have always been used because of their hardiness, and especially because they have proven themselves completely immune to two other forms of crown rot disease caused by species related to the present fungus. Discovery of this chink in the armor of the sour orange is therefore causing scientists interested in citrus fruits a good deal of concern.

Science News Letter, January 3, 1942

MEDICINE

Factors Protecting Baby Mice Against Tuberculosis Found

Discovery Announced of Chemicals in Their Bodies Which Destroy Drug-Resistant Parts of Germ

DISCOVERY of chemicals in the bodies of young mice which destroy the drug-resistant waxy parts of the tuberculosis germ was announced at a meeting in Washington of the Committee on Medical Research of the National Tuberculosis Association.

The announcement was made by Dr. Bruno Gerstl of Yale University. Dr. Gerstl and Dr. Robert M. Thomas, also of Yale, found two years ago that newborn mice are immune to tuberculosis. A search was begun for the factor responsible for that immunity.

After analysis of the body organs of young mice, Dr. Gerstl concluded that the factor or factors were enzymes, chemicals produced by body cells which assist the life processes. When introduced into test tubes containing tuberculosis germs, the mouse enzymes broke up the fatty parts of the germs. The fatty components are believed to have defeated all attempts to kill the germ by drugs.

Commenting on Dr. Gerstl's announcement, Dr. William Charles White, chairman of the committee, stated:

"Dr. Gerstl's discovery . . . might lead to development of a preparation from the enzymes which will have a lethal effect on the germs within the human body."

Science News Letter, January 3, 1942

Blood Tests for Prognosis

A NEW method of following the course of tuberculosis in the body was described by Dr. Florence B. Seibert of Henry Phipps Institute, Philadelphia. She traced the rise and fall of albumin and globulin, constituents of the blood serum. To an old and baffling question, Dr. Seibert gave these answers: the albumin content of the blood always drops during tuberculosis; the alpha-globulin rises when the patient is improving; the gamma-globulin falls during the period of improvement, and the beta-globulin always rises just before death.

With these standards, analysis of the blood during tuberculosis can now be made as a diagnostic and prognostic procedure.

Science News Letter, January 3, 1942

MEDICINE

Influenza Prevented In Mice By Anti-Freeze in Gas Form

GAS warfare against germs may be the way to stop epidemics of influenza. The method gave mice 100% protection against the disease in experiments reported by Dr. O. H. Robertson and associates, of the University of Chicago. (*Science,* Dec. 26.)

The gas used by the Chicago scientists is propylene glycol, anti-freeze chemical and a close relative of ethylene glycol, the more familiar anti-freeze used in automobiles and high-powered airplanes. They had previously found that a very fine mist of this chemical killed bacteria in the air.

In the vapor or gas form, the chemical is even more effective, they now report.

When a fine mist of influenza virus was sprayed into a 20-gallon glass-walled experimental cabinet for from five minutes to one hour, all the mice in the chamber (35 in number) got influenza and died in six to ten days with extensive consolidation of the lungs.

When the propylene glycol vapor was let into the cabinet, in the proportion of one part of vapor to two million parts of air, and then the influenza virus mist was added, all the mice in the cabinet (32) remained well. The lungs of these mice, examined on the eighth day, were normal except for a small area of consolidation in one lobe in one mouse.

Similar results in protecting mice against influenza by propylene glycol mist, instead of the vapor, were reported about 20 days previously by Dr. Werner Henle and Dr. Joseph Zellat, of the University of Pennsylvania. (See SNL, Dec. 27, 1941.)

The propylene glycol gas which is so destructive to the influenza virus will not harm humans in the concentration used, and since it has no odor, will not even be noticed by them, it appears from Dr. Robertson's first report on the germ-killing action of the chemical. Associated with him in the work were Dr. Clayton G. Loosli, Dr. Theodore T. Puck, Dr. Edward Bigg, and Dr. Benjamin F. Miller.

Science News Letter, January 3, 1942

The *Incas* of ancient South America used in government administration clever models of towns and provinces, built to scale out of clay and small sticks and stones.