

Human Subject Research at Fort Detrick: 1943 - 1973

Background



The U.S. Army established its offensive Biological Warfare program at Fort Detrick in 1943. The purpose of the program was twofold: develop defensive mechanisms against biological attack and develop weapons with which the United States could respond “in kind” if attacked by an enemy who used biological weapons. The offensive Biological Warfare program remained at Fort Detrick until November 1969, when the United States formally renounced the use of lethal biological agents and weapons, and all other methods of biological warfare and discontinued these offensive programs.

Human Experimentation

From 1943 through 1953, biological warfare research on humans was observational in that it was done after occupational exposure incidents or accidents among workers in the biowarfare facilities. These incidents provided the station hospital the unique opportunity to study the onset, clinical course and possible therapeutics for many rare diseases.

In the early 1950s, due to a lack of firm data on human vulnerability to biological agents, the Army began to use human subjects in biological warfare research. Project CD-22, the first of the human research projects, involved the study of Q fever in animals and humans in the laboratory and the field. Operation Whitecoat followed this effort.



Operation Whitecoat volunteers largely consisted of Seventh-Day Adventist draftees, who were trained as medics but whose religious convictions forbade combat. Approximately 2300 individuals participated in the program. The Army

completed about 150 studies during the Operation Whitecoat years. Experimenters exposed volunteers to disease-causing agents such as Q fever and tularemia under strict protocols to study immunity to disease and to conduct drug therapy. Whitecoat volunteers also participated in safety studies of vaccines designed for protection against Venezuelan equine encephalitis, Eastern and Western equine encephalitis, plague, tularemia, Q fever, yellow fever, chikungunya virus and Rift Valley fever. There were no fatalities or long-term injuries among Whitecoat volunteers. The program ended in 1973 upon termination of the military draft.

Summary

Operation Whitecoat contributed to a better understanding of the signs, symptoms and clinical parameters of biological warfare pathogens in humans. Additionally, this experimentation resulted in the development of several experimental vaccines used to protect workers engaged in research at Fort Detrick. Research at Fort Detrick during the Operation Whitecoat program also contributed to the development of equipment and procedures that established the standards for laboratory biosafety. Equipment developed during the program included biological safety cabinets, "hot suites" with differential air pressure to contain pathogens, and other specially fabricated laboratory equipment. For a concise history of the biological program at Fort Detrick see "[Cutting Edge, A history of Fort Detrick Maryland 1943-1993](#)" by Norman M. Covert, published by the Public Affairs Office Fort Detrick

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