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MEDICINE

Cancer, Hormones Linked

► **GROWTH HORMONE** research has raised the question of cancer relationship to the pituitary gland.

If pituitary hormones are involved in the beginning and growth of some cancers, would rabbit antisera be able to knock out the hormones and arrest the cancer growth? An answer to the question awaits animal experiments and more growth hormone for trials on patients if the experiments are successful.

The American Cancer Society posed the question in a progress report on research it has supported for 15 years at the University of California at Berkeley.

Scientists there have begun applying to human patients the results of many years of basic research on growth hormone, extracted from human pituitaries and purified by procedures devised by Dr. C. H. Li and Harold Papkoff of the University Hormones Research Laboratory. The substance is called Somatotropin and affects tissues of the body in other ways besides growth.

Dr. Papkoff reported that total laboratory synthesis of the growth hormone rests on further research to determine the structure.

"We know there are about 250 amino acids hooked up in the chain," he said. "It is a formidable job to find out the sequence, and once the structure is known we must find techniques not yet available."

"We have produced antiserum in the rabbit and blocked biological activity in the rat," he said. "We have been assaying growth hormones in the blood and other tissues and we are about to test a great many people to find out how much growth hormone is circulating in an individual."

Dr. Papkoff said that inasmuch as cancer is a growth process going wild, it is within the realm of possibility that antiserum could be applied to stop the growth.

"It is our hope that we can arrest cancer growth eventually," he said. If it is caused by hormones—even if not by the growth hormone—he said research could be directed against this.

• Science News Letter, 79:238 April 15, 1961

PSYCHIATRY

Competent Mental Cases

► **NOT ALL** patients sent to mental hospitals are incompetent. Dr. Winfred Overholser, superintendent of St. Elizabeths Hospital, Washington, D. C., said that many patients are competent to carry on their businesses.

The first of a series of witnesses in a three-day hearing of the Senate Constitutional Rights subcommittee, Dr. Overholser made a plea for separation of the process of commitment so that a prejudgment of incompetency would not embarrass patients when they were discharged.

"A right of the mentally ill, which is sometimes forgotten," he said, "is the right to early and effective treatment, whether that be in a hospital, an outpatient department or a community clinic."

Dr. Overholser said he was "convinced that the basis for the belief that persons are improperly sent to mental hospitals is, for practical purposes, entirely without foundation."

Burdensome formalities in connection with the admission make a family reluctant to send the patient to the hospital, he said. They are painful to the patient himself and tend to fasten the stigma of mental illness upon him.

"Fortunately today," he said, "there is a gradual extension of facilities to those who are in need of treatment." He mentioned particularly the establishment of psychiatric services in general hospitals for non-judicial commitment, and said mental disease is an illness that should be treated as much as possible as other illnesses are.

In connection with judicial commitments, Dr. Overholser asked for separation of the "process of commitment from that of ad-

judication of incompetency. Commitment should only authorize the patient's hospitalization.

"In a number of jurisdictions," Dr. Overholser explained, "including the District of Columbia, the commitment to a mental hospital" means incompetency by itself. When the patient is released, this adjudication of incompetency may operate against the interests of the person.

"Not all those patients in need of hospitalization," he said, "are unable to carry on their businesses."

• Science News Letter, 79:238 April 15, 1961

Questions

BIOCHEMISTRY—How might scientists obtain uncontaminated meteors from space? p. 227.

CHEMISTRY—How far below the surface is the most abundant source of salt water in Israel? p. 230.

GEOPHYSICS—How much of the ice on the earth's land surface is located in Antarctica? p. 226.

Photographs: Cover, National Science Foundation; p. 226, Global Marine Exploration Company; p. 227, Grumman Aircraft Engineering Corp.; p. 229, Ford Motor Company; p. 231, The Garrett Corporation; p. 234, International Business Machines Corporation; p. 240, Glido Mfg. Co.