It may be concluded that lactogenic hormone, although capable of producing a specific effect on epithelial cells of the immature pigeon crop *in vivo*, is unable to stimulate embryonic crop tissue when cultivated *in vitro*. Non-specific tissues such as embryonic chick connective tissue, embryonic chick epidermis and embryonic pigeon oesophageal epithelium also failed to show growth stimulation in the presence of the hormone.

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Effect of Autoclaved Pancreas upon Lipids of Blood and Liver in Depancreatized Dogs Maintained with Insulin.*

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It was first shown in this laboratory that raw pancreas contains a factor (or factors) active on the blood lipids of the completely depancreatized dog maintained with insulin.[1] When the glandular tissue was added to the diet immediately after pancreatectomy, a rise above normal in blood lipid constituents occurred. The removal of the glandular tissue from the diet resulted in an abrupt fall in the lipid constituents, in particular, cholesterol esters. The essential effect of pancreas feeding upon blood lipids consisted in the maintenance of a level, particularly cholesterol, above the preoperative or normal; this effect was produced irrespective of whether the concentration of the blood lipids was normal or subnormal at the time when feeding of the glandular tissue was instituted.

It has already been shown that the blood lipid factor is not choline.[2] In a further study of the mechanism whereby raw pancreas produces these lipid changes, it seemed of interest to investigate the effects of pancreas that had been autoclaved for 30 minutes at 20 lb. pressure. Such a procedure destroys the enzymes but leaves unaltered the caloric value of the ingested pancreas.

A typical result of the effect of autoclaved pancreas on the blood

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1 Chaikoff, I. L., and Kaplan, A., *J. Biol. Chem.*, 1935, **112**, 155.

2 Chaikoff, I. L., and Kaplan, A., PROC. SOC. EXP. BIOL. AND MED., in press.

cholesterol is shown in Table I. For the first 37 days following pancreatectomy Dog D-73 received 125 gm. of raw pancreas twice daily in addition to the regular stock diet. Determinations made on 2 occasions showed that the blood lipid concentration was definitely above normal during this period. For the next 19 days, autoclaved pancreas, in equal amounts, was substituted for the raw glandular tissue. A definite fall in both free and esterified cholesterol occurred. In 3 other dogs it was found that when autoclaved pancreas was added to the diet of dogs in which the blood lipid level fell below normal, a rise above the preoperative value did not occur. It may, therefore, be concluded that the factor in the pancreas responsible for the maintenance of a blood lipid level above normal is partially or completely destroyed by autoclaving.

TABLE I.
Effect of Raw and Autoclaved† Pancreas upon Whole Blood Cholesterol of Dog D-73.

Interval since Pancreatectomy days	Duration of raw pancreas in diet‡ days	Duration of autoclaved pancreas in diet‡ days	Cholesterol			
			Total mg. per 100 cc.	Free mg. per 100 cc.	Ester mg. per 100 cc.	Ester % of total
29	29		209	127	82	39
37	37		218	123	95	44
45		8	132	99	33	25
56		19	112	103	9	8

†Autoclaved for 30 min. at 20 lb. pressure.
‡125 gm. twice daily in addition to stock diet.

The accumulation of large amounts of lipids is characteristic of livers of depancreatized dogs receiving no raw pancreas in their diets.[3] Despite its inability to raise the preoperative level of the blood cholesterol, autoclaved pancreas was found effective in preventing the deposition of these excessive amounts of lipids in the livers of 2 dogs. Moreover, in a depancreatized dog in which a fatty liver had been established, the fat content of this organ was reduced to normal by the addition of autoclaved pancreas to the diet. In all 3 animals that had received autoclaved pancreas, total fatty acids ranged from 2.7 to 2.9% of the wet weight of the liver, a range that closely approximates the normal.

[3] Kaplan, A., and Chaikoff, I. L., *J. Biol. Chem.*, 1935, **108**, 201.