MEDICINE

New Vitamin Discovered

Anti-anemia member of B family may have value in disease treatment. Experiments with chicks show promise. Existence of substance has long been suspected.

➤ DISCOVERY of an anti-anemia vitamin which promises to be of major use in disease treatment is announced to the scientific world (*Science,* April 30).

This new substance of the vitamin B family, obtained through cooperative research by groups at Parke, Davis and Company and the University of Missouri, may very well be one reason spinach is good for building good red blood and liver or liver extract cures pernicious anemia.

Its existence has been suspected since 1940. What the scientists call vitamin B sub c, or the "anti-anemia factor for chicks," has now been isolated as thin, yellow, spearhead-shaped crystal platelets, chemically composed of carbon, hydrogen and nitrogen.

Careful as always, the scientific report does not claim application to human nutrition, but there is a good chance that what works in chicks will work in man.

Dr. J. J. Pfiffner led the Parke, Davis group of scientists, and Prof. A. G. Hogan and Dr. B. L. O'Dell were the team from the University of Missouri where this vitamin has been under investigation for several years. Signing the scientific paper with Dr. Pfiffner from the Detroit laboratory were: S. B. Binkley, E. S. Bloom, R. A. Brown, O. D. Bird and A. D. Emmett.

The scientists state that they believe their vitamin is the same as the folic acid factor believed to be a vitamin and found by other scientists in spinach and other green leaves. (*See SNL,* April 10) They also think it is the same as an "eluate factor" obtained from liver by still another group of researchers.

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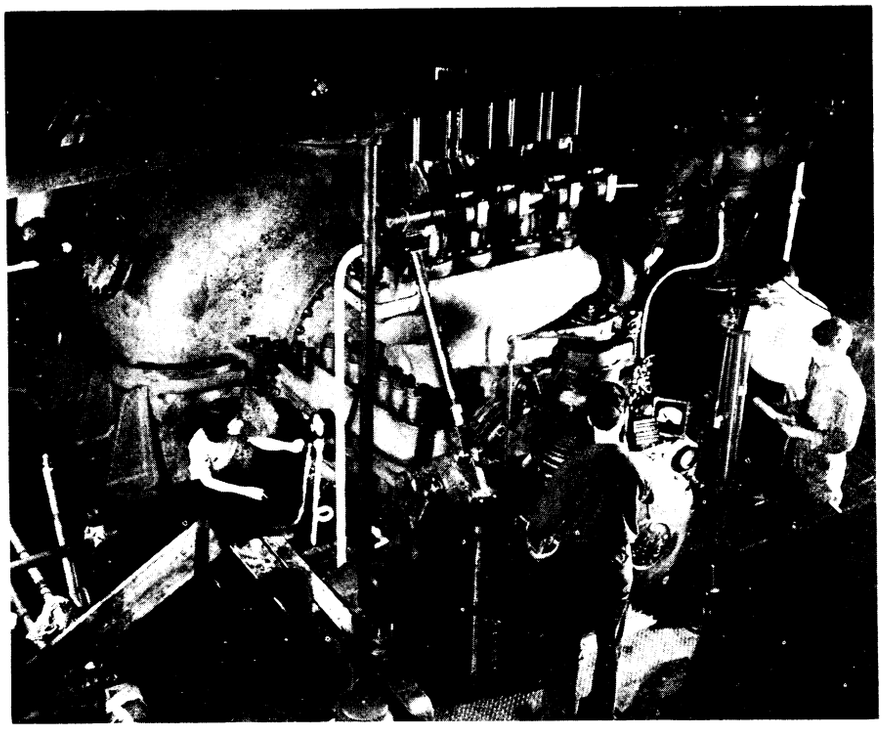

FLOATING POWER—This 30,000-kilowatt turbine generator is one of four floating power plants that General Electric is building for the War Production Board. Towed to manufacturing areas on inland waterways, the mobile generators will provide an emergency power supply.

PLANT PATHOLOGY

New Soil Disinfectant Combats Harmful Organisms

➤ A NEW low-cost disinfectant protects crops from injury by organisms in the soil. The chemical, called D-D mixture for short, gave a real measure of control in tests on rapidly maturing vegetable crops planted in soil heavily infested with root-knot threadworms.

Other experiments in pineapple fields, conducted during the past three years, showed a favorable response in growth, Walter Carter of the Pineapple Research Institute reports (*Science,* April 23). Results were particularly striking in an area where beetle larvae, threadworms and a fungi had ganged up to produce serious plant failure. But the favorable results in the pineapple tests did not show up for over a year after soil treatment.

Cost of the chemical is low compared with any competing disinfectant. It is especially useful where prediction of damage cannot be made prior to planting or in areas where damage is spotty. About 200 pounds of the disinfectant were applied per acre, injected into the soil at one-foot intervals. Gas masks are not needed when the applications are made in the open air.

Much experimental work remains to be done on such problems as dosage under various soil and weather conditions and on the effect of treatment on specific organisms.

This product, which promises to bolster our food production, is technically a mixture of 1:3 dichloropropylene and 1:2 dichloropropane.

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GENERAL SCIENCE

Henry Wallace Elected to Philosophical Society

➤ VICE PRESIDENT Henry A. Wallace is among the 32 new members elected by the American Philosophical Society, oldest of scientific bodies in this country. This election is in keeping with the traditions of the Society, for it was founded by an earlier American who combined statesmanship, science and letters in one career: Benjamin Franklin. And at its recent meeting it celebrated the bicentennary of another American who had a similar career, and who was

also at one time Vice President of the United States: Thomas Jefferson.

The 32 new members include 27 American and five foreign scientists. Elections to the Philosophical Society are made according to four classes, as follows:

Class 1, Mathematical and Physical Sciences: Prof. Raymond T. Birge, University of California; Dean Samuel C. Lind, Institute of Technology, University of Minnesota; Prof. Donald H. Menzel, Harvard University; Prof. Marshall H. Stone, Harvard University; Dr. M. A. Tuve, Department of Terrestrial Magnetism, Carnegie Institution of Washington; Dean Frank C. Whitmore, Pennsylvania State College; Sir William Laurence Bragg, Cambridge University, England; Prof. L. E. J. Brouwn, University of Amsterdam, The Netherlands; Prof. Godofredo Garcia Diaz, University of San Marcos, Peru.

Class 2, Geological and Biological Sciences: Prof. R. T. Chamberlin, University of Chicago; Prof. Ralph W. Chaney, University of California; Prof. H. T. Clarke, Columbia University; Prof. L. C. Dunn, Columbia University; Prof. E. W. Goodpasture, Vanderbilt University; Dr. Warren H. Lewis, Wistar Instiute of Anatomy and Biology; Dr. George L. Streeter, Carnegie Institution of Washington.

Social Sciences and Humanities

Class 3, Social Sciences: Prof. J. P. Boyd, Princeton University; Douglas S. Freeman, editor, Richmond, Va., News Leader; Dr. Owen Lattimore, Johns Hopkins University; Henry Allen Moe, secretary general of the Guggenheim Memorial Fund; Dr. Walter W. Stewart, Institute for Advanced Study, Princeton, N. J.; Prof. Quincy Wright, University of Chicago.

Class 4, The Humanities; Prof. W. E. Hocking, Harvard University; Fiske Kimball, director, Philadelphia Museum of Art; Prof. Charles G. Osgood, Princeton University; Prof. Erwin Panofsky, Institute for Advanced Study, Princeton, N. J.; Prof. Mary H. Swindler, Bryn Mawr College; Dr. George C. Vaillant, director, University Museum, University of Pennsylvania; Prof. John D. Beasley, Oxford University; Dr. Allan H. Gardiner, editor, Journal of Egyptian Archaeology; C. E. Barnard, president, New Jersey Bell Telephone Company; Henry A. Wallace, Vice President of the United States of America.

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MEDICINE

Chemical Tests Gangrene

Simple, quick test aids difficult diagnosis of gangrene by detecting germ enzymes. Promises to save many war wounded. Practical field trials planned.

➤ LIVES threatened by gas gangrene infection in war wounds may be saved if a new chemical test proves as successful in the hands of military surgeons as it has in laboratory experiments.

The test depends on detecting in fluid exuded from the wound the presence of enzymes or ferments produced by the germs that cause gas gangrene.

The test was developed by Dr. D. McLean and Dr. H. J. Rogers, of England's Lister Institute of Preventive Medicine, and Dr. B. W. Williams, of St. Thomas's Hospital, London (*Lancet*, March 20).

Gas gangrene develops so quickly that death may follow within a few hours and even experienced surgeons, the editor of the medical journal points out, may have difficulty in making the diagnosis in time for effective treatment. Nor is the bacteriologist able to give him much help.

The new chemical test gives results within an hour and is simple to perform. By using an ordinary white blood cell-counting pipette with a few simple precautions it can, the scientists state, be carried out under field conditions.

So far it has only been used in laboratory experiments so that its real practical value is not yet known. The scientists who developed it have published their results quickly so that it can be given an early trial in actual practice.

Of the enzymes produced by the gas gangrene germs, one, called hyaluronidase, is also produced by certain other germs. The scientists apparently believe, however, that it would be more practical to test for this enzyme as a diagnostic measure than for lecithinase, presence of which would give a more specific diagnosis but which is likely to be present in only very small amounts at a time when detection of it would help the diagnosis.

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RESOURCES

New Tannin Source Found

➤ THE semi-tropical buttonwood tree found in southern Florida, and more plentifully in Middle America, promises an abundant source of tannin for heavy leather tanning to replace the vanishing supply of chestnut tree tannin.

Both the bark and the wood of this buttonwood tree, which grows to a diameter of 12 inches, are rich in tannin. In the bark the content is 20 per cent, in the wood 8 per cent. Both leach easily. Both give firm, tough, strong, well-filled leather.

The bark leather is slightly darker than the wood leather. Except for this the results with the two extracts are identical.

A nation-wide search has been under way for new sources of tannin since a few years ago, when hope was lost for a further supply of chestnut tannin. Chestnut trees died from a disastrous blight two decades ago, and new plantings are quickly killed by the same blight. The dead wood was used for tannin as long as the supply lasted. Other plants have been found that yield tannin but none of them give the promise now given by the buttonwood.

Dr. Alfred Russell, professor of chemistry at North Carolina State University, has done much work on tannin extraction and in the search for tannin. He reports the results of tests in his laboratory with tannin extracted from the buttonwood.

Split calfskins were tanned with buttonwood tannin, chestnut tannin, and quebracho.

He states, "The buttonwood leather is heavier, better filled, mellower and lighter in color than the chestnut leather; it is heavier, tougher, stronger, equally well filled, but not so soft as the quebracho leather."

The buttonwood which Dr. Russell states yields tannin is called Conocarpus erecta by botanists.

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