

BIOCHEMISTRY

A-Bomb Use for Old Drug

Decade-old drug will pick up life-saving role in case of atom bomb attack. Made from animal blood, drug is called lipo-protein-nucleic acid complex.

► A DRUG that has been on the market and in use for over a decade will have a new life-saving role in case of atomic bombings.

The drug is a complex protein chemical derived from animal blood. Its potential new use is foreseen by Col. Ralph M. Thompson, deputy director of the Armed Forces Institute of Pathology in Washington.

The drug should be included in medical stockpiles wherever radiation hazards exist or may exist, Col. Thompson advises. By this he means stockpiling not only in defense medical supplies in preparation for possible atomic bombings but also in hospitals and other institutions where X-rays, radium and radioactive isotope chemicals are in use for treatment of cancer or for research purposes.

Scientifically named lipo-protein-nucleic acid complex, the yellowish liquid preparation has the tradename Reticulose. It has been given to patients previously by injections into the muscles as a means of giving them extra protein and to fight infection.

Its possible new anti-A bomb effect is foreseen from tests on animals conducted with Dr. L. J. Berry of Bryn Mawr College and Dr. R. B. Mitchell, U. S. A. F. School of Aviation Medicine, Randolph Air Force Base, Tex., where Col. Thompson was chief of pathology.

In these tests the animals, after irradiation, showed greater resistance to infection and stimulation of white blood cell production. The white cells of the blood are an important defense of the body against disease germs. Heavy doses of radiation damage the organs that form the white blood cells, thus lowering the body's resistance to infection. This is estimated to have caused many of the deaths of persons who survived the immediate radiation effects of the atom bombings in Japan but who died a few weeks later.

Great saving of lives among this class of victims might be achieved in future, Col. Thompson believes, using Reticulose.

The drug is produced by Chemico Laboratories, Inc., of Indianapolis. Increased production for further research along the lines indicated by Col. Thompson's studies is now under way. Method of making the drug and its exact source have not been published and will not be now, B. E. Lapenta, vice-president of Chemico Laboratories, states. He gives as reason for this the fact that publication now of the method of preparing the drug might "become automatically valuable to a potential enemy."

Col. Thompson's report appears in the MILITARY SURGEON, official publication of the Association of Military Surgeons of the United States.

Science News Letter, January 19, 1952

TECHNOLOGY

Home Movie Screens

► TINY GLASS beads make home movies show up well on the screen, while a sheet of dead-white plastic with rows and rows of tiny holes punched in it gives a life-like quality to professional movies.

In the theater, everyone must be able to see the picture. Yet some sit directly in front of the screen while others are far to the side. At home or school, it is more important to have most of the light reflected back toward the most favorable seating area, in line with the projector and screen. So different screen materials have been designed to meet these special needs.

Theater screens are usually made of sheets of smooth, dead-white plastic that tends to reflect light uniformly in all directions. As large loud-speakers are placed behind the screen, the screens are perforated to let the sound come through so the actors

in the picture will appear to be talking. The tiny holes cause the loss of less than 10% of the reflecting surface.

Beaded projection screens are good to use when the projector can be placed directly behind most of the people in the audience. Screens of this type are most often used in school classrooms, churches and homes as they reflect the light back toward the most favorable seating area.

It is interesting to see how differently screen materials reflect light by testing them with a flashlight. If you direct the light from a focusing flashlight into a small mirror or shiny piece of metal, the light falls on the ceiling, wall and floor as you tilt the mirror up and down.

But when you tilt the beaded material, it reflects most of the light directly back toward the light source, irrespective of the

angle at which it is held. The dead-white plastic reflects the light pretty uniformly in all directions.

Two types of screen material now popularly used have been collected for you by SCIENCE SERVICE. In addition, the Motion Picture Kit demonstrates the old and new in motion pictures: several frames of Technicolor pictures from a recent feature movie are included, along with two animated cartoons which let you actually see the figures move. Magnetic and photographic methods of recording sound are also demonstrated. These specimens can be secured for the nominal price of 75 cents. Just write to SCIENCE SERVICE, 1719 N St., N. W., Washington, D. C., and ask for the Motion Picture Kit.

Science News Letter, January 19, 1952

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