The results are shown in Table I. The blood cholesterol changes in the first 4 groups of animals are graphically illustrated in Chart 1. The microscopic appearance of the aorta of the experimental animals 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, and 16 is shown in Chart 2.

Lipocaic does not affect the level of blood cholesterol in normal animals. It prevents the rise in blood cholesterol and the development of atherosclerosis in the aorta which otherwise regularly occurs in rabbits fed a high cholesterol diet. Heated hormone is ineffective.

Studies are in progress concerning the use of lipocaic in the treatment of atherosclerosis in rabbits in whom the condition has been allowed to develop. The resemblance of cholesterol atherosclerosis of rabbits to the pathology of sclerotic vascular disease in man suggests the possibility of the use of this pancreatic extract in the prevention and treatment of human atherosclerosis.

9601 P

Synaptic Connections in the Celiac Ganglia.

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The distribution of axons effecting synaptic connections in the celiac ganglia and their modes of termination have been studied in silver preparations of human material and material obtained from normal and experimental animals (cats). The synapses observed involve (1) pericellular and peridendritic nests, (2) arborizations of axons in dendritic glomeruli, and (3) axon terminations in dendritic fasciculi. Synapses of these types have been described by de Castro[1] in various autonomic ganglia. The synapses effected by the terminal branches of axons with dendrites in dendritic fasciculi probably are the most common in the celiac ganglia. Every ganglion cell in these ganglia probably is synaptically related to more than one axon.

Bilateral section of the splanchnic and vagus nerves and extirpation of the upper lumbar segments of the sympathetic trunks in cats resulted in degeneration of the great majority of the axons which effect synaptic connections in the celiac ganglia but not all of them. Degeneration of only the vagus nerves did not appreciably alter the

[1] de Castro, F., 1931, Sympathetic Ganglia; Normal and Pathological. Cytology and Cellular Pathology of the Nervous System (Penfield), Sec. VII.

numbers or distribution of synapses in these ganglia. Section of nerves extending from the celiac ganglia to the stomach and intestine resulted in extensive degeneration of the fibers in the distal portions of the nerves and degeneration of some fibers in the proximal portions. The latter observation supports the assumption that fibers which arise in enteric ganglia join the celiac plexus. The synaptic connections which persist in the celiac ganglia following degeneration of the splanchnic and vagus nerves probably are effected by these fibers. They probably constitute connections through which reflex responses in one segment of the gastro-intestinal canal may be elicited by impulses arising in another segment.

9602

Influence of Cattle Anterior Pituitary Extract on Endochondral Ossification in Young Ovariectomized Guinea Pigs.*

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Continuing our investigations[1] on the growth of cartilage and bone of the young guinea pig it seemed of interest to analyze the rôle of the gonads, to determine whether or not the effect of anterior pituitary is exerted by intermediation of the ovaries, which organs undergo considerable changes after the administration of anterior pituitary preparations (Loeb[2]).

Observations extended over periods of 1, 2, 3, and 4 weeks. In each of the 4 series, 6 animals averaging 140 gm. in weight were used: (a) One served as normal control; (b) one received daily injections of acid extract of cattle anterior pituitary; (c) 2 were ovariectomized; (d) 2 were ovariectomized and subsequently received daily injections of extract.

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1 Silberberg, M., PROC. SOC. EXP. BIOL. AND MED., 1935, **32**, 1423; Silberberg, M., and Silberberg, R., PROC. SOC. EXP. BIOL. AND MED., 1937, **36**, 622.

2 Loeb, L., *Endocrinology*, 1932, **16**, 129; PROC. SOC. EXP. BIOL. AND MED., 1933, **30**, 1335; Loeb, L., and Hayward, S. J., PROC. SOC. EXP. BIOL. AND MED., 1937, **36**, 250; Loeb, L., Festschrift dedicated to Robert Tilden Frank, June, 1937, p. 2, press of The C. V. Mosby Company, St. Louis.