Kiwanis told of medical research

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In a timely talk before the Frederick Kiwanis Club, on Tuesday at Erni's Italian Kitchen, Col. Richard Barquist, commander of the U.S. Army Medical Research Institute of Infectious Diseases (USAMRID) described the research being done by his unit at Fort Detrick.

The unit has two main purposes, Barquist said. USAMRID is charged with studying diseases in foreign countries, and particularly in those countries in which American military forces might conceivably become involved. The unit aims to find cures for the infectious diseases it encounters. (The Center for Disease Control in Atlanta, Ga., works with American infectious diseases.)

USAMRID also studies biological agents which could be used in biological warfare, attempting to find antidotes.

Col. Barquist explained that while the United States and 64 other countries have signed a pact disavowing the use of biological agents in warfare, the agreement holds no provision for inspection or certification. The United States does not wish to be taken by surprise, and so is continuing its medical defensive research.

"The things we work with are dangerous," he admits, "but these buildings are designed for working with dangerous (biological) agents."

The USAMRID building is divided into a series of narrow "hot suites," each with its own separate air-handling apparatus. The second floor of the building is, in fact, devoted to ductwork and filtering.

To enter the hot suite requires passing through a "cold change room" protected by air locks. Only laboratory clothing is permitted in the suite. (On leavng the lab, clothing is left in a laundry bag sterilized by an ultra-violet light and everyone is required to shower before dressing to leave.

Workers in the lab are also vaccinated to protect against diseases for which vaccines have been developed.

The suites have limited access, a policy designed to expose the fewest number of people as possible to danger. Air flow is guided away from the workers. High-efficiency, particulate-retaining filters sweet the air and in some instances an incinerator is placed behind the filters.

Within the suite itself, disease organisms are kept within sealed cabinets. Windows and glove ports make it possible to work with the organisms from the outside of the cabinet.

In some instances, a "spacesuit" of clear plastic, with a self-contained air system has been used. After use, this "spacesuit" would get a Lysol shower.

Every tool used in the lab passes through an autoclave for sterilization.

These techniques were all pioneered at Fort Detrick, and although some [illegible] workers were infected while working with the diseases, no family members have ever contracted the dangerous diseases.

Col. Barquist added that the final stage of testing a new vaccine involves human testing. While studies in cultures, in rats, and with other animals are necessary along the developmental stages, only exposure in human beings provides convincing proof that a given vaccine will work. Naturally, this step is only taken after extensive testing.

Col. Barquist revealed that there is a tradition at Fort Detrick of the commanding officer being among the first volunteers to test a new vaccine. He, himself, has done this several times.

Where do the volunteers come from? While the draft was in operation, many members of the Seventh-Day Adventist Church chose to serve their country in this fashion. Today, many churchmen look to other avenues of national service, but there are a dozen volunteers from that church among the eighty-four volunteers are now on base at Fort Detrick, the rest being trained volunteer medical corpsmen.

at Detrick

A "human use committee" must pass on every new research study. Once approved, those volunteers wishing to participate are given a chance to study the research plan and then a week is allowed to pass, time for reflection and for the men to drop out of the program if they wish. Even after the tests have begun, a volunteer can withdraw at any time. The Army has also made provisions with each man to provide medical care for any future effects resulting from the experimentation, whenever it might occur.

USAMRID is working with diseases which are not lethal but which would incapacitate any army, such as influenza, dengue fever, or Rift Valley fever. Potential killer diseases such as epidemis typhus, Congo virus, and Korean epidemic hemorrhagic fever are also worked with.

A year ago, USAMRID was looking at the evidence with Legionnaire's Disease, but was not able to solve the riddle.

In closing, Barquist revealed that half the center's $6,869,000 budget goes for civilian salaries.