



CASPARY AUDITORIUM—This hemispherical dome of reinforced concrete, to be covered by brightly-colored ceramic tile, is the auditorium of the new Alfred H. Caspary Hall of the Rockefeller Institute. It will seat 500 people and is the first of its design to be constructed in New York. Made possible by a gift of \$3,000,000 from the estate of the late Alfred H. Caspary, the building will include an auditorium, administrative offices and meeting rooms for the Institute which occupies 13 acres along the East River from 63rd to 68th Streets.

MEDICINE

Thyroid Hormone in Cancer

► **THYROID HORMONE**, long thought to be a general body stimulant, has been found to have no effect on many important body tissues, and may offer a new approach to the treatment of human cancer.

Dr. S. B. Barker, professor of pharmacology, W. J. Lewis and Herbert S. Schwartz, University of Alabama Medical Center in Birmingham, have determined which types of body cells are and which are not stimulated by the thyroid hormone, a substance which controls the cells' use of energy.

They found that liver, kidney and some muscles, including the heart muscle and those attached to bone, do respond to the control of the hormone.

But many other tissues were completely unresponsive to it. These included spleen, ovaries, uterus, testes, the smooth muscle of the stomach and intestine, prostate and seminal vesicles. Brain, too, was only slightly altered, contrasting with marked changes in human nervous behavior.

The scientists now hope to determine whether cancers arising from the first group of normal tissues can be affected by the presence or absence of the hormone. If certain types of cancer turn out to be dependent on the thyroid, the supply of the gland's hormone can be cut off, thus removing the energy needed for the growth of the cancerous cells.

If animal experiments prove promising, it may be possible to help patients with cancers of hormone-dependent tissues by either removing the gland, destroying its activity with radioactive iodine, or administering counterfeit hormones which will block the activity of the natural hormone.

Sex hormones are also known to affect the growth of cancer cells. Prostate cancer has been improved by removing the male sex glands and depriving the cancer of its essential male hormone, and hopelessly advanced breast cancers have been helped by the removal of the ovaries and adrenal glands, which are the sources of female hormones.

The research was reported by the American Cancer Society which supported the work.

Science News Letter, March 9, 1957

BIOPHYSICS

Finding Old Age Defects Early Held Possible Soon

► **EARLY DETECTION** and correction of the "old age" diseases will soon be possible using radioactive isotopes for pin-pointing the defects, the Atomic Energy Commission's top medical man has predicted.

The tests will also lead to a means for prescribing a medical retirement age, rather

than an arbitrary age as is now the case, Dr. Charles L. Dunham, director of the AEC's division of biology and medicine, told the Centennial Exposition of the Academy of Medicine of Cincinnati.

Precise knowledge of the various disturbances of carbohydrate, lipid and protein metabolism will mean a great deal in the efforts to control the diseases of "maturity," such as atherosclerosis, hypertension and perhaps even neuropsychiatric disorders, he said.

Many laboratories, Dr. Dunham reported, are already far along in using radioisotopes for tracking the action of these organic compounds through the body.

"As the metabolic defects are pinpointed," he predicted, "there is every reason to believe that diagnostic tests will be devised using these same techniques which will permit early recognition and correction of the defect before irreparable damage has occurred."

The methods are already known, Dr. Dunham pointed out, but what is needed is improved and relatively inexpensive and reliable instruments to speed up the work on a broad front.

Dr. Dunham also reported that for the first time scientists have a new tool for studying the aging process, "whole body irradiation." Suffered by thousands of Japanese at Hiroshima and Nagasaki, "whole body irradiation," which can cause premature aging, can now be duplicated in the laboratory.

This means, Dr. Dunham said, that before too long scientists might be able to answer "so simple a question as: 'What precisely is aging?' or irrespective of chronological considerations 'How old is Mr. Smith?'"

Perhaps, he concluded, scientists can even look forward to the day when retirement age can be individualized and on a less arbitrary basis than is the case today.

Science News Letter, March 9, 1957

PUBLIC SAFETY

Car Rumble Saves Lives, Called Hi-Way Hi-Fi

► **HIGHWAY HI-FI** can save lives, Cook County, Illinois, highway experts have found. The Hi-Fi is a rumble caused when a car rolls over uneven asphalt roadway.

The Cook County Highway Department experts have put slag into the asphalt near 62 stop sign intersections.

"The unexpected noise," the researchers found, "causes a driver who might not be aware of the sign to become observant. The pebbled surface also affords better stopping conditions and, in winter, better starting."

Calling the method "rumbling the surface," the Cook County process has been hailed as a success not only by the Highway Department but by motorists too. The Department has received "numerous letters of approval," it reports.

Science News Letter, March 9, 1957