

MEDICINE

New Step in Flu Fight

Family of chemicals found which have the ability to lower slightly power of influenza virus to infect chick embryos. Related compounds might be more effective.

➤ A FRESH clue to possible influenza-stopping chemicals has been discovered by Dr. Robert Hanan of the U. S. National Institutes of Health.

Compounds derived from vitamin E, or alpha-tocopherol, are capable of lowering slightly the ability of influenza virus to infect chick embryos, he has found.

The 'flu-stopping ability of the chemicals he tried is too slight to make them of value for practical application as influenza remedies or preventives. But any number of similar tocopherol compounds can be

prepared. One of them might prove more valuable in anti-influenza properties.

Starting point for Dr. Hanan's research was the finding by other scientists that tocopherol compounds can check the activity of an enzyme called hyaluronidase. This enzyme acts to change another chemical, hyaluronic acid, by a process called depolymerization. This acid has certain chemical similarities to ovomucin, or egg mucin, on which the influenza virus enzyme acts. Tocopherols which inhibit the hyaluronidase enzyme might, Dr. Hanan suspected, also act on the 'flu virus enzyme.

Experiments with 'flu virus in the test tube showed this to be the case. Details of these experiments and of those showing the tocopherols can slightly check infecting activity of the virus for chick embryos are reported in the PROCEEDINGS OF THE SOCIETY FOR EXPERIMENTAL BIOLOGY AND MEDICINE.

Science News Letter, January 20, 1951

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● RADIO

Saturday, January 27, 1951, 3:15-3:30 p.m., EST

"Adventures in Science" with Watson Davis, director of Science Service, over Columbia Broadcasting System.

Dr. E. U. Condon, director, National Bureau of Standards, will discuss "Fifty Years of Research."

ENGINEERING

Gas Turbine Engine For Use in British Ship

➤ A MARINE gas turbine engine, the first for installation in a commercially operating merchant ship, will soon be tested at the Rugby, England, works of British Thomson-Houston. It is for use in the tanker Auris.

Details of the engine are not revealed. Many gas turbines are in use in America in stationary installations. The U. S. Navy is conducting experiments with a marine gas turbine but as yet this type of power is not used on shipboard. Four gas-turbine electric locomotives are now in experimental use on railroads of the world, and several installations of gas-turbines, commonly called the turbo-prop system, are in use in both American and British airplanes.

The gas turbine is an efficient engine in which high-pressure gas resulting from combustion is forced against blades or vanes on a shaft to cause the shaft to rotate. It might be called the successor of the steam-turbine which utilizes high-pressure steam to rotate the shaft.

The customary fuel used in the gas turbine is oil but it can be operated with natural gas as fuel. A coal-burning gas turbine is under development. It uses for fuel a very finely divided type of coal, blown into the combustion chamber with air. One particular advantage of the gas turbine, besides its thermal efficiency, is its suitability for use where water is scarce. No water is required for its operation.

Science News Letter, January 20, 1951

AERONAUTICS

New Amphibian Plane Can Use Varied Terrain

➤ A FEEDER airplane, an eight-passenger craft developed in England, is now under flight and landing tests in South America, using either land or water for a port. It is an amphibian, dubbed the Short Sealand, and is being tested for service under tropical conditions and for use on inland waters and rough grass fields.

For landing on earth, the plane has ordinary landing gear with wheels that can be retracted into the hull. For landing on water it has wing-tip floats. The tail wheel used in dry landings folds up to become a rudder when the Sealand is taxiing on water. It can be easily taxied along narrow water channels.

The special feature of this plane is ability to operate from varied types of terrain. In addition to its ability to land on water or paved runways, it can land on grass fields whether the grass has dried up or is green and six inches tall. It is fitted with feathering and reversing propellers which shorten its landing run. A run of 800 yards is sufficient for take-off; for landing, a shorter run can be used.

Science News Letter, January 20, 1951

Some 38 chemicals produced by molds, bacteria and fungi have been discovered which are active against the tuberculosis germ; *streptomycin* is the only one now widely used.

YOSEMITE FIELD SCHOOL

A Workshop in Interpretive Methods

Twenty selected college graduates will have the opportunity to spend the summer in Yosemite National Park under the tutelage of the National Park Service Naturalist Division. They will receive intensive, varied training in the presentation of natural and human history to the public, and in the techniques of interpretation-on nature walks, with children, at campfires.

Also considered will be related matter such as museum methods and the use of museum and library materials. Twelve days will be spent in the High Sierra, an opportunity for maturing, exhilarating personal experience.

Students pay own expenses, plus modest incidental fee. Application deadline, February 28. For prospectus, address:

Director, Yosemite Field School
Box 545
Yosemite National Park, California