

## MEDICINE

**Leukemia Drugs Used In Autoimmune Diseases**

► THE SAME DRUGS used to treat leukemia (cancer of the blood) are being used to block the immune responses in autoimmune diseases, Dr. William Dameshek, director of the Blood Research Laboratory, Pratt Clinic, New England Center Hospital, Boston, Mass., reported.

"This may affect transplantation rejection," Dr. Dameshek said, "so that skin and kidney transplants may be accepted."

The drugs used successfully have been methotrexate and 6-mercaptopurine. Noteworthy results were obtained with 6-mercaptopurine in autoimmune disorders such as hemolytic anemia and in some cases of systemic lupus erythematosus (SLE or Red Wolf Disease), as well as in vascular purpura, a hemorrhagic blood ailment. These antibody diseases are called autoimmune because they attack an individual's own tissues.

Dr. Dameshek spoke in Washington, D. C., on Leukemia and Auto-Immuneization at a meeting of the St. George Society, composed of medical students.

• Science News Letter, 81:184 March 24, 1962

## PUBLIC HEALTH

**School Children Benefit From Food for Peace**

► SOME 30,000,000 school children in 81 countries overseas are benefiting from school lunches under President Kennedy's Food for Peace Program.

George McGovern, director of the program, who has just returned from a month-long trip that included Hong Kong, Cairo, Tunis and New Delhi, said the total cost of overseas school lunches to the United States in 1961 was about \$150,000,000.

"With between 650,000,000 and 700,000,000 school-age children in the world today," Mr. McGovern told a news conference in Washington, D. C., "we should multiply our school lunch programs several times over."

India's children (3,000,000) are benefiting most from the school lunch program with Egypt next with 2,000,000. More than 1,000,000 children in Tunisia are getting school lunches, and close to three-fourths of a million are getting lunches in Hong Kong, where the refugee problem is enormous.

Mr. McGovern pointed out that March 13 was the first anniversary of President Kennedy's Alliance for Progress, involving the countries of Latin America.

"Negotiations are being completed to expand the Peruvian school lunch program to reach an estimated 1,000,000 school children within four years." Plans also are being discussed with Brazil and Chile, as well as other South American countries to establish "government to government" school lunch programs.

Mr. McGovern said the commodities shipped abroad included flour, corn meal, bulgar wheat, non-fat dried milk and edible oils. (The U.S. Department of Agriculture is purchasing edible oils.)

"I would like to see beans and peas added to this list," he said, "inasmuch as they would supply protein to diets sadly lacking in this nutritive substance."

The United States is moving total surplus foods at the rate of \$2 billion a year, Mr. McGovern said, explaining that our warehouses would be much more greatly overrun if it were not for the Food for Peace Program.

"Food for wages" has reached about 5,000,000 persons whose wage-earning heads of families have been paid in grain.

Food for Peace activities are authorized under the Agricultural Trade Development and Assistance Act of 1954, commonly known as Public Law 480. Food distribution is done mainly by voluntary agencies.

• Science News Letter, 81:184 March 24, 1962

## MEDICINE

**New Plastic Suture Better Than Catgut**

► A NEW PLASTIC SUTURE for closing wounds during an operation is reported in the Journal of the American Medical Association, 179:780, 1962.

The suture, a polypropylene monofilament, may replace the widely used catgut.

Although catgut has been the material of choice, four Texas surgeons reported that "premature dissolution of these sutures in the presence of infection" often results in wounds splitting open or in hernia.

High tensile strength comparable to highest nylon, good flexibility and resistance to work-fatigue, as well as exceptionally good knot retention are among the qualities listed for the new suture. The suture is biologically inert in the presence of infection, Drs. Francis C. Usher, John E. Allen Jr., Robert W. Crosthwait and John E. Cogan, all of the Baylor University College of Medicine, Houston, report.

Drugs called "analeptics," from the Greek term meaning "restorative," are arousing new interest in treating persons in a coma from taking barbiturates and other hypnotic drugs, Drs. John Adriani, Peter Drake and James Arens of the Tulane University School of Medicine, New Orleans, report. Bemegride, methylphenidate and ethamivan are notable among the new analeptics. They can arouse and return to consciousness lightly "narcotized" patients (p. 752).

A 24-year-old man working with rhesus monkeys died as a result of B virus infection, Drs. Frances M. Love and Erwin Jungherr of Lederle Laboratories, Pearl River, N. Y., report. They state that although the number of such cases is small, distribution of a manual on protective measures and training programs for employees are strongly recommended. Human infection with B virus of monkeys is almost invariably fatal (p. 804).

Medical Politics: The American Medical Political Action Committee announced through Dr. Leonard W. Larson, president of the AMA, that it would support candidates who favor "medicine's point of view" and oppose those opposed to the "private, free-enterprise system of medical care." (p. 814).

• Science News Letter, 81:184 March 24, 1962

**IN SCIEN**

## MEDICINE

**Contraceptive Pills Do Not Cause Cancer**

► CONTRACEPTIVE PILLS do not cause cancer, latest scientific studies show.

An extremely low incidence of cancer in women taking contraceptive pills has been reported over a period of six years, Dr. Gregory Pincus of the Worcester Foundation for Experimental Biology, Shrewsbury, Mass., reported. This low incidence occurred among several thousand women in Texas, Puerto Rico, Haiti and Mexico when they took contraceptive pills containing the hormones progesterin and estrogen, Dr. Pincus said.

It has been thought that these hormones, also administered to women for maintaining "physiological youthfulness," might cause cancer, but Dr. Pincus said he had found the reverse to be true.

He spoke at the American Cancer Society's seminar for science writers in Phoenix, Ariz.

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## MEDICINE

**Childhood Disease Explained Biochemically**

► A CHILDHOOD DISEASE has joined the select list of diseases that can be explained biochemically.

The disease, cerebromacular degeneration, is usually fatal and affects the eye and brain. Victims begin to lose their sight and to deteriorate mentally at about six or seven years of age.

Drs. Samuel P. Bessman and Ruth Baldwin of the University of Maryland's Medical School pediatrics department have discovered that the disease may affect the kidney, permitting a chemical study through urine analysis.

The scientists confirmed chemically, from their observations of three unrelated families, what has already been clinically observed—that the disease is genetic in origin.

An abnormal excretion, which shows the body's inability to handle amino acids of the histidine group, is found not only in the patient but in the parents. Usually the brothers and sisters have the abnormality too, even when they show no symptoms of the disease. Apparently the abnormal kidney function is transmitted from parents to children as a "dominant" trait and poor eyesight and brain defects are transmitted as a "recessive" trait.

Drs. Bessman and Baldwin are theorizing that a person who has the urinary abnormality is a "carrier" and can transmit cerebromacular degeneration to his children only if he marries another carrier.

The findings are reported in Science, 135:789, 1962.

• Science News Letter, 81:184 March 24, 1962

# CE FIELDS

## ASTRONOMY

### Giant Balloon Given Successful Test Launch

➤ A GIANT BALLOON and special equipment, designed by the United States Air Force to carry two men and a telescope to an altitude of nearly 100,000 feet, had a successful trial launch from Chico, Calif.

The effort was part of Project Stargazer, a program to enable an astronomer to study the stars and planets with a stabilized 12-inch telescope at a distance above 99% of the earth's atmosphere.

A second, unmanned trial balloon launch will be made before the end of this month or early in April, to be followed by the launch of an astronomer in an enclosed gondola carried by a balloon piloted by Capt. Joseph Kittinger, Air Force balloon flight specialist.

An Air Force spokesman said the balloon responded to ground-based radio signals at an altitude of 83,500 feet. Winds carried it over the Pacific. No attempt will be made to recover the test balloon or vehicle.

To reduce the risk of an emergency landing, the unmanned launch will be made over flat desert terrain.

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## SPACE

### Space Needles Package Improved for Next Try

➤ THE NEXT LAUNCH of millions of copper "needles" into a radio communications belt around the earth will be triggered by a safety device to help prevent another failure.

The copper dipoles, three-quarters of an inch long, will be released by a signal from earth's surface only if the space vehicle carrying the "can" goes into an orbit that would limit their lifetime. Some astronomers have voiced concern that the belt would interfere with their studies.

The additional telemetry equipment needed to control the space package will weigh 25 pounds, necessitating a reduction in the weight of the dipoles from 75 to 50 pounds. Therefore, in the second attempt of Project West Ford, slated for some time this year, only 250,000,000 dipoles will be launched, compared to 350,000,000 in the container sent aloft on the first launch, Oct. 21, 1961.

The fine metallic fibers will again be embedded in naphthalene to be dispersed individually when they are spun off the outer surface of the rotating package as the naphthalene gradually evaporates.

The Massachusetts Institute of Technology's Lincoln Laboratory, Lexington, Mass., reported that a mechanical malfunction caused the first can of needles to be ejected

without the spin necessary to release the needles.

As a result, the fibers clustered together in five or six small clumps that have been tracked for several months by the Millstone Hill ultrahigh-frequency radar.

When the experiment is repeated, the telemetry equipment will indicate the position, temperature, tumble rate and extent of dipole dispensing as well as the spin rate.

The belt of fibers is expected to disperse to form a thin, narrow, circular orbital ring about 40,000 miles long at an altitude of about 2,000 miles.

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## SPACE

### New Book Covers NASA, Student Space Projects

➤ A FULL ACCOUNT of America's peaceful space activities—right up to the moment of John Glenn's dramatic flight—is now available in a paperback book called PROJECTS: SPACE.

Written with the technical cooperation of the National Aeronautics and Space Administration, the book describes the space shots—manned and unmanned—that have already been launched by NASA, and those that are coming up in the near future. All the big space projects are covered here: Mercury, Apollo, the Tiros weather satellites, Ranger, Mariner and many others.

The first half of the book also provides information about NASA's rocket line-up, tracking systems, research problems. There are chapters on the colorful new language of space, the X-15 and Dyna-Soar, and the benefits of space exploration.

Fourteen student reports on Space Age science projects make up the second half of the book, along with over 100 suggestions for new projects in space. The student projects range from computer simulation of life forms to rocket propulsion systems.

PROJECTS: SPACE was written by Judith Viorst of SCIENCE SERVICE and published by the Washington Square Press. Indexed, and illustrated with photographs and drawings, it sells for 45¢. (See p. 188)

• Science News Letter, 81:185 March 24, 1962

## OCEANOGRAPHY

### New Instrument Reveals Profile of Sea Floor

➤ A NOISEMAKER to study the ocean's floor has been developed by Massachusetts Institute of Technology engineers.

Dr. Harold E. Edgerton and his colleagues built this "boomer" to discover the depth of sediment in valleys below the sea.

The boomer is a flat coil between two aluminum plates. When current is sent into the coil, the plates fly apart. Reflections of the sound from this controlled, small explosion can be picked up with apparatus towed behind a ship, and used to record the seismic profile far below the vessel.

Explosives often have been used in the past for such mapping, but some mapping can now be done without them. A boomer is safer and economical to operate.

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## ASTRONOMY

### New Comet May Become As Bright as Halley's

➤ A NEW COMET predicted to rival Halley's comet in brilliance is now flashing across the skies, but is now too close to the sun to be seen.

The comet was of magnitude 9 when first discovered on Feb. 4 by a Japanese amateur astronomer named Seki who lives on the island of Shikoku. It was independently discovered two days later by R. D. Lines of Phoenix, Ariz.

Astronomer Seki discovered another comet also named for him, and first reported on Oct. 11, 1961. Like the new Seki-Lines, the earlier Seki comet was predicted to reach first magnitude but was observed as only fifth magnitude by astronomers. (See SNL, 80:304, 351, 363, 1961.)

Calculations made on the new comet's progress by Dr. Leland E. Cunningham of the University of California at Berkeley showed the comet would brighten from fifth magnitude, just visible to the naked eye unless seeing conditions are extremely good, to second magnitude like the Big Dipper stars by March 25. When the comet is again visible, about April 6, it is expected to be of first magnitude, brighter than most of the visible stars.

After April 6, the comet will dim rapidly and become invisible to the unaided eye about April 18, when it will be seen near the group of stars known as the Pleiades.

Two other first magnitude comets, besides Halley's comet, last seen in 1910 and expected to be visible again in 1986, were Arend-Roland and Mrkos, seen in 1957.

Details of observations on Comet Seki-Lines are sent to astronomers by Harvard College Observatory, Cambridge, Mass., clearing house for astronomical information in the Western Hemisphere.

• Science News Letter, 81:185 March 24, 1962

## BIOLOGY

### Shields Warren Awarded Albert Einstein Medal

➤ A PATHOLOGY professor at Harvard Medical School who is also pathologist at New England Deaconess Hospital, Dr. Shields Warren, will receive the Albert Einstein Medal and Award for 1962.

Dr. Warren specializes in the biological effects of radiation and served as head of the Atomic Energy Commission's division of biology and medicine for six years following that agency's establishment in 1947.

The award, a prize of \$5,000, was announced on the anniversary of Dr. Einstein's birth, March 14, by the trustees of the Lewis & Rosa Strauss Memorial Fund. Dr. Warren, who lives in West Newton, Mass., is a native of Cambridge, where he was born in 1898.

He has served as president of the American Association of Pathologists and Bacteriologists, the American Society for Experimental Pathology, and the American Association for Cancer Research.

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