

In cultures of the ventral lobe of both the dogfish and the skate were many large frothy looking cells, full of large colloidal vacuoles. These cells did not seem to multiply but migrated out among the growing cells.

Cells of the stroma usually grew out later than the epithelial cells and increased in number slowly. They formed wide-spread out-growths of large, flat, spindle-shaped cells with large round or oval nuclei, and usually contained many irregular granules, probably composed of ingested foreign protein.

These preliminary observations have shown that the pituitary gland of the fish, particularly that of the dogfish and skate, in which the lobes are easily separated, furnishes favorable material for a study of different kinds of pituitary gland cells.

STUDIES ON THE SPONTANEOUS CARCINOMA OF THE MAMMARY GLANDS OF MICE

MARGARET REED LEWIS AND LEONELL C. STRONG

*Carnegie Laboratory of Embryology, Johns Hopkins Medical School
and Department of Anatomy, Yale University Medical School*

The effect of ascorbic acid, dibenzanthracene and fluorescent X (reduced neutral red, Clark) was studied upon in vitro growth of mammary gland tumors of three mice of the Murray strain and ten mice of the Strong strains.

It was found that all three of these substances produced a different effect upon the cultures of carcinomatous tissue than they had exhibited in cultures of chick embryo tissue.

Ascorbic acid and dibenzanthracene had an inhibiting rather than a stimulating effect upon the growth of the cultures. Fluorescent X, instead of remaining in bright red granular form, as it does in supravitaly stained cultures of normal cells, frequently formed into clusters of yellow crystals within the cell vacuoles of the growing cancerous epithelial membranes.

STUDIES IN TISSUE CULTURES

HOPE HIBBARD, *Oberlin College*

The work of the summer consisted of growing in vitro, at laboratory temperature, various tissues of cold-blooded animals. The work was carried on in consultation with Dr. and Mrs. W. H. Lewis. The hanging drop method on a coverglass was used exclusively. The amount and character of growth in the various cases differed according to the tissue and the composition of the nutrient medium. Briefly, the results were as follows:

a) Lobster heart. The growth of the lobster heart was made up of long cells, resembling the fibroblasts of mammals and birds. These cells grew out in the blood or in centrifuged plasma of the animal itself.