

states that he cured three cases of gas gangrene when amputation appeared inevitable, and that the healing process set in 48 hours after the treatment began.

In this brief summary, I have stated the present position of the subject in so far as it is known to me. It is desirable, at the present early stage in the world calamity that we are facing, that the foregoing information should be made as widely known as possible. There is no doubt that further research into the technique of this method is urgently required. Also, I believe that it is correct to say that this method of wound treatment has been more widely explored in the United States than in England.

The literature on the subject is already extensive, and I have only mentioned a few of the chief writings here.

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- ¹ *J. Bone and Joint Surgery*, 13, 433-475 (1931).
- ² *Prelim. Rep. Surg. Gynaec. and Obst.*, 53, 155-165 (1934).
- ³ *Ann. Trop. Med. and Paras.*, 28, 445-460 (1934).
- ⁴ *U.S. Dept. of Agric., Bur. Entom. Ser. E*, 311 (1933).
- ⁵ *J. Amer. Med. Assoc.*, 98, 1143-49 (1932).
- ⁶ *J. Econ. Ent.*, 30, 41-48 (1937).
- ⁷ *Z. wiss. Insektenbiol.*, 27, 82-85 (1934).

Points from Foregoing Letters

In view of the large apparent difference between the sensitivities of bean roots to neutrons and γ -rays, a search was made by L. H. Gray and J. Read for possible contributions to the energy absorption in tissue resulting from neutron irradiation, such as induced radioactivity. The activity induced in ashed grass was measured experimentally, and was found to correspond to a quite inappreciable contribution to the total energy absorption. The difference in sensitivity to neutrons and γ -rays is therefore considered to be real.

The scattering cross-sections of various elements for D-D neutrons have been measured by W. D. Allen and C. Hurst, using phosphorus as a fast neutron detector. The cross-sections thus observed are smaller than those obtained by previous experimenters.

The superficial oxide films formed on aluminium containing small admixtures of beryllium or magnesium are found by S. Dobinski and M. Niesluchowski to consist in most cases of BeO or MgO, even when the additional element is present at so low a concentration as 0.03 per cent in the case of magnesium.

When testing a new Coolidge tube with molybdenum target, I. Koga and M. Tatibana observed brilliant spots and scratch markings on the target while X-rays were being emitted. They suggest that the spots are due to electronic bombardment of minute protrusions from the surface of the target. Jan Forman describes similar appearances which were noted when using multi-segment magnetrons under certain conditions; the luminescent points were on the backs of the anode segments. He has also seen a similar effect in a Farnsworth cold cathode multiplier.

According to results obtained by P. György and R. E. Eckardt, the part played by the vitamin B₂ complex in dermatologic conditions has to be extended beyond vitamin B₆. In the presence of vitamins B₁ and B₆ and riboflavin, three further types of dermatologic conditions were observed.

M. Landy has confirmed earlier work by other investigators, who showed that some strains of haemolytic streptococci can be grown on a peptone base medium supplemented with glutamine; but when the peptone is replaced by a stock amino-acid mixture frequently used for nutritional studies, he finds no growth, suggesting that peptone contains a necessary growth factor.

A. K. Balls and H. Lineweaver state that the exposure of crystalline papain to iodoacetate, or for

longer periods to cystine, resulted in the disappearance of sulphhydryl as determined by a titration with iodine on the later denatured protein. The loss corresponded approximately to one -SH group per molecule of the enzyme protein inactivated by the reagent. Qualitative tests for -SH with nitroprusside in the absence of added cyanide were positive only on denatured protein that had not been treated with iodoacetate or cystine. The results permit the conclusion that an -SH group or the precursor thereof is essential to the enzymic activity of papain. It is also evident that native proteins exist for which the nitroprusside test is not informative.

H. A. Krebs and P. P. Cohen describe a 'dismutation' between α -ketoglutaric and α -imino-glutaric acids leading to the formation of glutamic acid, succinic acid and carbon dioxide. The reaction is an intermediary process in the metabolism of heart and kidney.

H. R. Catchpole and J. F. Fulton give an account of the first recorded survival of the spectral tarsiers in captivity outside the area of their normal distribution (Melanesia). A pair were brought from Surigao in the Philippines to New Haven, Conn., U.S.A., in November 1938, and they are now thriving under laboratory conditions. The female is mature and has exhibited regular oestral cycles of 23-28 days duration.

The photoperiodical response of several Swedish violas has been studied experimentally by G. Borgström. It seems that chasmogamy and cleistogamy are due to different photoperiods. When the photoperiod is less than 15 hours chasmogamic flowers normally appear, and when exceeding this day length cleistogamic flowers occur. Several additional morphological responses have been observed. These results partly account for the occurrence of these different flower-types in Nature.

G. H. Thomson points out that Burt's symmetry criterion for identity of mental factors in two batteries of tests, if accepted, may conceivably enable the natural variances of such tests to be ascertained.

A mutant coffee growing in Brazil has seeds which are yellow throughout. Pollination of these plants with normal green-seeded coffee produces hybrid seeds which are green, according to C. A. Krug and A. Carvalho. It is inferred that true endosperm constitutes the bulk of the mature coffee seed.