BACTERIOLOGY

Antibiotics: More, Better

➤ A SOIL MOLD organism from the interior of Borneo has produced an antibiotic capable of stemming the rapid spread of staphylococcus infection that has hit numerous hospitals within the past year.

In the four years of clinical trials of the drug on more than 4,000 people no resistance to the infection-killing agent has been observed. The antibiotic is called vancomycin.

The clinical effectiveness of vancomycin may lie in the antibiotic's pronounced bactericidal effect, Dr. N. Joel Ehrenkrans of the University of Miami School of Medicine commented at the sixth annual Antibiotics Symposium in Washington.

No resistant staphylococci, that is, infectious organisms that become immune to the antibiotic, rendering it impotent, were observed in any of the cases, the Miami physician reported.

Three Seattle doctors added support by reporting that they had encountered no resistance to the antibiotic in the two years they had been conducting extensive clinical trials of the drug.

"Vancomycin is probably the best drug now available for the treatment of severe staphylococcal infections."

Drs. William M. M. Kirby, David M. Perry and James L. Jane of the department of medicine, University of Washington School of Medicine, said.

The clinical trial material now available is well-tolerated and produces relatively few side effects, they added. The doctors tested the drug on 30 patients. The drug, developed by the Eli Lilly and Company of Indianapolis, is expected to be available commercially within the next few months under the trade name Vancocin.

Penicillin Beaten

➤ THE GONOCOCCUS, the organism that causes gonorrhea, is becoming immune to penicillin.

Many countries have had an increasing attack rate of gonorrhea, Dr. R. R. Willcox of St. Mary's Hospital, London, reported to the antibiotics symposium.

Repository penicillins, those trapped in vegetable oil and wax to allow slower absorption and prolonged action, are notably less effective than formerly.

A penicillin preparation with higher peaks of penicillinemia than the peaks attained with repository preparations might be the needed dosage, the British scientist suggested.

A mixed preparation of penicillin, containing from 300,000 to 600,000 units of three types of penicillin, was tested on 95 men with gonorrhea.

Among those tested, the failure rate was 9.8% among Negroes and 5.6% in other patients. The increased failure rates in Negroes may be due to a higher reinfection rate. Perhaps it is due to a higher attack rate resulting in more frequent use of penicillin. The more frequently an antibiotic is used, the greater is the chance that the organism will develop resistance to it.

Gonorrhea is spread primarily by sexual contact. The infection itself usually produces inflammation of the urinary tract, sterility, arthritis and other more remote complications.

Zinc Improves Drug

➤ THE ADDITION of zinc to an antibiotic makes the drug 100 to 450 times more powerful against bacteria.

This greater effectiveness makes it possible to reduce the dosages of the antibiotic, bacitracin, and at the same time lessen the danger of undesirable side effect.

The discovery of the zinc-enhancement was reported by Dr. Eugene Weinberg, associate professor of bacteriology, Indiana University, at the symposium.

Bacitracin is used in promoting the growth of food animals as well as in the treatment of infection.

PROJECTOR—The Korkosz projector is silhouetted against the planetarium dome.

ASTRONOMY

Planetarium Stars Twinkle Like Real Ones

➤ MORE THAN 9,500 stars, each one with a "built-in" twinkle, can be shown in a new million-dollar planetarium.

Instead of showing larger discs of light for brighter stars, the three-ton projector, designed by Frank D. and John J. Korkosz, of Chicopee, Mass., simulates for the first time in a planetarium the correct size and light intensity of actual stars.

The Charles Hayden Planetarium at the Museum of Science, Boston, Mass., also features an unusual three-dimensional skyline. Unlike the fixed variety, this hydraulically operated skyline of the neighboring area can be raised or lowered and replaced by tropical or polar horizons.

The Korkosz projector took seven years to make. It contains several projector systems in a single 13½-foot instrument.

Science News Letter, November 1, 1958

Small Doses Good

➤ SMALL BUT consistent doses of an antibiotic during 21 months caused no increase in antibiotic-resistant microorganisms in children.

Children of Haiti suffering from malnutrition were given 50 or 10 milligrams of Terramycin daily to help them grow and to stem the microorganisms in their digestive systems. Drs. Elmer E. Loughlin, Louverture Alcindor and Aurele A. Joseph of the New York Medical College and the Flower and Fifth Avenue Hospitals reported the research.

The larger of the two doses had the best growth-promoting effect. The study is part of a long term project to determine the nutritional value of small doses of Terramycin in undernourished children.

Science News Letter, November 1, 1958

ZOOLOGY

Two Birds in a Bush May Eat Bad Food

➤ A FINCH seems to have a better chance of choosing good food if he eats alone, a Duke University zoologist reports.

Experiments designed to test the influence of social interaction on learning rates in birds showed that single greenfinches learned with "considerably greater rapidity" than paired male-female greenfinches. Several pairs failed to discriminate at all between palatable food (sunflower seeds) and noxious food (aspirin filled seeds), Dr. Peter H. Klopfer reports in *Science* (Oct. 17).

Even a finch that has learned to avoid "bad" food will eat it if an untrained bird is observed eating it. The effect of seeing a bird feed on bad food is powerful enough stimulus to overcome previously learned avoidance behavior even after 24 hours have elapsed, Dr. Klopfer explains.

Some species of birds have a more varied diet or a "more opportunistic feeding habit" than the greenfinches. They might not be as seriously affected by this interference with discrimination learning, in social situations.

"Only among species whose feeding responses are so conservative as to virtually eliminate the likelihood of their feeding on some unsuitable or noxious food," the zoologist says, is there a possibility that this interference might not be a harmful adaptation.

Further studies of flocks of birds and birds that do have more varied diets and feeding habits should provide valuable information about the relationship between learning processes and social organization, Dr. Klopfer concludes.

Science News Letter, November 1, 1958