

GENERAL SCIENCE

Foundation Board Named

The scientists who will mold the policy of the National Science Foundation have been named by President Truman. Sixteen states are represented.

► THE 24 board members of the National Science Foundation, appointed by President Truman to make national policy for scientific research and education and administer government grants, are representative of all sections of the nation and the broad fields of science, engineering and industry.

Among the membership are seven university presidents, heads of two big foundations, 11 deans, department heads, or professors of colleges, two industrial presidents. Sixteen states and the District of Columbia are represented on the board of 24.

Professionally, the board includes four biologists, four chemists, four educators, two engineers, one geologist, two industrialists, one mathematician, three medical scientists, and three physicists.

Two women are on the board and one of them, Dr. Cori, is the only Nobel prize winner in the group. The board includes two Negroes, one a chemist and the other a college president.

The members appointed are Dr. Sophie D. Aberle, special research director, University of New Mexico; Dr. Robert P. Barnes, head of the chemistry department, Howard University; Chester I. Barnard, president, Rockefeller Foundation; Dr. Detlev W. Bronk, president, The Johns Hopkins University; Dr. Gerty Theresa Cori, professor of biological chemistry, Washington University Medical School; Dr. James Bryant Conant, president, Harvard University; Dr. John W. Davis, president, West Virginia State College; Charles Dollard, president, Carnegie Corporation; Dr. Lee A. Dubridge, president, California Institute of Technology; Dr. Edwin B. Fred, president, University of Wisconsin; Dr. Paul M. Gross, dean of Duke University Graduate School; Dr. George D. Humphrey, president, University of Wyoming; Dr. O. W. Hyman, dean of medical school and vice-president, University of Tennessee; Dr. Robert F. Loeb, Bard professor of medical services, College of Physicians and Surgeons, Columbia University, and Dr. Donald H. McLaughlin, president of Homestake Mining Co., San Francisco, Calif.

Others are Dr. Frederick A. Middlebush, president, University of Missouri; Edward L. Moreland, partner, Jackson and Moreland, Boston, Mass.; Dr. Joseph S. Morris, head of the physics department and vice-president of Tulane University; Dr. Harold Marston Morse, professor of mathematics, Princeton University; Dr. Andrey A. Potter, dean of engineering, Purdue University; Dr. James A. Reyniers, director of bacteriology

laboratories, Notre Dame University; Dr. Elvin C. Stakman, chief, division of plant pathology and botany, University of Minnesota; Charles Edward Wilson, president, General Electric Co., and Rev. Patrick Henry Yancey, professor of biology, Spring Hill College.

Science News Letter, November 11, 1950

MEDICINE

Sugar Handy Aid For A-Bomb Victims

► SUGAR can supply two medical aids to any future atom bomb victims, Dr. Robert C. Hockett, director of the Sugar Research Foundation, reported to the American Public Health Association meeting in St. Louis.

One of these is dextran, a water-white mucilaginous compound produced only from sugar by the action of certain bacteria. It could be used as a substitute for blood plasma and can be produced cheaply.

The second sugar aid to atom bomb victims described by Dr. Hockett is invert sugar. This is a liquid mixture of dextrose and levulose easily made from common sugar. In the ordinary process of digestion, the body converts sugar to invert sugar. But for patients who cannot eat and must be nourished by solutions injected into their veins, invert sugar is a "superior nutriment," Dr. Hockett said. Trials on patients show that the levulose fraction of sugar is apparently what causes improved metabolism and nourishment of the patients given this kind of sugar by veins.

Science News Letter, November 11, 1950

AERONAUTICS

JATO Rockets Use Smokeless Powder

► BOOSTER rockets, used to help get fighter planes quickly into the air from the decks of Navy carriers, need no longer cloud the vessel in smoke.

A new rocket, developed for the Navy by the Allegany Ballistics Laboratory, Cumberland, Md., uses smokeless powder for fuel. Although the new unit weighs considerably less than present types, it provides an equal amount of thrust.

Rockets used to provide extra power to planes at the takeoff are called JATO for short. The letters stand for "jet assisted take-off." They are used on carrier decks and short runways at airports to get planes

into the air more quickly than can be done by engines alone. The rockets are dropped when they have done their job.

Smokeless powder has been used for some time as a propellant charge for military and naval guns. This is said to be the first JATO to employ it. For its development, both Army and Air Force contributed funds. All three services plan to use the new rocket.

Science News Letter, November 11, 1950

DENTISTRY

Five Chemicals Seal Tiny Teeth Openings

► FIVE substances that can penetrate the entire structure of the teeth, going through enamel defects and decayed areas and plugging the tiny perforations known as lamellae, were reported by Dr. William Ward Wainwright of the University of Illinois College of Dentistry, Chicago, at the meeting in Atlantic City of the American Dental Association.

The five substances are: calcium chloride, silver nitrate, palladium chloride, sodium iodide and copper nitrate.

The extent to which the tiny perforations are plugged and the nature of the substance doing the plugging seems to have much to do with the incidence of tooth decay, it was pointed out.

"Certainly the vulnerability of the tooth



MAPS NEEDED—Robert L. Williams, Yale's newly appointed cartographer, makes a map in Yale's newly established Cartography Laboratory in the University Library. The laboratory, one of the few of its kind in U. S. educational institutions, has been set up to meet the increased demand for maps in classroom teaching.

is increased by the presence of so many permeable tracts," Dr. Wainwright said.

Zinc chloride also could penetrate the lamellae, decayed areas and other defects. Nearly all the lamellae could subsequently be plugged by other substances, however, so they were not considered permanently plugged.

Plutonium, atom bomb material, when used in a citrate complex did not penetrate decayed areas and defects. It attached itself to the surface of the enamel.

Discovery of this vulnerability of the tooth, said to be of prime importance in the prevention and treatment of tooth decay, was made by applying the substances in their radioactive form to teeth that had been extracted. After treatment with the radioactive chemical, the teeth were dissected and the dissected portions applied directly to X-ray film. This gave radiographs of the teeth for study of their structure.

Science News Letter, November 11, 1950

METEOROLOGY

Warmer and Drier November for U. S.

► THE last two weeks in November will be warmer and drier than usual over most of the nation. However, the Pacific Coast including Washington and Oregon, and parts of Idaho, Montana, Utah and Nevada will have more rain or snow than usual.

Thus the U. S. Weather Bureau's extended Forecast Section, in its regular twice-a-month, 30-day forecast, offers little hope for relief to the flood-threatened Northwest.

Temperatures of the southern Rocky Mountain states will go higher than those of most of the nation in November. They are expected to be "considerably" above normal, the Weather Bureau says. Only northern New England and northwestern Washing-

ton will be colder than usual and then only slightly so.

Near normal rain or snow is expected only along the nation's northern border and in the northeast.

Science News Letter, November 11, 1950

BOTANY

Predict Apples That Do Not Turn Brown in Air

► APPLES for your Waldorf salad that will not require any special attention to keep them from turning brown in the air were predicted.

"Apple breeders now have available to them a German apple with this desirable trait. If there is sufficient demand for an American apple that will not turn brown when exposed to air, then I see no reason why the breeders can not develop it."

So states Dr. William E. Whitehouse of the U. S. Department of Agriculture's Plant Industry Station, Beltsville, Md., in charge of introductions for the improvement of fruit and vegetable crops.

There is one German apple now available with a non-oxidase system, that is, a system that will not turn brown, or oxidize, when exposed to air. Two other apple varieties with this same trait have been discovered within the past year and these will also be made available to breeders.

Dr. Whitehouse also predicted the possibility of improving present day apple varieties by breeding those with increased vitamin C content, with the spice-like flavor found in some English apples and with the smooth, after-cooking flesh texture found in certain German and New Zealand apples.

The world-wide search for apples with desirable traits was begun over 15 years ago. Since it takes about eight years for a tree to bear fruit and since frost delayed bearings for five years in a row, the rich collection of foreign varieties is just be-

ginning to be distributed to breeders. Over 1,500 varieties have been rounded up, and only 700 of these have so far had their characteristics thoroughly studied, Dr. Whitehouse stated.

Science News Letter, November 11, 1950

All the sugar in the bread dough does not remain as sweetening; some is converted by the yeast into carbon dioxide and alcohol gas which causes the bread to rise.

SCIENCE NEWS LETTER

VOL. 58 NOVEMBER 11, 1950 No. 20

43,400 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., NORTH 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.

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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. Acceptance for mailing at the special rate of postage provided for by Sec. 34.40, P. L. and R., 1948 Edition, paragraph (d) (act of February 28, 1925; 39 U. S. Code 283), authorized February 28, 1950. 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.

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

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