Chemical Corps Medical Laboratories

THE Chemical Corps of the Army maintains three major research establishments: Chemical Corps Biological Laboratories, Chemical Corps Chemical and Radiological Laboratories, and Chemical Corps Medical Laboratories. The last is the present-day descendant of the Gas Defense Service created within the Medical Department of the Army in the latter part of 1917. The Chemical Corps Medical Laboratories are housed in buildings erected since 1943 at Army Chemical Center, adjacent to Edgewood, Maryland.

The administration of the Chemical Corps Medical Laboratories is headed by a Medical Corps officer assigned to the Chemical Corps for that purpose. The direction of the research within the laboratories is carried out by civilian scientists, headed by a scientific director. The research staff is predominantly civilian; qualified military personnel from the Chemical and Medical Corps of the Army, from the Air Force, and from the Navy are also assigned there.

The research personnel is organized into five divisions: Biochemistry, Biophysics, Clinical Research, Physiology, and Toxicology. Each division has in it about 100 people and has as its head a division chief of recognized standing in his particular field. The divisions are divided into branches headed by younger M.D.s or Ph.D.s. Each branch works on one or more of the projects assigned to the laboratories by the Research and Development Board.

The research work carried out within the Chemical Corps Medical Laboratories falls into four major categories: (1) the toxicities, effects, and mechanisms of action of chemicals used or proposed for study as offensive agents in chemical warfare; (2) the development of means of protecting or treating military personnel exposed to poisoning by chemical warfare agents; (3) the toxicities, effects, mechanisms of action, and chemical or physiological antagonisms of substances handled by military personnel but not intended primarily for use in chemical warfare; and (4) the factors involved in production and prevention of wounds. The primary program of applied research is integrated closely with supporting basic research.

The results of research projects are presented as Medical Laboratories Research Reports, for circulation within the Department of Defense and associated agencies. Those portions of this work that contain basic knowledge of general application in medicine and biology are published openly whenever security considerations permit. The present uses of drugs like diisopropyl fluophosphate in treating myasthenia gravis and of nitrogen mustards in treating certain blood dyscrasias illustrate medical applications of knowledge that originated as classified information.

Although the research facilities and personnel of the Chemical Corps Medical Laboratories are capable of attacking a wide range of problems, other laboratories with special facilities or knowledge in limited fields are placed under contract to do research within their special areas of unusual competence. In this way the laboratories complement or supplement the work of their own staff.

In addition to their research function, Chemical Corps Medical Laboratories have the duty of increasing the scientific competence of their staff. This is done in three ways: by weekly seminars conducted by laboratory personnel or by outstanding guest scientists and open to all staff members; by conferences and symposia on specific topics, in which selected members of the staff and invited experts participate; and by in-service training courses yielding credits applicable toward graduate degrees in the basic medical sciences. For this latter purpose certain staff members hold appointments as lecturers in the University of Maryland. These men organize and offer courses at the graduate level within Chemical Corps Medical Laboratories. Research done within these laboratories is acceptable as thesis material.

J. H. WILLS

Pharmacology Branch
Chemical Corps Medical Laboratories

SCIENCE, founded in 1880, is published each Friday by the American Association for the Advancement of Science at the Business Press, 10 McGovern Ave., Lancaster, Pa. Entered as second-class matter at the Post Office at Lancaster, Pa., January 13, 1948, under the Act of March 3, 1879. Acceptance for mailing at the special rate postage provided for in the Act of February 28, 1925, embodied in Paragraph (d-2) Section 34.40 P. L. & R. of 1948.

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Annual subscriptions, $7.50; single copies, $.25; foreign postage, outside the Pan-American Union, $1.00; Canadian postage, $.50. Special rates to members of the AAAS.

The AAAS also publishes THE SCIENTIFIC MONTHLY. Subscription and advertising rates on request.

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