



Fig. 3 Ability of lymphocytes from mice administered serially-transplanted or (mass) cultured tumour cells to lyse target cells from either serially-transplanted tumours, mass cultures, clones of cells with one M_8 or those with two M_8 . Lymphocytes were purified (Ficoll-hypaque separation) from the spleens of animals bearing palpable tumours and the cytotoxicity assay was performed according to the method described previously⁹. Target cells were plated in Falcon 3040 Microtest II wells and the cells directly counted 24 h later. Target cells were then exposed to lymphocytes for 2 d, washed with saline and stained with crystal violet for final counting.

chromosomes and the degree of suppression. Furthermore, a chromosome group responsible for the expression of malignancy has been identified in that tumour, the number of such chromosomes in cells of any clone being proportional to the degree of malignancy of that clone. When cells from clones of suppressed polyoma virus-transformed cells are reimplanted into syngeneic hosts, the tumours produced contain fewer suppressor chromosomes and more chromosomes for the expression of malignancy. Careful examination of MC-42 tumour cells failed to demonstrate a specific chromosome group responsible for the expression of malignancy.

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Isolation of *Bacillus anthracis* from an aborted bovine foetus

We report here the presence of virulent anthrax bacilli in aborted tissues. This is significant in that it suggests that the foetus becomes infected during the bacteraemia/pyrexia phase of the dam, and that the bacilli continue to multiply in and cause the death of the foetus despite the recovery with treatment in the parent cow. Since abortion may be a sequel to the infection in pregnant animals which survive, the products of such abortions must be regarded as potential vectors of anthrax both for man and other animals.

In Spring 1974 two cows died within 24 h of each other and anthrax was confirmed in each case. Control measures included the immediate vaccination of the remainder of the herd with a proprietary spore vaccine. Anthrax Spore Vaccine (Living), (Wellcome). The following day a cow became ill, having a rectal temperature which rose to 41.1°C. Antibiotic therapy was instituted and the animal recovered within 48 h. But 13 d after vaccination this cow aborted a foetus and placenta within an isolation box. In keeping with the Brucellosis Incentives Scheme rules, serum, milk and the products of abortion were forwarded to the local Veterinary Investigation Centre. The gestational age of the foetus was determined as 120 d, but apart from softening of the liver no gross pathological changes were seen in either the foetus or the placenta which might have indicated the possible presence of anthrax. Examination of smears prepared from foetal stomach contents and placental cotyledons revealed chains of encapsulated bacilli; overnight cultures prepared from similar sites were suggestive of *Bacillus anthracis* and material was forwarded to the Central Veterinary Laboratory, Weybridge, for identification.

Two guinea pigs inoculated subcutaneously with 1 ml of a saline suspension of the culture ($\sim 1 \times 10^6$ organisms) and 1/100 dilution of a saline suspension ($\sim 1 \times 10^4$ organisms) respectively died within 48 h. On *post mortem* examination hyperaemia associated with oedema, characteristic of anthrax, was observed and *Bacillus anthracis* was isolated in pure culture from blood and oedema. Anthrax was confirmed by the presence of encapsulated bacilli in guinea pig blood smears fixed and stained with 1% aqueous solution of polychrome methylene blue. The vaccine strain is seldom lethal for guinea-pigs and is not encapsulated if present in the blood of inoculated guinea pigs¹.

Two vaginal swabs and a faeces sample, taken from the cow 3 d after abortion, did not yield anthrax bacilli on bacteriological examination at the Central Veterinary Laboratory.

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Erratum

In the article "Precocious development of detoxicating enzymes following pituitary graft" by G. J. Wishart and G. J. Dutton (*Nature*, **252**, 408; 1974) line 3 in paragraph 10 should read '. . . similar weight from 2-d chicks down to 18-d embryos,' and not as printed.