in the skin. It is probable that the tissues are sufficiently buffered to prevent the rapid decomposition of the drug.

7014 C

Growth Inhibiting Agent in Extracts of Desiccated Mammary Gland.

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Hormones, notably thyroxin, insulin, parathormone and epinephrine, have been shown to inhibit proliferation of the glandular tissues that produce them.[1, 2, 3, 4] The availability of these hormones in concentrated form made possible a determination of their effect on the mitotic rate of the glands. The histological methods for calculating rates of proliferation in the endocrine organs are equally applicable to tissues that do not produce internal secretions. In this laboratory aqueous extracts of desiccated kidney were found to inhibit the proliferation of the epithelium of the renal tubules when injected intraperitoneally into young rats.[5] Saline extracts of desic-

TABLE I

Mouse No.	CC. Ext. Injected	Mitoses per 10 mm.² 24 hrs. after injection	Mitoses per 10 mm.² at time of injection
1	1.2	505.5	772.3
2	1.4	244.0	387.5
3	2.2	58.5	271.8
4	2.0	4.1	345.3
5	2.4	60.6	66.4
6	2.2	250.6	1161.5
7	1.8	166.7	245.5
8	2.0	162.9	381.4
9	2.2	21.1	188.2
10	2.0	262.8	334.6
11	2.2	378.4	408.6
12	2.0	433.5	722.1
13	2.0	59.5	121.3
14	2.2	111.3	468.0

[1] Loeb, L., *J. Med. Res.*, 1920, **41**, 481.

[2] McJunkin, F. A., and Roberts, B. D., PROC. SOC. EXP. BIOL. AND MED., 1932, **29**, 893.

[3] McJunkin, F. A., Tweedy, W. R., and Breuhans, H. C., *Arch. Path.*, 1932, **14**, 649.

[4] McJunkin, F. A., Rall, R. R., and Singer, P. L., *Endocrinol.*, 1932, **16**, 635.

[5] McJunkin, F. A., and Hartman, C. D., *Am. J. Path.*, 1933, in press.

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 Copher[1] 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.