

MEDICINE

Predicts Cure For Cancer Will Be Found Before Cause

Results of Recent Research on Chemical Cures May Be of Far-Reaching Significance, Report Predicts

THE CURE of cancer will be achieved before the cause is discovered, Dr. Cornelius P. Rhoads, director of Memorial Hospital, predicts in the hospital's biennium report.

Search for a chemical cure for the disease, consequently, is being carried on at Memorial at the same time that investigations into the cause of cancer are made. No chemical cure has been found yet, Dr. Rhoads emphasizes, but a method has been devised for testing in the test tube the poisoning effects on the cancer cell of various chemical compounds. So far, some 70 different compounds have been tested.

"A type of chemical has been found," Dr. Rhoads reports, "which in the test tube appears to interfere with the health of one type of cancer cell of man, that found in cancer of the breast, and in the same concentration not to interfere with the well-being of any normal organ tissue so far tested. The chemicals which have this preferential anti-cancer effect are characterized by a common structure.

"The results may have a far-reaching significance. They prove apparently that there is a real difference between cancer cells and normal cells in their sensitivity

to certain types of chemicals. The cancer is more sensitive and can be killed by compounds which do not kill the normal tissue. This observation alone is sufficient justification for the intensive continuation of the experiments."

Dr. Rhoads is not yet ready to disclose the name of the type of chemical found to have this preferential anti-cancer effect because the studies have not yet gone far enough to justify considering it as a cancer cure.

Surgical cures of breast cancer in the primary operable stage have been achieved in 51% of all cases and in 75.5% of cases of the most favorable type (with no extension of cancer from the original focus), Memorial Hospital reports show. These cures represent patients alive and well five years after the operation.

Attempts to find a cure for cancer by starvation of the cancer cell are being made. Preliminary steps, now under way, consist in studies of the diet requirements of cancer and normal cells.

Delving into the cause of cancer, Memorial chemists, with the help of Harvard University, are engaged on the gigantic task of searching for cancer-causing chemicals in the kidney excretions of patients. Certain classes of chemi-

cals, not unlike naturally occurring body chemicals such as the sex hormones, are known to be capable of causing cancer. Scientists believe that a defect in body chemistry may result in the cancer-chemicals being formed from the natural ones. If so, they should be present in the excretions of cancer patients but not of normal patients.

The difficulty of searching for them may be understood from the fact that the chemist who first described the chemical structure of the male hormones was able to isolate from thousands of gallons of kidney excretions about as much of the hormone chemical as could be placed on the tip of a pencil.

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ASTRONOMY

Blackout Eliminates Puzzling Spectral Lines

THE BLACKOUT or dimout brings some compensations that may not be apparent to non-scientists. Not long ago Dr. Edwin P. Hubble, Mt. Wilson Observatory astronomer, in discussing the kind of universe we live in as determined from observations of the very faint and distant stars with the giant 100-inch Mt. Wilson telescope, told of strange spectral lines in the star light that were very puzzling. After much trouble it was finally discovered the source of this light was the neon signs of Los Angeles reflected from the ocean into the sky and the telescope. Presumably, thanks to the war's dimming of the signs, any photographs taken now will have less such earthly interference.

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