

the course of the treatment can be altered during these important years there may be great hope for recovery.

Effects of the treatment on heart and kidney action were reported in detail by Dr. Talbot at the meeting in Atlantic City on May 5 of the American Society for Clinical Investigation.

One of the most interesting cases described was that of a young medical student who had been admitted to the hospital several years before. She had not talked in more than two years. When her bodily temperature reached 89 degrees Fahrenheit she talked clearly and logically and with insight. When her

temperature reached 93 degrees Fahrenheit her conversation became confused and her speech thick. In describing her Dr. Tillotson said:

"During the four intervening hours she had looked and acted quite normally and could not have been diagnosed as suffering from schizophrenia. Her conduct during the following three months was possibly somewhat better. During the second treatment two months later she duplicated her previous performance. When her temperature reached 88 degrees Fahrenheit she became mentally clear and conversed for nearly four hours with her father."

Science News Letter, May 17, 1941

of the way cancerous growth spreads.

"Such observations have led to the conclusion that the pattern of cancerous growth is influenced decisively by surface forces," Prof. Lucké stated. "Thus, if the outgrowths from the cancer extend into the cavity of the eye where they are completely surrounded by fluid, and where in consequence interfacial forces are equalized, the resultant form is cylindrical. If, instead, the outgrowths make contact with a firm surface such as the lens, the interfacial relations become such that the edges of the growing tumor are drawn over the lens, forming a spreading membrane. If, however, the proliferating tumor pushes into the clefts of a loose tissue, such as the iris, the invading cells become arranged as spheres or cylinders, again through the operation of surface forces."

It was also possible to study cancer growth through a far wider range of temperature than is possible with higher animals, because the frog is cold-blooded. Growth was observed at temperatures ranging from only a few degrees above freezing to that of a warm summer day. Low temperatures retarded growth, high temperatures speeded it. At low temperatures the outgrowths were short, stubby, solid, whereas the more rapid growth induced by warmth produced long branching outgrowths that tended to become bulged with fluid.

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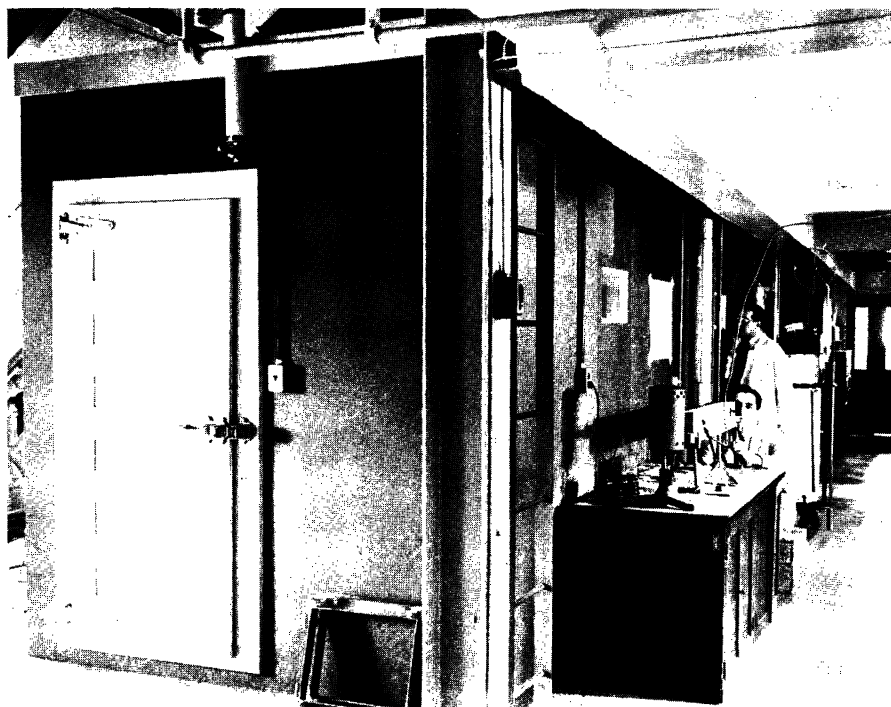
PHYSIOLOGY

Cancer Watched In Frog's Eye; New Facts Learned on Spread

Pattern of Growth Seen To Be Influenced Decisively By Surface Forces; In Fluids, Cancer Is Cylindrical

CANCEROUS tissue growing between the pupil of the eye and the curved, transparent front surface can be watched as if through a window, and studied in detail with a microscope, Prof. Bal-

duin Lucké and Dr. Hans G. Schlumberger of the University of Pennsylvania told the American Philosophical Society meeting in Philadelphia. Their investigations have led to new knowledge



TEST CHAMBER EXTERIOR

This shows the airtight door of the toluene chamber. The scientists shown are measuring the concentration of gas inside the chamber.

ARCHAEOLOGY

Armageddon Battlefield Figures in Oil War

THE BIBLE'S most famous battlefield, Armageddon, toward which international conflict is drawing, has new significance in the present struggle, for crossing the famous Palestine plain runs a pipeline to carry the Near East's most precious fighting material—oil.

The pipeline, carrying Mosul oil gushing from Baghdad west to the port of Haifa in Palestine, was opened in 1934.

If armies converge on Armageddon, as they did in the World War in 1918, and as they have been doing since at least as far back as 1479 B. C., the fighting will appear different from any battles there before, because never before has this Biblical plain seen mobile tanks in attack at 50 miles an hour. World War tanks moved at a snail's pace. Ancient Assyrians fighting at Armageddon had wheel towers for carrying battering rams or soldiers, rather suggesting forerun-