It should be stressed that the inaccuracies inherent to the method are numerous, and too great importance should not be placed on minor variations in the index. Although experience has taught that false positives are quite uncommon, a negative result should not be accepted as final until 2 or 3 specimens of blood have been taken at varying intervals. A trace of acid in a tube, too long an interval between the collection of the blood and the addition of the organisms, a slight alteration in the pH of the reagents, partial clotting of the blood, or the admixture of tissue juice when the blood is secured by puncture of the ear or finger instead of the vein may lower or entirely prevent phagocytosis of the Brucella organisms. The length of the incubation period at 37°C. alters the index markedly in many instances, the number of bacteria ingested being often twice as great at the end of an hour as after 30 minutes. Whether there is a difference in the susceptibility of leucocytes to external influences which may change from day to day is not known, but it has been noted that blood taken from the same person on different days, though the conditions of the test were as nearly identical as possible, gave widely differing results. It is recommended that when possible, tests be run in duplicate, using both heparin and citrate as anticoagulants, until the factors controlling the phenomenon are more fully understood.

8201 P

Action of Carbaminoylcholine on the Iris, Normal and Parasympathectomized.

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The ciliary ganglion and its accessories were removed from one orbit in each of a series of cats. At intervals thereafter, the effects on the pupils of a drop of carbaminoylcholine chloride solution in each eye, were studied in the dark-room under conditions of uniform lighting. In the experiments here reported, the dosage in each eye was equivalent to 0.3 mg. of carbaminoylcholine chloride and the eyes, when studied, were 60 cm. from a screen of white muslin, illuminated by a 100 watt mazda lamp, 40 cm. away.

When the irises were tested *within 24 days* after the operation,

the pupils in both the normal and the parasympathectomized eyes were constricted down to the same size, approximately 1 mm. in horizontal diameter. The constriction began within 5 minutes, in both eyes, reached its maximum, in both eyes, at about 45 minutes and, in most cases, remained at this maximum more than 45 minutes.

Since it is probable that the nerve fibers and their endings had completely degenerated before the end of 14 days, and since Armstrong[1] has shown that acetylcholine does not depress the nerveless heart, the foregoing facts suggest that carbaminoylcholine in the given concentration, stimulates only the parasympathetic neuromuscular junctions.

In the later months after the operation, the drug in the normal iris still constricted the pupil down to a 1 mm. width, but in the parasympathectomized iris, it constricted the pupil only to about 8 mm. These findings in the later months are probably due to the degeneration of disuse, either in the denervated parasympathetic neuromuscular junctions or in the muscle fibers.

8202 P

Observations on Intra-Intestinal Pressure with Special Reference to Absorption of Saline.

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Measurement of the absorption of fluid from an isolated fistulous loop of intestine by the use of an ordinary manometer tube is unsatisfactory, since with absorption the manometer level falls progressively, and with it, the intra-intestinal pressure. The intra-intestinal pressure can, however, be maintained at a constant level by a manometer system built on principles similar to that used by White[1] for the measurement of the intracapsular pressure in the kidney. Inserted in a closed loop of small intestine previously prepared, is a rubber catheter, which is encircled close to its eye by an inflatable rubber balloon, which serves as a flange fitting snugly in the fistulous passage through the abdominal muscles and preventing

[1] Armstrong, P. B., *J. Physiol.*, 1935, **84**, 20.

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[1] White, H. L., *Am. J. Physiol.*, 1928, **85**, 191.