



CONTRAST CANCEROUS LIVERS—Laboratory photographs show the startling contrast between enlarged, cancerous rat livers and the normal rat livers from two groups, both fed the same cancer-inducing chemical. The pituitary gland had been removed from the group of rats whose livers were found to be normal.

BIOCHEMISTRY

Clue to Cancer Seen In Pituitary Gland

► THE PITUITARY gland in the head is now under suspicion as playing a villain's role in the development of cancer.

The suspicion comes from rat experiments at Stanford University, California. In the experiments, rats that had their pituitary glands removed failed to get cancer when fed a cancer-producing azo dye. Other rats, with pituitary glands left in their heads, developed large cancerous growths in their livers after 14 to 19 weeks of the diet.

The pituitary gland, at the base of the brain, influences other glands of the body, including the adrenal glands. Next step in the research is to learn which function or gland influence of the pituitary is involved in the cancer picture.

The research so far has been carried out by Prof. A. Clark Griffin, Drs. A. P. Rinfret and Charles Robertson, Mrs. Marjorie O'Neal and V. F. Corsiglia. Results are reported in *Cancer Research*.

Science News Letter, February 14, 1953

PUBLIC HEALTH

Research Hospital to Open

► THE CLINICAL Center, new 500-bed combined research hospital and laboratory of the U. S. Public Health Service's, National Institutes of Health, Bethesda, Md., is scheduled to open "sometime in April," SCIENCE SERVICE has learned.

The exact date has not been announced and probably will not be. The first patients will be received quietly, without even the screaming siren of an ambulance to herald their arrival.

Sparing the feelings of the patients and their relatives is the reason for the comparative hush-hush over the first arrivals.

This new hospital, it is explained, is a research center for study of the major health problems of the nation. Mental and nervous diseases, stubborn infectious diseases, cancer, heart and blood vessel diseases, and arthritis are the chief of these problems. Many patients, however, would not want the relatives or the neighbors back home to know they had come to this hospital if it would immediately label them as having one of these diseases. And even today many patients do not want it known that they have cancer or a mental disease or a serious form of heart disease.

The patients who do come to this hospital, in April or later, will be admitted after lengthy and careful negotiations with their doctors back home to make sure they have the particular type or stage of disease under study, and that they are of the age, sex and other characteristics that fit the particular study.

No patient will be admitted except when referred by a cooperating physician or

medical group, such as the staff of a teaching hospital.

This hospital is not just another hospital to care for patients. While the actual care will be the best that can be given, the hospital's prime objective is to help find ways to conquer diseases that afflict not only its 500 patients but hundreds of thousands or even millions of Americans all over the nation.

Science News Letter, February 14, 1953

INVENTION

Patent Heating Unit For Wounded Soldiers

► A HEATING unit which may be slipped into casualty evacuation bags to keep wounded soldiers warm on their trip from the front to the aid station or hospital has been invented.

Insulated with Fiberglas, the unit is so arranged that one flat side is porous and the other is non-porous. An inner layer of Fiberglas holds a catalyst such as carbon black which is distributed among the fibers. In the middle of the unit is a fuel reservoir which feeds fuel to the Fiberglas.

The heating unit, the inventors claim, can keep a wounded man warm without danger of too much heat. Donald M. Stadd, New York, and Raymond P. Schreiber, Washington, received patent 2,627,266. They specify that the government may be allowed to use their invention without making royalty payments.

Science News Letter, February 14, 1953

METEOROLOGY

Little Drops Bump Bigger Water Drops

► LITTLE DROPS of water bumping into bigger drops of water may be the most important factor in producing rain. This was a theory tossed out to weathermen at the meeting of the American Meteorological Society in New York by Wendell A. Mordy and Laurence E. Eber of the Pineapple Research Institute in Hawaii.

Several years ago, most weathermen thought that most rain came from clouds which reached high enough altitudes to be cold enough to produce tiny ice crystals. The ice crystals, this theory went, became large enough to fall through the clouds, melting when they got low enough and thus hitting the face of the earth as rain.

Weathermen knew that some rain was coming from warm clouds, clouds that did not reach freezing and sub-freezing heights, but they thought this was only a minor factor in the production of rain.

Mr. Mordy and Mr. Eber presented a record of 10 typical days of trade-wind weather in Hawaii. On six of those 10 days it rained, and in no case did rain come from any cloud colder than 7.2 degrees Centigrade, about 45 degrees Fahrenheit.

Although they merely presented these observations, other weathermen picked up the implication that warm cloud rain may be more important and of greater volume than cold cloud rain in most other parts of the earth. If that is so, rain drops large enough to reach the ground without evaporating are probably formed by coalescence—by little drops of water in the clouds bumping into slightly bigger ones until large enough drops are formed to reach the earth.

Science News Letter, February 14, 1953