occurred if, as culture medium, sterile filtered sea water was used.

Cultures in Carrel flasks and roller tubes behaved quite differently. First of all the cells on the cut edges rounded up. Following this all the cells of the fragment dissociated, rounded up, increased in size, underwent vacuolization and disintegrated after 48 hours. The same results were obtained in all kinds of media used.

In filtered sterile sea water or in White's modified synthetic medium in hanging drops, the cells at the cut edges became spherical. These cells underwent vacuolization, dissociation and disintegration. The rest of the fragment remained unchanged for as long as 4 - 5 days.

In Vitro Studies of Tissues from Sensitized Animals

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More than half of the summer period was spent in learning tissue culture technique. In the remaining time two projects were undertaken.

1. An attempt to induce skin sensitivity to 2, 4-dinitrochlorobenzene in rabbits by means of repeated applications to the shaved skin of a 10% alcoholic solution of the allergen, could not be carried to the tissue culture stage since no sensitivity appeared in the experimental animals. This finding agrees with results reported by other investigators, namely that rabbits are very difficult to sensitize in this manner.

2. A rabbit was inoculated in each footpad with 0.1 ml. of heat killed tubercle bacilli in mineral oil, 4 mg/ml.; the inoculation was repeated one week later. A skin test on the 13th day with undiluted old tuberculin (OT) gave a typical severe reaction with necrosis. On the 38th day, fragments of popliteal lymph node and cerebral cortex from this animal and from a control uninoculated rabbit were planted in roller tubes in a thin plasma clot with 2 ml. of nutrient medium (embryo juice, horse serum, and Gey's solution in a ratio of 1:4:5) to which in some tubes OT was added in a final dilution of 50 or 100. Observation for several days suggested that the OT caused slight inhibition of the growth and migration of macrophages and fibroblasts in the lymph node cultures from the tuberculin sensitive rabbit and of ependymal(?) cells and macrophages in the brain cultures from this animal. Later similar experiments (in the winter) confirmed this result or

showed no evidence of inhibition at all. One reasonable hypothesis to explain these findings, which are in conflict with numerous reports in the literature, is that only certain types of cells participate in the cellular sensitivity found in tuberculin sensitive animals and that these cells may be deprived of this sensitivity by their nearness to the invading tubercle bacilli (as in a lymph node draining the inoculation site).

This single, successfully executed (essentially negative) experiment will be included in the data forming the basis of a paper, now in manuscript stage, titled "Studies of Cellular Lysis in Tuberculin Sensitivity."