

## MICROBIOLOGY

# Germ Warfare Detection

**Centers for detection of germ warfare are being planned as a part of civil defense. A number of agents could be used in attack, but large-scale epidemics are unlikely.**

► ESTABLISHMENT of germ warfare detection centers is a part of Federal civil defense plans, Dr. Victor H. Haas, director of the Microbiological Institute, National Institutes of Health, revealed at the meeting in Chicago of the College of American Pathologists.

Federal agencies are also now planning as part of their civil defense activities to train selected scientists in germ warfare detection and defense methods. These in turn will train other scientific and technical personnel.

The training is needed because laboratory workers engaged in usual peacetime operations are not familiar enough with procedures used in germ warfare detection.

Laboratory directors must be prepared to detect and frustrate attempts to produce germ warfare agents in the United States, Dr. Haas warned.

"An enemy can attack us with infectious agents or biological toxins," Dr. Haas declared emphatically in one of the few statements that have been made by a government official on this hush-hush subject since the release early in 1946 of the Merck report on the nation's biological warfare program during the last war.

Large-scale epidemics, however, are unlikely to result from germ warfare attacks, in Dr. Haas' opinion.

Many disease-causing germs and their poisonous products are stable, resistant to heat, drying and sunlight, capable of quantity production and suitable for dissemination in the air, water, milk and so on, Dr. Haas stated.

"Any bacteriologist can think of a number of agents which could be used to attack us," he said, giving as examples: 1. viruses, such as influenza or psittacosis (parrot fever); 2. rickettsiae, such as those causing Q fever or typhus; 3. bacteria, such as the typhoid or cholera organisms or the agents causing plague or tularemia; 4. fungi, such as histoplasma or coccidioides; and 5. toxins such as that produced by the botulism germ.

"There is abundant reason," he declared, "for believing such agents could be used against us as part of an attack with explosive munitions or by sabotage before or during actual warfare.

"A simple but important measure in helping to prevent attacks with these agents will be to frustrate attempts to produce them here in the United States.

"An enemy with access to a laboratory might manufacture sufficient quantities of

live organisms or their toxins to permit extensive sabotage.

"Alertness and vigilance on the part of laboratory directors, careful supervision of all activities under their control and scrutiny of any excessive or unusual demands upon bacteriological supplies or equipment should minimize the possibilities for surreptitious production."

Because agents of biological warfare, or B. W. as scientists term it, are not detectable by the physical senses, Civil Defense Health Services will have to set up a system of air sampling and accumulate records of normal

germ populations of the air in target areas and strategic buildings and installations under a variety of conditions, Dr. Haas stated.

Present methods and apparatus are inadequate for detecting most of the agents that might be used to attack us, Dr. Haas said. Even such germs as were caught by the samplers would be identified too slowly. But he thinks a start could be made and expects improvements in the methods.

The first sign of an attack with B. W. agents, he said, will probably come some days after the attack has taken place and will depend on the appearance of illnesses resulting from exposure to the germs or toxins.

We can expect, he said, "a number of primary casualties resulting from a mass initial exposure, and that secondary cases will be absent or minimized.

"It is not expected that large-scale, self-perpetuating epidemics would develop as a result of attack."

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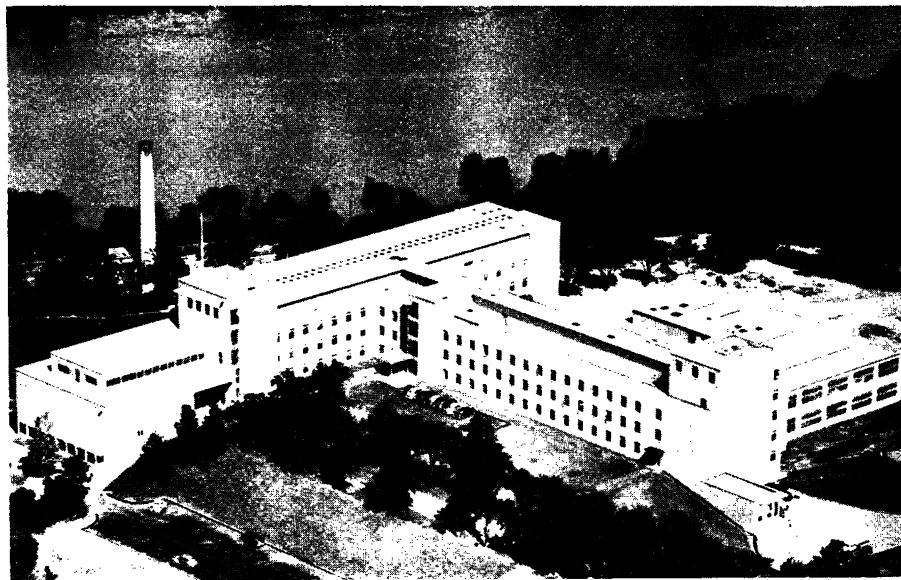
## MEDICINE-AERONAUTICS

# Ultrasonic Noise Harmless

► THE HIGH frequency noise of the exhaust of turbo-jet engines has been found not guilty of causing nausea, weakness, irritable disposition and other vague ills. So Dr. Hallowell Davis, expert on hearing of the Central Institute for the Deaf,

St. Louis, Mo., reported to the National Noise Abatement Symposium in Chicago, Ill.

Ultrasonic noise that is beyond the range of your hearing will not hurt you—unless the sound is intense enough to cook a small



**HOME OF RESEARCH**—The main building of the General Electric Research Laboratory located at the Knolls near Schenectady, N. Y. is shown above. "Universal space" design, provided by ready availability of services and use of movable steel partitions, permits establishment of rooms of any size ranging from six feet to the full length of the building. The four other principal structures are the radiation laboratory, the low-temperature laboratory, a chemical pilot plant and a heating plant.