(Campbell and Woode, *J. med. Microbiol.*, 1970, **3**, 463). Intracranial injection of lymphocyte cultures containing transformed cells has produced cerebral lymphomata in chickens.

DIAGNOSTIC AND PROGNOSTIC SIGNIFICANCE OF DELAYED HYPERSENSITIVITY SKIN TESTING IN PATIENTS WITH MALIGNANT NEOPLASIA. P. M. BOLTON, S. L. JAMES, J. DAVIDSON and L. E. HUGHES. University Department of Surgery, Welsh National School of Medicine, Cardiff.

Impairment of delayed hypersensitivity is a feature of advanced malignancy. Eilber and Morton (*Cancer, N.Y.*, 1970, **25**, 362) studied the response to D.N.C.B. in cancer patients and concluded that an impaired response indicated a poor prognosis.

We have investigated Mantoux and D.N.C.B. responses in 112 patients with solitary breast lumps and in 54 patients with suspected gastric or colonic neoplasia. Results were assessed in relation to final diagnosis (benign or malignant), tumour staging and prognosis.

Patients with benign breast lumps were nearly always D.N.C.B. positive, while impaired responses occurred in 60% of patients with breast cancer and haematogenous dissemination. Conversion from negative to positive was associated with a good response to treatment, whereas persistent negativity implied a poor prognosis.

Patients with gastrointestinal malignancy exhibited impairment of D.N.C.B. and Mantoux tests compared with controls. Positive tests indicated a better prognosis.

Serial testing of delayed hypersensitivity correlates with the course of the disease in cancer patients.

GROWTH INHIBITORY EFFECT OF PERITONEAL MACROPHAGES ON HARDING PASSEY MELANOMA, ITS IMPAIRMENT BY MACROPHAGE LYSOSOME OVERLOADING. F. J. LEJEUNE, E. BEAUMONT and Y. GARCIA. Department of Surgery, Institut Jules-Bordet, Brussels.

Repeated i.p. inoculations of irradiated Harding-Passey melanoma cells (HPM) induced an immune protection of mice against living HPM graft. *In vitro*, spleen cells from immune animals were found to produce a strong growth inhibition of HPM. However, peritoneal macrophages taken 7 days after immunization were less inhibitory than controls. The spontaneous cytotoxicity of control macrophages was recovered by macrophages taken 31 days after immunization. An electron microscopy study of the macrophages showed lysosome overloading with melanin on Day 7 and an important clearing of lysosomes on Day 31.

Preliminary experiments showed that it was possible to neutralize the inherent cytotoxicity of normal peritoneal macrophages by feeding them with melanin in culture.

Explants and primary cultures of HPM were found to contain a consistent amount of macrophages filled with melanin. It is suggested that malignant melanocytes can neutralize macrophage cytotoxicity by overloading their lysosomes with melanin.

CHANGES IN GROWTH AND ADHESION OF EHRLICH ASCITES TUMOUR CELLS COATED WITH TRYPSIN INHIBITOR (SOYBEAN). P. WHUR, R. T. ROBSON and N. E. PAYNE. Cell Biology Unit, Marie Curie Memorial Foundation, Research Department, Oxted, Surrey.

We report an attempt to inhibit tumour growth using a non-agglutinating plant protein. Mice injected i.p. with tumour cells and subsequently with trypsin inhibitor showed a 92% reduction of recoverable cells compared with untreated controls after 8 days of tumour growth. No differences were detected in rates of DNA synthesis *in vitro*, but experiments *in vivo* indicated that treated cells grew slightly faster. Trypsin inhibitor, which binds to the cell surface, was non-toxic to the treated cells. Scanning EM micrographs showed that treated cells, unlike untreated cells, adhered to internal abdominal surfaces, and treated cells also showed increased agglutinability with concanavalin A *in vitro*. These findings are generally compatible with the possible existence of an intrinsic protease, which becomes inhibited in treated cells.