

## MEDICINE

# New Germ-Fighting Drug

► A NEW disease-fighting drug was announced by Dr. Walter J. Nungester and Ada M. Ames of the University of Michigan at the meeting of the Society of American Bacteriologists in Cincinnati.

The drug is one of the man-made chemicals called quaternary ammonium compounds. Some of its relatives are used to make soapless soaps, or detergents. It acts by stimulating the body's natural defenses against germs, increasing the action of the phagocytic white blood cells which normally engulf invading bacteria. This is different from the action of penicillin and sulfa drugs which destroy or check the germs themselves.

One of these compounds gave complete protection to 16 out of 20 mice receiving

100,000 times the killing dose of Type I pneumonia germs. Another quaternary ammonium compound gave protection to 19 out of 20 mice threatened by the same dose of pneumonia germs. All untreated animals given this dose died within 24 hours.

These compounds have not yet been tried on humans and further study must be made before their usefulness for humans can be determined. But if they live up to present expectations, they may in future be useful in a two-way attack on disease. For this they might be given with a sulfa drug, penicillin or some other medicine that destroys germs while the new anti-germ chemical is stimulating the body's own defenses.

Science News Letter, May 28, 1949

sociation and who will move in about a year to the new building are constantly working out new methods of food preservation and taking care of the continual problems that arise in the industry. Like so many other things, canning had its beginning from a Napoleonic need. The Little Corporal offered a prize for a method of serving food for his armies, and Nicholas Appert, a Frenchman, won the prize when he invented canning. His new art was first applied to meat and soup.

Science News Letter, May 28, 1949

## SCIENCE NEWS LETTER

VOL. 55

MAY 28, 1949

No. 22

50,800 copies of this issue printed

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N. W., Washington 6, D. C., NOOrth 2255. Edited by WATSON DAVIS.

Subscription rates: 1 yr., \$5.50; 2 yrs., \$10.00; 3 yrs., \$14.50; single copy, 15 cents, more than six months old, 25 cents. No charge for foreign postage.

Change of address: Three weeks notice is required. When ordering a change, please state exactly how magazine is now addressed. Your new address should include postal zone number if you have one.

Copyright, 1949, by Science Service, Inc. Reproduction of any portion of SCIENCE NEWS LETTER is strictly prohibited. Newspapers, magazines and other publications are invited to avail themselves of the numerous syndicate services issued by Science Service. Science Service also publishes CHEMISTRY (monthly) and THINGS of Science (monthly).

Printed in U. S. A. Entered as second class matter at the post office at Washington, D. C. under the act of March 3, 1879. Established in mimeographed form March 18, 1922. Title registered as trademark, U. S. and Canadian Patent Offices. Indexed in Readers' Guide to periodical literature, Abridged Guide, and the Engineering Index.

Member Audit Bureau of Circulation. Advertising Representatives: Howland and Howland, Inc., 393 7th Ave., N.Y.C., Pennsylvania 6-5566 and 360 N. Michigan Ave., Chicago. STATE 4439.

### SCIENCE SERVICE

The Institution for the Popularization of Science organized 1921 as a non-profit corporation.

Board of Trustees—Nominated by the American Association for the Advancement of Science: Edwin G. Conklin, Princeton University; Karl Lark-Horowitz, Purdue University; Kirtley F. Mather, Harvard University. Nominated by the National Academy of Sciences: Harlow Shapley, Harvard College Observatory; R. A. Millikan, California Institute of Technology; L. A. Maynard, Cornell University. Nominated by the National Research Council: Ross G. Harrison, Yale University; Alexander Wetmore, Secretary, Smithsonian Institution; Rene J. Dubos, Rockefeller Institute for Medical Research. Nominated by the Journalistic Profession: A. H. Kirchofer, Buffalo Evening News; Neil H. Swanson, Baltimore Sun Papers; O. W. Riegel, Washington and Lee School of Journalism. Nominated by the E. W. Scripps Estate: H. L. Smithton, E. W. Scripps Trust; Frank R. Ford, Evansville Press; Charles E. Scripps, Scripps Howard Newspapers.

Officers—President: Harlow Shapley, Vice President and chairman of Executive Committee: Alexander Wetmore, Treasurer: O. W. Riegel, Secretary: Watson Davis.

Staff—Director: Watson Davis. Writers: Frank Thone, Jane Stafford, A. C. Monahan, Marjorie Van de Water, Martha G. Morrow, Ron Ross, Lydia Schweiger. Science Clubs of America: Joseph H. Kraus, Margaret E. Patterson. Photography: Fremont Davis. Sales and Advertising: Hallie Jenkins. Production: Priscilla Howe. In London: J. G. Feinberg.

## GENERAL SCIENCE

# Canners Omit Food Cans

► THERE is not even one canned calorie in the corner-stone of the new building of the National Canners Association, now being erected a few blocks from the White House.

Copies of research reports, daily newspapers, even tempting canned food recipes, and labels from commercial canned food are sealed in the stone for posterity to discover when buildings of mid-twentieth century become old and retired.

But the canners' capsule has not one tin of food, or can of beer, bottle of sauce or jar of edible material, just two cans, sealed, of papers and a glass jar of records, all non-nutritious. These historical items were presumably chosen in hope they would not become stale or spoiled.

Yet what is more ancient than yesterday's newspaper?

Cans of food are intended to be opened and eaten in a year or two, and most of them are. They will last for years—almost forever—if the cans do not corrode and the contents keep sterile. The record for canned food longevity is about 50 years.

Wisconsin corn canned 50 years ago is one of the prized possessions of Continental Can Company, and some of these specimens opened recently were in good condition. The first food canned in America was lobster, it is said. That was 1819, and no specimens remain. Not long ago, however, some of the canned food that Admiral Peary took with him on one of his early trips to the Arctic was brought back to civilization, and it was in good condition.

The scientists who work in the present laboratories of the National Canners As-

# Question Box

### BACTERIOLOGY

What is the new tool for diagnosing sickness caused by germs? p. 342.

### ENGINEERING

How can boilers be converted to an air-conditioning system? p. 341.

### GENERAL SCIENCE

What have studies revealed about GI attitudes during the war? p. 343.

Photographs: Cover, Langley Aeronautical Laboratory; p. 339, Bell Telephone Laboratories; p. 341, Carrier Corporation; p. 343, Harry D. Tiemann.

### MEDICINE

How does a new disease-fighting drug work? p. 340.

Of what significance is the discovery that cancer disturbs a metabolic function? p. 339.

What drug shows promise of checking whooping cough? p. 344.

What is the diagnostic test for a disease which causes parts of the body to enlarge? p. 338.

### PSYCHIATRY

What is the dream world of adolescents concerned with? p. 341.