

## MEDICINE

# Six New Antibiotics

Half a dozen antibiotics, mostly still in the laboratory stage, are reported to symposium. One of the antibiotics, Puromycin, has successfully reduced tumor weight in mice.

► HALF A dozen new antibiotics for fighting infectious diseases and one anti-tumor antibiotic were reported at a symposium held in Washington under the sponsorship of the Food and Drug Administration of the U. S. Department of Health, Education and Welfare.

The six new ones are Tetracycline, Hygromycin, Streptogramin, Ruticin, Streptocardin and Methymycin.

The potential anti-tumor antibiotic is Puromycin. Its effect on experimental tumors was reported. It is one of a number of antibiotics being tested for anti-tumor activity in experimental animals by William Troy and associates of Lederle Laboratories, Pearl River, N. Y.

In mice given the largest dose they could stand, this antibiotic reduced the weights of breast cancers up to 70%. Its action against other cancers in mice and rats was relatively weak.

Tetracycline, trademarked Achromycin by its producers, Lederle Laboratories, was made from an older antibiotic, Aureomycin. By a chemical process a chlorine atom was removed from Aureomycin and replaced by a hydrogen atom. This change, although seemingly minor to a layman, took years to accomplish and results in a completely new antibiotic.

Dr. Raymond W. Cunningham of Lederle explained that in literally thousands of laboratory tests on mice, rats and dogs, Achromycin showed a low toxicity. The yellow-colored antibiotic is both more soluble and more stable than Aureomycin in an alkaline solution. Antibiotics are mixed in an alkaline solution for vein injections.

Dr. J. S. Kiser of the Pearl River group said the antibiotic is effective against organisms that cause such diseases as pneumonia, dysentery, typhoid fever, etc. Dr. Maxwell Finland of Harvard Medical School reported that, in clinical trials, the new antibiotic's effects closely paralleled those of Aureomycin, and that Achromycin had even fewer side effects than the older drug.

Hygromycin not only stops bacteria but can kill them, and in animal tests was effective against tuberculosis, Dr. R. C. Pittenger and associates from Lilly Research Laboratories, Indianapolis, reported.

Streptogramin, Ruticin and Streptocardin were developed by researchers at Sharp and Dohme division of Merck and Company, West Point, Pa. Methymycin was reported by scientists from the Squibb Institute for Medical Research, New Brunswick, N. J. These are still in the laboratory testing stage.

Dramatic results in the prevention of rheumatic fever and the treatment of otitis

media, an infection of the middle ear, were reported for a recently introduced long-acting penicillin called Bicillin.

Lts. Robert Chamovitz, Medical Corps, U. S. Air Force, and Francis J. Catanzaro, Medical Corps, U. S. Army, Warren Air Force Base, Wyoming, reported results of a study made with 241 test patients suffering from pharyngitis. A group of 132 was given Bicillin, while the other 109 were treated with other drugs.

Of those receiving Bicillin, only one showed traces of beta hemolytic streptococci in the throat, while 84.8% of those given standard treatment carried the germs.

Although the cause of rheumatic fever is not known, it has been found to follow beta hemolytic streptococcal infection. A single injection of Bicillin, setting up a two-week barrier against that infection, has proved effective in preventing the more serious disease.

Two cases of rheumatic fever developed in the Ft. Warren control group, whereas there were none among the patients who received Bicillin.

Dr. Gene H. Stollerman, medical director of Irvington House, Irvington-on-Hudson, N. Y., reported similar results with Bicillin. The antibiotic is valuable in pre-

venting recurrences of rheumatic fever, which in time usually leads to rheumatic heart disease, he reported.

Dr. Stuart Walker of Johns Hopkins Hospital, Baltimore, reported very favorable results with Bicillin in the ear infection.

Earlier in the year, the same drug was reported to be effective as a one-shot cure of syphilis by venereal disease specialists of the U. S. Public Health Service. Bicillin was developed at the Wyeth Institute of Applied Biochemistry, Philadelphia.

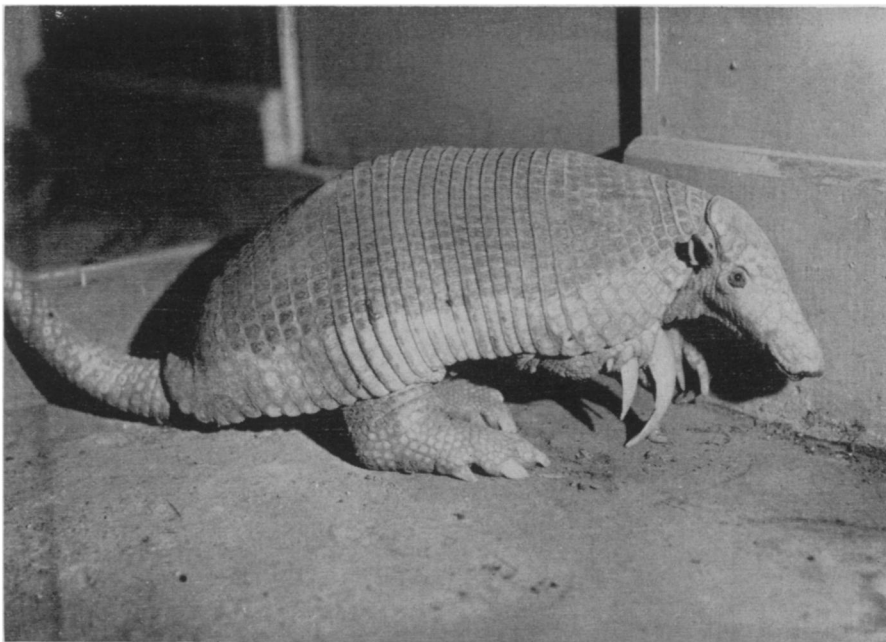
While these new antibiotics, or so-called mold remedies, held the spotlight, results with some of the older ones, best methods of using them and ways of avoiding their disadvantages such as sensitivity of the patient and resistance of the germs were described.

"Ten years ago penicillin was the only antibiotic known to medical practice, and its use was confined to battlefield casualties," Dr. Henry Welch, chief of the Food and Drug Administration's antibiotic division, pointed out.

"There was none available for civilian patients. Today there are numerous antibiotics, accounting for more than one-half of all prescriptions written in this country.

"The past ten years may well go down in medical history as the 'Antibiotic Era,' based upon what these drugs have done to minimize human suffering and extend the life span.

"Primary syphilis has been markedly reduced throughout the United States, to the point where it has become very difficult to find cases for clinical study. Marked progress is being made in the eradication of spirochetal diseases in tropical countries where these diseases are endemic. Mass



**GIANT ARMADILLO**—A recent arrival at the National Zoological Park in Washington is this giant armadillo, *Priodontes giganteus*. It usually measures more than four feet from head to the end of its tail, and is found in South America from the Guianas to Argentina.