

cated beef lactating mammary gland were made by the same method and injected into mice with spontaneous cancers of the mammary gland.* Tumor tissue was obtained by biopsy at the time of injection and the mitoses counted. Twenty-four hours later the animal was killed and the rate of proliferation determined. The results are shown in Table I. The experiments show that the extracts prepared from the mammary gland inhibit mitoses in the adenocarcinomata developing spontaneously in mice mammary glands. The mitoses in the tumors of control mice subjected to ether anesthesia and the same operative procedure were reduced not at all or to a much less degree. The inhibitory effect was seen about 24 hours after the injections and subsequently the tumors continued to grow at their usual rate.

7015 C

Gall Bladder Function after Pancreatectomy.

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In the course of an extended series of observations on depancreatized dogs a number of questions arose in the interpretation of the data. Many other changes in body economy besides loss of insulin and loss of juice in the intestine have to be considered. Some questions have arisen concerning altered biliary function.

The following experiments were performed in order to determine the functional activity of the gall-bladder in dogs after complete pancreatectomy. For this purpose the dye method of Graham, Cole and Copher¹ was employed in 3 dogs which had been depancreatized 173, 242 and 287 days respectively. The animals were kept on a diet consisting essentially of cooked lean meat and glucose, supplemented by insulin.

The experiments were conducted in the following manner: 0.15 gm. of sodium tetraiodophenolphthalein (iodeikon) per kilo body weight was injected intravenously. Eighteen hours afterward an X-ray of the gall bladder was taken. Then the dogs were given their ration of meat and glucose to which 40 gm. of beef suet was

* The strain of mice was obtained from M. C. Marsh, Springville, N. Y.

¹ Graham, E. A., Cole, W. H., and Copher, G. H., *J. Am. Med. Assn.*, 1925, **84** 1175.

added, and insulin was injected. Two hours and 5 hours after the feeding cholecystograms were made to study the emptying time of the gall bladder.

The results were as follows: 18 hours after the injection of the dye, well defined cholecystograms were obtained in all of the dogs, demonstrating good concentration. After feeding, the shadow of the gall bladder diminished in size and density or disappeared completely, indicating partial or complete removal of the dye. These results are well within the range of the variations found in the functional activity of the gall bladder in normal dogs and demonstrate that removal of the pancreas does not alter the function of the gall bladder as determined by the dye method.

7016 C

Phosphatase Studies. IV. Serum Phosphatase of Non-osseous Origin. Significance of the Variations of Serum Phosphatase in Jaundice.

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In view of the wide occurrence of phosphatase in other tissues than bone, the possibility of non-osseous origin of *some* of the serum phosphatase deserves examination. It receives support from the evidence of the great decrease of serum phosphatase after prolonged fasting¹ and its great increase after ingestion of dextrin.² The significance of phenomena of normal physiology has frequently been suggested by a disturbance of the function of a given organ or tissue; we believe that the increase of serum phosphatase in jaundice is of similar importance and indicates that liver is a source of serum phosphatase, normally as well as pathologically.

The procedure for determination of serum phosphatase has been described.^{3*} The icteric index was determined by Meulengracht's method.

¹ Bodansky, A., and Jaffe, H. L., *PROC. SOC. EXP. BIOL. AND MED.*, 1931, **29**, 199.

² Bodansky, A., unpublished data.

³ Bodansky, A., *J. Biol. Chem.*, 1933, **101**, 93.

* About 2.6 and 7.5 units of phosphatase per 100 cc. are the average normal figures for adults and children, respectively (normal range for adults, 1.5 to 4.0 units; normal range for children, 5.0 to 13.0 units).