

## Origins of the Research Program

The origins of the Office of Health and Environmental Research trace back to the outset of the Second World War and the establishment of nuclear research centers under the "Manhattan Project." The first formal program began in 1942 as a Health Division, established by Dr. Arthur Holly Compton, Director of the University of Chicago Metallurgical Laboratory. Already a Nobel Laureate for his work on X-ray scattering, Dr. Compton recognized the unprecedented hazards posed by radiation to wartime workers at the laboratory. With the perspective of a half century of earlier experience with X rays and radium, he and his colleagues could well appreciate the dangers as well as the possibilities of atomic radiation. Biomedical programs were soon established at Oak Ridge, Tenn., and in the Manhattan Project at large, and it is fortunate that these programs were able to attract the most competent physicians and medical researchers in the field of the biomedical effects of radiation.

Like the Curies and other pioneers in the field of radiation, those who sought to protect the health of their colleagues could understand, more than others, that the phenomenon that so concerned them was, at the same time, an opportunity. They grasped its significance and foresaw the promise of radiation and nuclear medicine as a new means for medical diagnosis and treatment. This promise has been fulfilled. Today nuclear medicines are produced and packaged in myriad forms and are in widespread use; for example, thallium-201 alone was administered to 370,000 patients in 1981 for the diagnosis of heart disease.

In providing the first legislative basis for the health research program through the Atomic Energy Act of 1946, the Congress overlooked neither the opportunities nor the dangers presented by radiation. In the act the Congress directed the Atomic Energy Commission (AEC) to

*. . . make contracts, agreements, arrangements, grants-in-aid, and loans . . . for the utilization of fissionable and radioactive materials for medical and health purposes . . .*  
and for  
*. . . the protection of health during research and production activities . . .*

The need for a highly qualified group of research administrators was foreseen to fulfill this broad charter. Thus the Division of Biology and Medicine was established, and Dr. Shields Warren, Professor of Pathology at Harvard, was named its first director. Under Dr. Warren the division laid down the outlines of a vigorous research effort in fundamental studies in the life sciences, in applied areas to ensure industrial hygiene in AEC facilities as well as the public health and safety, and in fostering the rapid growth of nuclear medicine.

The responsibility for administering this program was later assigned to the Energy Research and Development Administration (ERDA), which succeeded the Atomic Energy Commission through the Energy Reorganization Act of 1974. The oil embargo, however, had underscored the need for developing a wide range of energy options and technologies in addition to nuclear, and this was reflected in the new agency's mission. Therefore this act charged the ERDA administrator with the additional responsibility of

*. . . engaging in and supporting environmental, physical, and safety research related to the development of energy sources and utilization technologies.*