towards the tooth was a slower process. This resulted in a longer exposed span for the newly formed peridental fibres. It was evident, however, that the new fibres were becoming incorporated within this bone.

Plate No. 1 indicates repair fundamentally like that noted just previously. In this animal a thick formation of cementum had been laid down upon the cut wall of dentine. In this instance, however, the alveolar wall has extended into the cut and thus an hypertrophy of the alveolar bone has been produced. Peridental fibres connect the newly formed cementum with this projection of bone.

Replacement of true peridental membrane and not merely scar formation thus has been shown in the cat following initial destruction by artificial means.

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Hypertrophy of Mammary Gland in Adult Male Rats with Experimental Ovario-testes.*

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In a previous report[1] it was stated that typical ovario-testis could be produced in adult male rats by grafting the ovaries of immature females into the testis, subsequently giving daily transplants of the anterior lobe, using Smith's technique.[2]

Eight to 12 days of treatment is sufficient to produce numerous ovarian follicles of mature condition in the ovarian graft, but no changes have been observed in the host animal. If the daily transplants are continued for 18 days, the ovarian mass engrafted in the testis is greatly increased. The large follicles are more numerous, and in many cases, the thecal cells have hypertrophied, forming a layer of lutein cells around the periphery of the follicle.

As shown in Fig. 2, the response in the tissue of the mammary gland of the treated male rat bearing an ovarian graft is markedly different from that of its litter-mate (Fig. 1), which had received the same number of daily transplants of anterior lobe, but which did not bear an ovarian graft.

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[1] Engle, E. T., PROC. SOC. EXP. BIOL. AND MED., 1927, XXV, 83.

[2] Smith, P. E., *Am. J. Physiol.*, 1927, lxxx, 114.

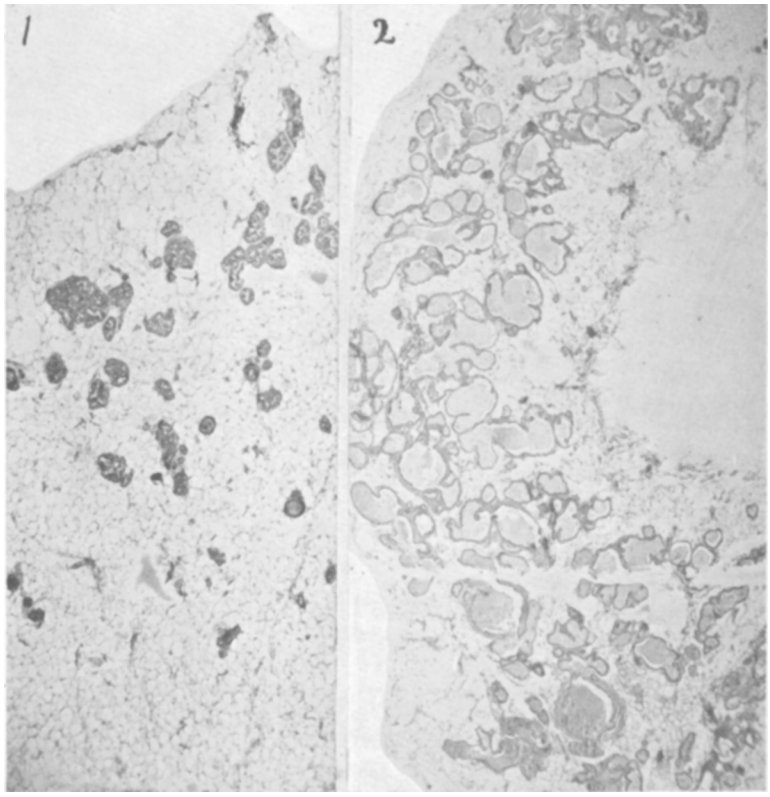

FIG. 1.
Mammary gland of male rat, 184 days old. Daily pituitary transplants, 18 days. No ovarian graft. x25.

FIG. 2.
Mammary gland of male rat, 184 days old. Daily pituitary transplants, 18 days. Ovarian graft in each testis, each graft having many follicles. x25.

These rats possess normal seminiferous tubules, and have mated with normal females during the experimental period. All animals bearing grafts have sired 1 litter, many 2 litters, and a few 3 litters, during the period of the experiment.