

MEDICINE

Leukemia Drug Helpful

A new drug, a member of an entirely new class of chemotherapeutic agents, has been found which is helpful in treating chronic leukemia patients—By Walter Wingo

➤ A NEW ANTICANCER compound, called hydroxyurea, is helpful in treating victims of a form of chronic leukemia, members of the Sloan-Kettering Institute for Cancer Research reported.

Hydroxyurea noticeably helped three of six patients with granulocytic leukemia, a cancerous blood disease.

The drug, believed to work by cleaving molecules of DNA, the material that contains the cell's genetic code, is "not effective" in other forms of leukemia.

The report was presented by Drs. I. H. Krakoff, M. Lois Murphy and H. Savel at the American Association for Cancer Research meeting at Toronto.

"The new compound is a member of an entirely new class of chemotherapeutic agents," Dr. Krakoff said.

After extensively testing the drug on animals, Dr. Krakoff said he and his associates studied its effects on 30 patients at the Institute's Center in New York.

The patients were victims of leukemias, lymphomas and various types of inoperable cancer. Of the three patients with chronic granulocytic leukemia who "responded well" to the drug, two have

returned to normal employment. The scientists pointed out, however, that they are not considered cured.

The third patient, who had leukemia for nearly seven years, responded to hydroxyurea treatments for four months, but died of viral hepatitis.

Three other victims of the same disease "failed to show beneficial response to hydroxyurea although some decline in the number of white blood cells in the blood stream was seen," the report stated.

Dr. Murphy and another member of the Institute's team, Dr. Joseph H. Burchenal, proposed that a study be made of leukemia victims who live for unusually long times.

They suggested that all data on these patients be collected by many investigators and reviewed cooperatively "in the hope of discovering some common factors responsible for the unexplained long-term survival."

They presented four case histories of patients with acute leukemia who had lived more than four years after diagnosis of their disease.

Other doctors at the meeting reported knowing patients who lived with the disease from 10 to 13 years.

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MEDICINE

New Drops for Glaucoma May Replace 1876 Drug

➤ NEW EYE DROPS promise to replace a drug used since 1876 as the best treatment for glaucoma, which if neglected can cause blindness.

The new drug, which became available in low potency solution only within the last few months, is Phospholine. In solution of one-sixteenth of one percent, its potency is still adequate when used once or twice a day.

The trouble with the old drug, pilocarpine, is that it acts for a short time only. This makes it necessary to interrupt the patient's sleep once or twice during the night, or run the risk of elevated pressure in the eyeball. Elevated pressure, or tension, if maintained over a substantial period, will inevitably lead to optic nerve damage and gradually deteriorating vision.

In 11 of the 18 eyes of nine patients tested, normal tension (below 20) was shown when Phospholine was used, it was reported at a symposium held in New York by the Manhattan Eye, Ear and Throat Hospital. There was a peak of 25 or greater when pilocarpine was used.

Drs. Paul C. Barsam and Herbert P. Vogel of the Bronx Eye and Ear Infirmary reported the findings, which some dispute.

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ZOOLOGY

New Mouse Produced With Golden Hair

➤ A MOUSE with golden hair has been born—and, for the first time known, will live.

Before this, yellow color in mice has carried a lethal effect.

The new species of yellow mice was developed through a set of mutations at the Roscoe B. Jackson Memorial Laboratory in Bar Harbor, Maine. A mutation is a sudden change that takes place in a gene to produce a new individual basically unlike his parents. This change will breed true, which means that the change can continue in the offspring.

Many varieties of changes can show in innumerable ways—the new animal may have a different color coat or eyes, or it may be a dwarf child, or have longer hair.

At the Jackson Laboratory, several new varieties of mice have been produced. There are mice that fall over easily, and those that have the jitters. There are mice with skeletal malformations, metabolic deficiencies or blood irregularities.

Out of two million inbred and hybrid laboratory mice produced last year, the scientists have created ten new mutations.

Geneticists believe the mouse has about 10,000 gene pairs. After more than 50 years of genetic research with mice, only 300 gene pairs have been described. Only about half of these have been classified as a linkage group, or located on a particular chromosome.

The unusual mice are being created in an effort to gain new knowledge on genes, chromosomes and mutations. Some of the new mice will provide information on mutations that resemble human defects in neuromuscular or skeletal development, metabolism or blood defects.

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BIOCHEMISTRY

Extracts From Mentally Ill Disturb Animal Brains

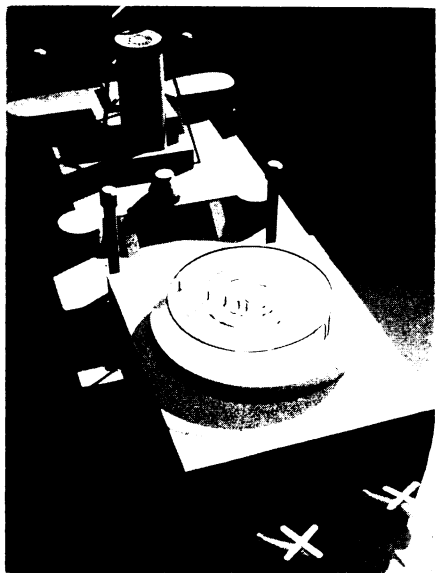
➤ THE BODY CHEMISTRY is so disturbed in schizophrenics, sufferers from one of the most common mental illnesses, it can cause upsets in laboratory animals, research indicates.

When a rat's or a rabbit's brain is painted with chemicals from the bodies of schizophrenic patients, brain activity is upset. Brain waves show disturbances like those in epileptic convulsions, investigators have found.

Extracts from the bodies of normal individuals, however, do not provoke these changes, Profs. G. A. German and D. Kemali, physiologists at the University of Aberdeen, reported in *Nature*, 198:791, 1963.

Such research is undertaken to throw more light on this important mental disease in hope of understanding its cause and developing treatment.

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Northrop

RING-SHAPED ANTENNA—A scale model of a new low-profile ring-shaped antenna and the U. S. Navy instrumentation recovery ship that will use the antenna developed by the Northrop Corporation is shown above. The antenna, only five feet high and consisting of five circular tubes one mounted inside the other, has the efficiency of a 120-foot vertical antenna.