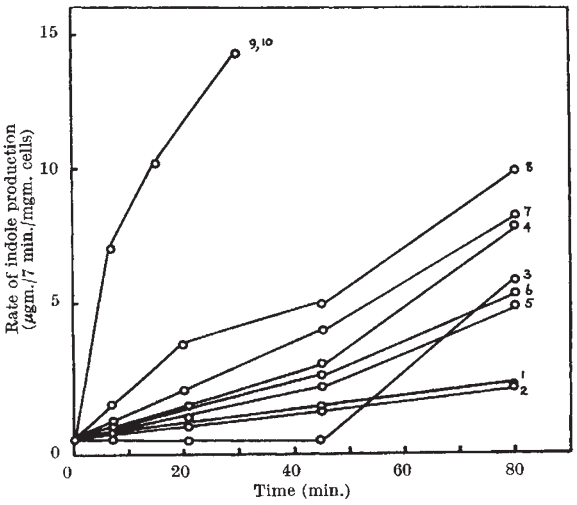

Fig. 1. Effect of the addition of certain amino-acids to a basal medium on the tryptophanase activity of cells of *E. coli* grown thereon.
Indole production per mgm. dry wt. of cells of *Escherichia coli*. 1, Cells from basal medium; 2, cells from basal medium + 3 μgm. pyridoxal phosphate; 3, cells from basal medium + 10^{-3} *M* DL-alanine; 4, cells from basal medium + 10^{-3} *M* DL-alanine + 3 μgm. pyridoxal phosphate; 5, cells from basal medium + 10^{-3} *M* L-alanine; 6, cells from basal medium + 10^{-3} *M* L-alanine + 3 μgm. pyridoxal phosphate; 7, cells from basal medium + DL-phenylalanine; 8, cells from basal medium + DL-phenylalanine + 3 μgm. pyridoxal phosphate; 9, cells from basal medium + tryptophan; 10, cells from basal medium + tryptophan + 3 μgm. pyridoxal phosphate

which 2 μgm. l-tryptophan in 1 ml. buffer (also at 37° C.) was added. The indole produced was then measured at intervals from 7 min. to 180 min. after the onset of incubation. The results are presented in Fig. 1.

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A Virus associated with Canine Encephalomyelitis

We have recently isolated from the tissues of a dog dying of encephalomyelitis a transmissible agent which appears to differ in several significant respects from the known etiological agents of canine encephalitis.

The natural case was a four months old fox terrier which developed nervous symptoms and died one month after distemper prophylaxis by the virulent virus – hyperimmune serum technique. It was not examined clinically. Histopathological examination revealed an acute demyelinating encephalitis without evidence of formation of inclusion bodies.

The experimental disease is characterized clinically by a continuous high fever with the subsequent development of various symptoms referable to the central nervous system. Tremor, weakness, ataxia, disturbed reflexes and epileptiform seizures have been seen. The histopathological lesions are those of a demyelinating encephalomyelitis. In addition, in one case there was an interstitial pneumonia. In no case have inclusion bodies been found in the brain or elsewhere. The sera of experimentally infected puppies (including one which survived forty-nine days *post inoculationem*) have shown no development of complement-fixing antibodies when tested against canine distemper virus and contagious canine hepatitis virus.

The experimental disease has been set up by the inoculation of tissue suspensions treated with 500 units of penicillin and 100 micrograms of streptomycin per ml. administered in intrathecal and intraperitoneal routes. In no case has any evidence of cultivable bacteria been found. Attempts are being made to cultivate the agent in the chick embryo; the results to date are equivocal.

The findings reported herein are of interest as they tend to incriminate a virus or virus-like agent distinct from those known to be capable of causing canine encephalitis. Much work will be required before such a hypothesis can be adequately supported; meanwhile, it is believed that the subject of the etiology of canine encephalitis is of sufficient general interest to warrant publication of these preliminary observations.

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Preservation of Bacteria

Bacteria may be preserved by drying suspensions either from the frozen or from the liquid state. Of these two methods, the former, particularly in the form of centrifugal freeze drying[1], has been widely used because of its efficiency and convenience.

A method which differs from previous ones and which appears to be worth serious investigation is at present being studied. In outline, it consists of dehydrating the viscous product which results when a small volume of bacterial suspension is incorporated in a mass of previously freeze-dried material.

The results shown in the table were derived from some early experiments with this method.

Organism	Survival (per cent) 1	2	4	8 months
Sh. flexneri	93	100	83	82
Salm. stanley	91	82	85	70
Salm. typhi	87	87	91	80
Str. viridans	80	80	69	63

Glass ampoules of 8 ml. capacity were found to be convenient for quantitative studies. A mixture of 6 per cent peptone (Evans) and 1 per cent soluble starch (B.D.H., 'Analar') was sterilized by autoclaving and dispensed into the ampoules in 1·5 ml. quantities. After freezing the mixture at − 20° C. for at least 5 hr., it was dried *in vacuo* for *c.* 18 hr., the water vapour being condensed on a refrigerated coil at − 40° C. The solids were left in the form of compact cylindrical plugs *c.* 13 mm. in diameter and *c.* 10 mm. in depth. The ampoules were stored in air-tight jars.

The manifold on which the inoculated ampoules were dried was a simple brass model with side-arms