

## MEDICINE

# Apply Medical Research

➤ RESEARCH discoveries save mice, not men, until they are applied, Secretary of Health, Education and Welfare Abraham Ribicoff said in a recent address.

"Breakthroughs in research," he told graduates of the University of California Medical School, "should not be followed by breakdowns" in applications to people.

Some of the United States failures or slowdowns in medicine, Sec. Ribicoff charged, are:

"The U.S. has slipped to tenth place among the nations of the world in prevention of infant mortality.

"In this seventh year of the dramatically effective Salk vaccine, nearly 80,000,000 people under 40 still have not completed the recommended course of injections.

"Every year nearly 13,000 women die of cervical cancer, a disease which can almost infallibly be detected by a simple test in its curable stages.

"Twenty thousand American lives are taken each year by rheumatic fever and

rheumatic heart disease—diseases caused by a chain reaction, which, I understand, can be broken at the beginning and in the middle. The list could be multiplied indefinitely."

Sec. Ribicoff called on the young medics to join in developing programs for "exchange of skilled medical people between our nation and others," as well as providing for this country's health.

Sec. Ribicoff put in a plea for the needs of old people, indirectly touching on the Administration's proposed social security medical program for the aged, bitterly opposed by the medical profession.

"Let us face the fact that often—most frequently among our older people—they do not get it (medical service) because they cannot pay for it. . . . Too proud to impose on their children or on others, too ashamed to seek public alms, they postpone the day of reckoning until the point of no return," Sec. Ribicoff said.

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## NEUROLOGY

# Brain Probe Computers

➤ MORE HIGHLY TRAINED young scientists are needed to exploit the potentialities of electronic computers in the study of human brains, Dr. Walter A. Rosenblith of Massachusetts Institute of Technology reported.

The modern computing machine, he told a National Science Foundation meeting in Washington, D. C., is "the most general and flexible technological tool that man has produced." Hence, it appears to be a natural tool for the study of brain functions.

Much of the computing equipment now available, however, was designed for calculations of a routine nature, such as one encounters in a business office. In neurophysiological research there is little need yet for such routine calculations, so present-day computers may have to be modified, or operated in different ways, to be employed effectively in this field.

Dr. Rosenblith envisions a relationship between a scientist and a computer similar to that between a scientist and a microscope. To attain such a flexible, direct relationship, the gaps between computer technology and

biological science must be bridged. To some extent, he thinks, this can be done by team research, but the long-range goal should be to give young scientists the requisite combination of skills. Research centers in which such young men can be trained are needed now, he said.

"Just as the brain is studied in laboratories of different size and type, computer installations can be expected to vary in kind, capacity and organizational structure," in Prof. Rosenblith's opinion.

"During the next few years we shall see a multiplication of big computer installations in this country; however, few if any of these multi-million-dollar computation centers can be expected to be conceived in response to the particular needs of brain researchers. Hence, this group will either need to find a way to share in the use, and perhaps even the management, of these giant installations or to develop smaller computation facilities that are peculiarly attuned to its special requirements."

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# Tool for Cancer Research

➤ SYNTHETIC PRODUCTION of a chemical compound, closely resembling a natural chemical found in most human cancer cells, provides an important new tool for cancer researchers, the Veterans Administration has reported.

Tests have shown that the synthetic apparently is identical to Cytolipin H, which occurs naturally in cancer cells in high con-

centration. But more data are needed to determine if it is actually an isomer of Cytolipin H—that is, if it has the same number of atoms but a differently arranged atomic pattern.

Dr. Alfred C. Schram, VA biochemist who synthesized the chemical in experiments at the Dallas Veterans Administration Hospital, said Cytolipin H has some

association with producing antibodies—cancer-fighting substances in the blood. He believes the synthetic will speed development of possible vaccines, and may offer research possibilities as a therapeutic agent.

Laboratory production of the compound, Dr. Schram said, "is important because it offers a new approach to learning what makes a cancer cell a cancer cell, and perhaps to explain why cancers kill people."

Producing a small amount takes a full month and is expensive, with one of the starting materials costing \$200 a gram. Largest amount recovered in crystal form in a single operation to date was one and one-half milligrams. But use of an infrared spectrophotometer at the Dallas hospital permitted complete analysis using only five-millionths of a gram, Dr. Schram reported.

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# Screening of Children Detects Heart Disease

➤ HEART DISEASE in children will no longer go undetected if a mass screening method is adopted in the United States.

The Chicago Heart Association reported that a cooperative study showed the test, which covered about 15 months, proved 91% accurate.

The method, which was tried on 33,026 Chicago public elementary school children, consists of recording children's heart sounds on hi-fidelity tapes that are later read by especially trained cardiologists. A mobile trailer containing the especially constructed equipment traveled to 39 schools where student heartbeats were recorded.

Abnormalities were found in two children per thousand screened, a total of 64 children, of whom 32 had previously undetected heart ailments.

An average of 250 children could be screened in one day. The nurse-technician put a stethoscope-like microphone to the child's chest and in 25 seconds the pupil's heart sounds were recorded for later interpretation.

Agencies cooperating with the Chicago Heart Association were the Chicago Board of Health, the Chicago Board of Education and the Chicago Medical Society.

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## IMMUNOLOGY

# Spring-Driven Instrument For Tuberculin Test

➤ A SPRING-DRIVEN instrument that can release tuberculin in a hardened gelatin pellet between layers of the skin is being tested in an effort to replace the hypodermic needle now in use for TB tests.

Dr. Floyd M. Feldmann, director of research for the National Tuberculosis Association, designed the projector and the Armour Research Foundation perfected the technique of the procedure.

The next problem is to test thoroughly the properties of the pellet, that is, to make certain that the binder does not in any way influence the reaction to the tuberculin.

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