

ide. Attractive solid tops and all the varied things which are placed in the flues tended to prevent complete combustion and to lower efficiency and were an actual menace to health. A flue is constructed by the manufacturer to be as small as possible and still allow complete burning of the gas, and when it is obstructed further to keep more heat in the stove or for any other purpose, a

dangerous condition frequently results.

"The 'grease absorbers,' " scientists observe, "should be called grease diffusers, because they merely distribute the grease more uniformly around the kitchen. Those that are filled with steel wool or other material in such a way as to obstruct the passage of the flue gases may become dangerous."

Science News Letter, July 28, 1934

MEDICINE

Cancer Caused By Virus Present in Even Normal Cells

New Theory of British Scientist Holds Disease Is Not Infectious But Develops From Irritation

WITHIN seemingly normal cells of human bodies, there is always a virus capable of causing cancer. Whether or not the disease develops depends upon whether a physiological "trigger" in the form of mechanical or chemical irritation sets free the virus.

This new theory of cancer with evidence for its support is presented by Dr. C. H. Andrewes of Britain's Medical Research Council.

Dr. Andrewes' report to the Royal College of Surgeons appearing in the *Lancet* is commended by the editor of the *Lancet* as "by far the most comprehensive survey" of the subject yet presented.

When irritants initiate malignancy, Dr. Andrewes believes, no virus enters the body. It has always been there, dormant, pending the trigger mechanism which sets off the malignant process. Such mechanical balance would explain the graduations from benignancy to extreme malignancy which are seen in tumors.

Like Fever Blisters

The development of cancer is seen as somewhat analogous to the formation of fever blisters. A mere rise in body temperature, such as caused by a fever, is enough to cause fever blisters in about every other person so afflicted. The herpes simplex virus seems to be liberated by the heat and causes the face eruption.

Dr. Andrewes' theory, according to the editorial, confirms the fact that cancer is not infectious in the conventional sense. In other words, although caused

by a filtrable virus it is not infectious like infantile paralysis, for example, which is also caused by a filtrable virus.

Many cancer students have thought that mammalian cancers are an apparently different class of tumors from the filtrable fowl tumors, but Dr. Andrewes

does not agree. He thinks the two kinds are really alike. The only way in which filtrable tumors of birds differ from cancers of men and other mammals lies in the fact that the causative agent of the fowl tumors can be demonstrated apart from the cells it normally inhabits, he concluded from his investigations.

The causative agents of cancer have properties so like those of the known viruses that excluding them from the virus group is unjustified, in Dr. Andrewes' opinion.

The natural history of other viruses readily explains the production of tumor growth phenomena, he stated. Many viruses multiply within the cells of the body and once they have gotten into these cells they cannot be neutralized by external antibodies.

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Glass cotton, glass silk, and glass wool are novel fibers which have a variety of industrial possibilities.

Rosie, a Yellowstone Park bear, emerged from hibernation this spring with four black cubs, the biggest family of bears ever credited to one mother.



TO CATCH THE STARLIGHT

This giant "mousetrap" is really the framework of a new observatory dome to house the large telescope which will be located on the summit of Mt. Locke, in southwestern Texas. Arc-welded steel bracing will protect the structure against possible earthquake shocks. It is shown here as it was pre-assembled in Cleveland, Ohio, before its 1500-mile journey to Texas. The dome, which is 62 feet in diameter and 73 feet high, was constructed by the Paterson-Leitch Company under the supervision of the Warner and Swasey Company, designers. An electrically-moved observing bridge will give the observers access to all parts of the dome and the telescope it encloses.