following introduction of the antigen into the anterior chamber.

7. Rabbits vary considerably in the intensity of reaction which can be elicited from them, but none was found which failed completely to give any reaction.

8. An experiment may be reported in which an eye sensitized to a multiple antigen containing cat red blood cells became inflamed 5 hours after the introduction of 35 cc. of a 50% suspension of partially hemolyzed cat red blood cells by stomach tube into the gastro intestinal tract.

9. Experiments in progress show that toxic antigens and bacterial bodies may be used to elicit the type of reaction obtained with the multiple antigen described above.

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Observations on the Blood Vessels of the Vascular Membrane of Chicken Embryos.

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It was the object of these experiments to attempt to discover first, whether there was a difference in innervation between the blood vessels of the vascular membrane of chicken embryos and innervated blood vessels; and second, what changes occurred in the blood vessels of the embryos' vascular membrane during the course of its development. The experiments were carried out in a constant temperature room with eggs at all ages but especially at the 3rd and 4th days of incubation. The eggs were opened at the end of the air-chamber. In connection with innervation both physiological and anatomical investigations were made. In the physiological experiments stimuli of mechanical, electrical and chemical varieties were applied. In the manner of Ricker it was found possible to grade the strength of the stimuli into weak, medium and strong, and doses were found of each variety of stimulus so that comparable effects in the vessels could be observed: constriction or dilatation, but more often dilatation with the weak stimuli, constriction with

medium stimuli, and dilatation with the cessation of flow, with strong stimuli. It was characteristic of all these effects, except perhaps those with strong stimuli, that *only* the vessel or vessels in the immediate neighborhood of the stimulus was affected. The stimulus did not spread to surrounding areas. Adrenalin behaved differently from the case of innervated vessels, for with small doses (0.1 ccm. of a 1% solution) no effect on the vessels was observed. With doses 4 times as great, one-half to 4 or 5 minutes were required to bring about contraction. In such cases a like amount of salt solution had the same effect.

In the anatomical experiments sections were made of embryos 3, 4 and 7 days old, and these were stained both by Bielschowsky's method and by the method of methylene blue reduced by rongalit. In each case tissues in which it was known that nerves were present were prepared in the same solutions. Nerves were found always in the controls and never in the vascular membrane. It appears, therefore, that here is genuinely a tissue free from nerves. In another place there will be described the physiological consequences of this fact.

In the experiments dealing with change in these vessels in the course of development, it was found that where the same stimulus was applied the reaction was the same provided the size of the vessel stimulated was the same. It made no difference what was the age of the embryo. A larger vessel we found was less irritable than a small one and capillaries were most irritable of all. There are naturally larger vessels in larger embryos, but as has been said, the larger the vessel the less the irritability. In none of the vessels of the vascular membrane were elastic fibers found nor was there found at any period of development evidence of degeneration. It appears, therefore, that these vessels at the end of the period of incubation are discarded without having passed through a process of growth and of evolution.