BIOCHEMISTRY

Find Penicillin Antibody

➤ A PENICILLIN ANTIBODY in the blood has been detected for the first time. Blood serum from certain individuals reacts specifically against penicillin. The newly found antibody, however, does not inhibit the effect of penicillin as would normally be expected.

Discovery of the penicillin antibody is reported in *Science* (May 9) by Dr. Allyn B. Ley, Jean P. Harris, Mary Brinkley, all of the Department of Medicine and Blood Bank Laboratory, Memorial Center for Cancer and Allied Diseases, and Dr. Amos Cahan, Bobbie Liles and James A. Jack, all of the Knickerbocker Foundation, New York.

The antibody was detected during a normal laboratory procedure in the following manner:

Routine blood bank procedure sometimes requires addition of penicillin to blood cell suspensions to be used for testing other blood. Blood from patients about to receive transfusions is mixed with this penicillin-containing blood suspension.

In August, 1957, during a routine blood testing, the test blood of a patient agglutinated, or "clumped," when added to the testing suspension. Usually the penicillin-containing suspension, when mixed with the patient's blood, exhibits no such reaction.

When this particular patient's blood was not exposed to the testing suspension, clumping did not occur.

Further investigation showed that clumping varied directly with the length of time the blood cells were exposed to the penicillin and the degree of penicillin concentration.

Among approximately 2,000 blood serums studied, 25 have reacted to the penicillin-containing suspension. In addition, those individuals with antibody-containing blood all had at some time in the past received penicillin for treatment of some disorder.

This antibody is not related to the penicillin sensitivity that causes skin rash in some patients. However, there is some evidence indicating that the antibody may be related to excessive red blood cell destruction in patients who receive massive penicillin doses in cases of severe infection.

Science News Letter, May 24, 1958

TECHNOLOGY

Battery Vest Kept Alive by Body Heat

➤ A POWER SUPPLY that is worn as a vest and kept alive by body heat has been developed for U. S. Army radio operators.

The vest is needed in cold weather operations where the extreme cold normally kills a battery's activity. With the vest, developed by scientists at the Army's Signal Research and Development Laboratory, Fort Monmouth, N. J., batteries to be used in low temperatures are now expected to stay in service ten times longer.

The vest has civilian applications too, the Army hinted. Special pouches in the vest could keep chemicals and drugs warm for explorers and mountaineers.

Test models of the battery garment were built for the Army by Burgess Battery Co., Freeport, N. Y.

Science News Letter, May 24, 1958

● RADIO

Saturday, May 31, 1958, 1:30-1:45 p.m., EDT

"Adventures in Science" with Watson Davis, director of Science Service, over the CBS radio network. Check your local CBS station.

Mr. Volta Torrey, veteran science editor and director of television, Massachusetts Institute of Technology, Cambridge, Mass., will discuss "Electronic Teaching of Science."

MEDICINE

Study Smoking Habit To Find Substitute

➤ A STUDY is being undertaken to determine why people smoke cigarettes in the hope that the smoking habits of the excessive smoker can be altered and the incidence of lung cancer reduced.

Dr. Daniel Horn, director of program evaluation for the American Cancer Society, said that 10% of the 25,000 lung cancer cases reported yearly could be prevented if heavy smokers could be persuaded to give up smoking.

The big problem now facing the evaluators is to find what motivates the cigarette smoker. If the smoking motives can be discovered, Dr. Horn said, there may possibly be some more suitable substitute which will be less harmful.

If the smoking habits can be changed, the incidence of lung cancer will decline.

Science News Letter, May 24, 1958

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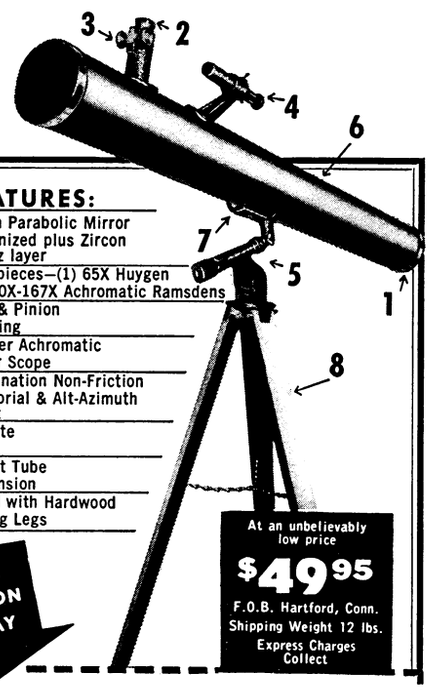

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