

- 1946, **56**, 489. 14. Albert, K., Hoch, P. and Waelsch, H., *J. Nerv. and Ment. Dis.*, 1946, **104**, 263. 15. Ikeda, K., *Original Communications. Eighth International Congress of Applied Chemistry*, 1912, **18**, 147. 16. Howe P. E. and Barbella, N. G., *Food Res.*, 1937, **2**, 197. 17. Crocker, E. C. and Sjostrm, L. B., *Ibid.*, 1948, **6**, 450. 18. Meyer, W. G., *Food Mannf.*, 1950, **25**, 317. 19. Kirkpatrick, S. D. and Callahan, J. R., *Chem. Engng. Nouv.*, 1950, **11**, 107. 20. Hatfield, M. R. and Ford, C. E., *Trans. Amer. Inst. Chem. Engrs.*, 1946, **42**, 121. 21. Winton, A. L. and Winton, K. B., *Structure and Composition of Foods*, 1946, **1**, New York, John Wiley & Sons. 22. Block, R. J., and Bolling, D., *Amino-acid Composition of Proteins and Foods*, 1950, Springfield, C. C. Thomas.

#### NEW TYPE OF PENICILLIN

A SPECIES of *Cephalosporium* has been found to produce two different kinds of anti-bacterial substances. The first consists of a group of acidic antibiotics which are soluble in common organic solvents, are active mainly against gram-positive organisms, and show similarities to helvetic acid. The second consists of a substance (or group of substances) which is insoluble in most organic solvents, and is active against a number of gram-positive and gram-negative organisms. This has been called 'Cephalosporin N'. Evidence has now been obtained that cephalosporin N is a new type of penicillin.

The reasons for believing that the antibiotic is a penicillin are: (1) It was inactivated by preparations of the enzyme penicillinase in high dilution, and, like benzyl-penicillinase, it stimulated the adaptive production of penicillinase by suspension of *Bacillus cereus*. (2) It was rapidly inactivated at room temperature in

aqueous solution below  $p_H 4$  or above  $p_H 9$ , and also at  $p_H 7$  in the presence of heavy metal ions such as those of copper, lead and tin (3) Various chemical reactions yielded thiazolidine hydrochloride, penicilline hydrochloride, penicillaminic acid and glyoxal bis-2:4-dinitro-phenyl hydrazone.

Cephalosporin N differs strikingly from the common penicillins in its hydrophilic character and its anti-bacterial activity. It behaves like an acidic substance on ion-exchange resins, and ionophoresis on paper shows that it carries a negative charge at  $p_H 6-7$ . Also it appears likely that the activity of pure cephalosporin N against many gram-negative bacteria will be of the same order as that of benzylpenicillin. The relatively low activity of the antibiotic against gram-positive bacteria suggests that it reaches the sensitive parts of these organisations much less readily than the other penicillins.—(*Nature*, 1953, 171, 343.)

#### 'DARAPRIM' IN TREATMENT OF VIVAX MALARIA

THE effects of pyrimethamine ("daraprim") on the clinical symptoms and also on the parasites in 30 cases of vivax malaria attending hospitals in Delhi State are reported by Jaswant Singh and collaborators of the Malaria Institute of India in a recent issue of the *British Medical Journal*. The clearance of symptoms and asexual parasites was more rapid in those who had a previous history of malaria than in those who had not. Though one must withhold judgment until reports on a large-scale and continued observations are available, daraprim seems to be remarkably effective against *P. vivax* in doses as small as 25 mg. The drug in all probability has a future and further work is indicated.

It may be mentioned that more recent reports from the U.S.A. show that the drug has gone through laboratory and field tests and found to be an anti-malarial of unusual scope and potency—perhaps the most effective agent discovered so far for the cure and suppression of malaria. It is claimed that the drug is 10 to 200 times as active as chloroquine, proguanil and mepacrine, the standard drugs in use at present for the treatment of malaria. It is reported that a 50 mg. dose of 'daraprim' is often sufficient to control the fever in acute malarial attacks and render the blood free from most strains of the disease, and that there are no after-effects.

#### COMMONWEALTH INDEX OF SCIENTIFIC TRANSLATIONS

THE British Commonwealth Scientific Liaison Offices in London are operating a scheme for a Commonwealth Index of Scientific Translations, and have appointed so far seven agencies in the Commonwealth countries. These agencies act in a liaison capacity and are responsible for collecting information about existing translations in that area for advising BCSO, London, of these, for the maintenance

of a central index of translation as also for assisting research workers in each area to obtain copies of translations requested by them and already prepared elsewhere. Scientific organisations are invited to participate in the scheme and to get into touch with the Ministry of Natural Resources and Scientific Research, New Delhi, who hold the agency for our country.