

MEDICINE

Center for Research

One of the great world centers for research, at the Government-supported National Institutes of Health, is a good place to learn of the advances being made in medicine.

► IT WOULD be ideal if every time a medical scientist accidentally knocked over a piece of laboratory equipment a cure for a disease resulted. Unfortunately, this is most often not the case.

Medical research, from the laboratory to the doctor's office, is a long, frustrating, painstaking, sometimes rewarding and sometimes fruitless business. At best, it is always hard work.

One of the great world centers for medical research is the Government-supported National Institutes of Health in Bethesda, Md. By no means the only such center here or abroad, NIH, as it is called, is a good place to meet medical researchers and have a quick looksee at how they work. For here, on this sprawling campus-like location, a few miles from the nation's capital, one can begin to get the first insights into the why, the what and the how of research aimed at saving human lives.

To try and get any more than a brief insight into medical research would be a Herculean task involving years of study and interviewing.

Briefly, NIH is a bureau of the Public Health Service. It supports medical research and training throughout the country and carries on research in its own laboratories. There are seven Institutes, three divisions and a clinical center comprising NIH. Programs of the Institutes, as described by its director, Dr. James A. Shannon, "are designed to obtain new medical knowledge in order to control especially the major killing and crippling diseases of today, such as cancer, heart disease, arthritis, neurological disorders, and mental illness."

Dr. Shannon also has said:

"We at the National Institutes of Health appreciate our great responsibility. We approach our work with humility, but with confidence that we can aid materially in man's conquest of disease."

In this respect, Dr. Shannon speaks for all medical researchers.

Medical research is paradoxically similar to the human body it is striving to make well and keep well and, at the same time, similar to the diseases that hinder it in its progress to do these things.

It is similar to the human body because to function properly medical research is now dependent on many parts and many persons. A study on some aspect of the heart might mean the interdependence of a biochemist, a medical doctor, a radiologist, a biophysicist and several more professional and technical researchers.

It is similar to the diseases it combats because medical research today takes many forms, changes its form from time to time as an illness will change from patient to patient. The research can be on one seem-

ingly complicated basic problem, whose solution will not fit into a notch of medicine's progress for ten or 15 years. On the other hand, it may be a dramatic find that will spell relief to thousands overnight.

The words basic and applied have little meaning to the medical scientist. Rather, the research is more like a circle than two parallel lines. It is not unusual for a patient to provide the scientist with the means for his first experiments that will result in a preliminary treatment for the patient. Then, the following results will end up back in the laboratory and undergo more tests. Then back to the hospital and so on. It is a spiraling staircase at whose top rest palliatives, cures and longer life.

The stairs for the spiral staircase are more often than not the work of medical scientists of the past. Scientists at NIH say that most major discoveries have their roots deep in the wellspring of all research. To build in medicine, a scientist cannot ignore the work of his predecessors.

The scientists themselves are little different from most human beings. They drive sports cars, play golf, enjoy baseball and television and worry about the rent, their children's education and the world situation. At work, they drink coffee out of beakers and spend a good part of their lunch hour in the laboratory exchanging ideas while munching on a pail-box sandwich.

Some are elderly, having devoted upwards of 20 and 30 years to one aspect of one problem on one disease. Some are young, starting out to unravel the mysteries of death. All are dedicated and although there are few tangible rewards, such as the Nobel Prize or the Lasker Award, a medical scientist is not too unlike the combat infantryman—each a hero. By the same token, many of these scientists could be making more money in either private practice or industry.

These scientists and their work are not unique. They can be found throughout the United States. Their counterparts might live in your town and work at a college or hospital there. An important part of NIH program takes this into account. It is the extracurricular grant and training program that stretches clear across the continent. Almost two-thirds of the money NIH spends in any given year is for this operation.

Specifically, the disbursements consist of grants to support research projects, fellowship awards to develop research talent, traineeship awards to provide special clinical training, grants to promote control of disease, and grants to assist in improved teaching or training in certain medical areas.

This is the first in a series of reports on research at the National Institutes of Health.

Science News Letter, August 16, 1958

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