

The virus is not particularly labile and will survive in normal saline suspensions, containing penicillin and streptomycin, for some weeks at $+2^{\circ}\text{C}$. It can be preserved for at least a year as frozen tissue at -30°C ., and freeze-dried material was still viable after $3\frac{1}{2}$ years at -30°C .

Three outbreaks in horses began in early spring and subsided spontaneously in May or early June. Of possible vectors in the area it seemed that only the over-wintering adults of *Hyalomma excavatum* were likely to be active as early as February; and that the feeding of hibernating adults, followed by that of adults newly moulted from hibernating nymphæ, would in all probability continue to the end of May. Systematic monthly collections of ticks confirmed this hypothesis, and inoculation of extracts of unfed ticks resulted in isolations of virus in rabbits and eggs. Virus was also shown to pass transovarially to the larvæ of *H. excavatum*.

Since larvæ and nymphæ of *H. excavatum* have been taken from nestling birds, wild birds, particularly aquatic species, were collected in an infected area in Syria, and pooled suspensions of brain were inoculated into rabbits or fed to kittens. In this way virus was recovered from *Ardea p. purpurea*, *Ardeola ralloides*, *Ardeola ibis ibis*, *Egretta g. garzetta*, *Oriolus oriolus*, *Glareola p. pratincola*, *Sturnus vulgaris* and others.

It was our intention to compare all these strains serologically, and for this purpose rabbits had recently been repeatedly inoculated with adjuvant vaccines. It was also intended during the present season to try to effect tick transmissions; but political developments have necessitated the postponement of our plans, perhaps for some considerable time. The disease in sheep is not uncommon in Syria, and since in the past two years outbreaks have been both frequent and extensive it is probably economically more important than the disease in equines. It is largely on this account that we have prepared this preliminary communication.

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Uptake of Radioactive Zinc *in vitro* by the Prostate

A HIGH concentration of zinc has been demonstrated in the prostate gland of many animals, especially in the dorso-lateral lobe of the rat¹, in human prostate² and spermatozoa. Because the radioactive isotope of zinc (zinc-65) at present available has a half-life of 250 days, it is unsuitable for studies in man, with the possible exception of cases with advanced malignant disease³.

Slices of dorso-lateral lobe of rat prostate, liver, muscle and other tissues have been incubated in

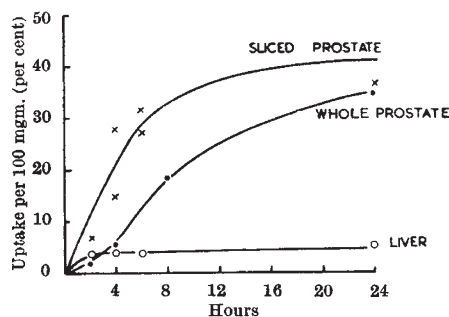


Fig. 1. Zinc-65 taken up by rat prostate and liver *in vitro*

buffered Krebs-Ringer phosphate at 37°C . in a Warburg apparatus. They show a steady oxygen uptake, and added zinc-65 with carrier is taken up by the tissues in concentrations relative to those obtained after injection of the isotope into the intact animal. Fig. 1 shows the result of such an experiment.

Human prostate obtained at surgical operations has been taken to the laboratory in ice and slices incubated in a similar manner. The tissue, which has usually been removed because of benign hypertrophy, shows a marked concentration of the isotope at 4 hr., and autoradiographs have been prepared from the slices.

This technique offers an acceptable method of studying zinc metabolism in human prostatic disease.

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Jan. 7.

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Histological and Histochemical Changes in Gamma-irradiated Lima Beans, *Phaseolus lunatus*

CLARK'S Bush variety of lima bean was grown on the farm of Farmington Experiment Station, Farmington, Utah; pods were harvested when beans were in the prime canning stage and were placed and sealed under vacuum in No. 10 tin cans. Each can was labelled, indicating the dose of gamma-rays to be given. The cans thus prepared for irradiation were transported under refrigeration (40°F .) to the National Reactor Testing Station, Arco, Idaho. The radiation used in the experiment was from a source of active spent fuel rods. Irradiation was by exposing the spent fuel rods from the reactor in a canal containing approximately 18 ft. of water. The rods were placed under columnar racks, and the cans containing lima beans were placed on the racks. The rate of irradiation was 1×10^6 rep/hr. at 78°F . The beans received the following doses of radiation: 0×10^6 (control), 1×10^6 , 2×10^6 , 4×10^6 , 8×10^6 , 10×10^6 , 20×10^6 , 40×10^6 , 60×10^6 , 70×10^6 , 80×10^6 and 100×10^6 rep.

Following irradiation, the cans were returned to the Horticultural Research Laboratory, where some of