

ANTIGENIC PROPERTIES OF HUMAN TUMOR CELLS
AFTER LONG CULTIVATION IN VITRO (BRIEF COMMUNICATION)

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The object of this investigation was to make a comparative study of the antigenic properties of human tumors cultivated in vitro for long periods and of fresh human tumor tissues.

The tumor tissue used was obtained from carcinoma of the stomach, carcinoma of the breast, and tumors HEp-2, CaVe, and DT-6. Antitumor sera were obtained by immunizing rabbits with saline extracts of the tumors. The investigations were conducted by means of the complement fixation reaction and the method of fluorescent antibodies (the indirect Coons' test).

The results of the complement fixation reaction showed that the sera of rabbits immunized with fresh human carcinoma tissue reacted with extracts obtained from various malignant tumors, from normal embryonic tissue, from embryonic tissue cultivated for short periods, and with the cells of tumor strains cultivated for long periods of time.

Conversely, the sera of rabbits immunized with cells from gastric carcinoma tissue after long cultivation reacted only with antigens from cultures of tumor cells, and did not react (or gave only a weak reaction) with antigens of fresh tumor tissues and cultivated normal embryonic tissue.

Similar results were obtained by the use of the indirect Coons' test.

It may be concluded from these findings that the cells of tumor tissues when cultivated for long periods in vitro contain antigenic complexes similar in their structure to the antigens of fresh tumor tissue. However, they contain other components, which are predominant, and which probably arise in the process of cultivation, for they differ from the antigens of fresh tumor tissue.

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