

Duke Hosts Tissue Typing Workshop

Matchmakers were at work at the medical center Nov. 10-22, but their interests had nothing to do with romance.

The items participants at the conference were matching were white blood cells and the object was to prevent possible rejection of transplanted organs.

The two-week workshop, co-sponsored by Duke and the National Institutes of Health, was designed to train more personnel to match donors and recipients for the ever-growing number of heart, lung, liver and kidney transplants.

Coordinated through the National Institute of Allergy and Infectious Diseases, the conference was organized by Dr. Chester M. Zmijewski, associate professor of immunology.

Thirty-seven immunologists and technologists from all over the United States, Canada and Puerto Rico learned the most modern laboratory techniques for matching the white blood cells (leukocytes) of prospective donors and recipients on the basis of the presence or absence of certain substances called antigens which stimulate production of antibodies. The antigens will elicit a defensive response from the body by production of antibodies. If a donor organ has antigens not present in the recipient, the recipient may recognize the transplant as foreign and reject it.

Blood known to contain antibodies against any of the seven identifiable antigens is used to test tissue cells of donors and recipients. Two basic tissue-typing methods were taught at the workshop. The cytotoxic technique measures



TISSUE-TYPING METHOD—Dr. Chester M. Zmijewski, associate professor of immunology, illustrates his method of matching white blood cells at a workshop held at the medical center.

the amount of cell death which occurs when a cell sample is mixed with blood known to contain antibodies indicating the presence of antigens in the sample. The other method is the agglutination technique which involves the aggregation of white cells when they possess the antigen recognized by the antibody.

In addition to presentations of typing methods by Duke researchers Dr. Zmijewski and Dr. D. Bernard Amos, professor and director of Immunology, participants heard lectures and watched dem-

onstrations of techniques by five other leading immunologists.

Dr. Paul Terasaki, professor of surgery at the University of California at Los Angeles, illustrated his world-famous cytotoxicity technique and the microcytotoxicity method, which uses very small amounts of the reagent blood. Dr. Terasaki has typed the white cells of thousands of patients resulting in over 500 transplants, mostly of kidneys.

Two scientists from Stanford University at Palo Alto, Calif., also demonstrated their techniques of typing. Dr. Rose Payne presented her agglutination method using blood from which platelets, a type of blood cell, have been removed. Dr. Walter Bodmer demonstrated his cytotoxicity fluorochromasia techniques, a cell-death measuring process which makes use of a fluorescent stain to increase the sensitivity of the test.

A University of Wisconsin researcher, Dr. Fritz Bach, lectured on his technique of mixed lymphocyte cultures, (MLC), in which white blood cells from potential donor and recipient are mixed to see if any rejecting substances are produced. This method provides a general measure of the incompatibility of donor and recipient cells.

Dr. Fred H. Allen of the New York Blood Center explained cell freezing techniques being developed for the shipment and standardization of blood used as reagents to test donors and recipients.

Under direction of Dr. Zmijewski and his staff, participants at the workshop spent one week learning and perfecting each method for later use at their home universities and hospitals. Duke is one of two medical centers in the United States serving as quality control agents for an NIH white cell "bank" which will soon be supplying medical centers with the scarce reagent blood.

Dr. Joanne Southworth, associate in Immunology, was responsible for bringing the visiting instructors to the workshop. Miss June Fletcher, technical associate in Immunology, served as program coordinator for the course.

All equipment for the laboratory work was provided by Dr. Zmijewski's research facilities. Even Duke's athletic department got in on the act of providing support equipment when it supplied one of the NIH officials at the conference with the crash helmet he needed to ride a rented motorcycle.

Employes' Councilmen Convene

Representatives elected to the Duke University Nonacademic Employes Council in October have begun organizational meetings.

The council, composed of 24 members, 11 of them from the medical center, is divided into two sections, one for technical and clerical personnel and one for service and maintenance employes.

The groups meet individually and jointly.

Mrs. Margaret Stinnett of the Department of Microbiology and Immunology has been elected chairman of the technical and clerical section. Pauline Jordan of plant engineering and maintenance is secretary. Temporary vice chairman of

the division is Martha Love of the Department of History.

The technical and clerical division is currently working on forming a constitution and suggesting persons to be named by the council as a whole to the Duke University Employes Relations Advisory Committee.

The service and maintenance division, presently headed by Oliver Harvey as temporary chairman, is in the process of selecting permanent officers, preparing a constitution and listing possible nominees for DUERAC.

The two divisions together plan to write a joint constitution to define their powers and duties.