

Adventists and Biological Warfare

Project Whitecoat enlisted hundreds of U.S. Adventists into hazardous biological experiments for the good of the country.

by Krista Thompson Smith

FOR 20 YEARS, SEVENTH-DAY ADVENTIST NON-combatant servicemen participated in defensive biological warfare research for the United States Army. The program, based at Fort Detrick, Maryland, was known as Project Whitecoat. Approximately 2,200 Adventists volunteered for medical research experiments. Another 800 assisted in the program as laboratory technicians, ward attendants, and clerks.¹

Both the Adventist Church and the Army praised this project highly. Members of Congress, scientists, and the press criticized the Adventist Church's involvement. Some of the questions raised about this largely forgotten project remain unanswered. Was Project Whitecoat a humanitarian program, devoted solely to the development of vaccines and treatment for disease? Or were critics correct when they charged that the Adventist Church collaborated with the U.S. Army, risked the

health of its members, and even supported the development of offensive weapons for conducting germ warfare? Project Whitecoat continues to raise concretely the issue of how the Adventist Church should relate to government and its use of science.

In 1953 and 1954, human volunteers participated in a study of Q-fever, known as the CD-22 program. The success of this project, and the authorization to use volunteers for defensive studies, cleared the way for the establishment of Project Whitecoat. The exact origin of the name is unclear, but the first research project, using specifically Whitecoat volunteers, began in 1958, with the goal of identifying the infectious dosage of *P. Tularensis*. In 1964, Whitecoat volunteers also began participating in studies involving immunizations for both tularemia and Venezuelan Equine Encephalomyelitis (VEE).² By the time Project Whitecoat ended in 1973, with the discontinuation of the draft, volunteers had also participated in research involving Eastern and Western Equine Encephalomyelitis, sand fly fever, yellow fever, typhoid fever, Rocky

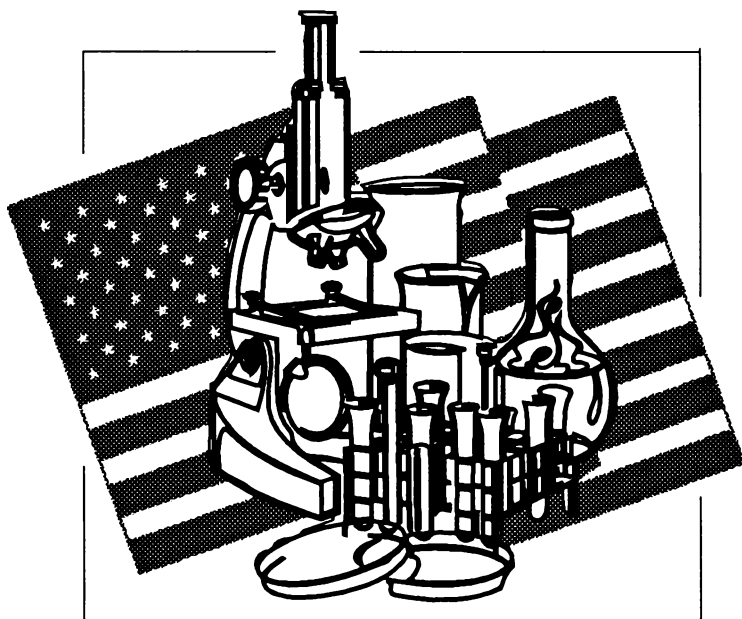
Krista Thompson Smith is currently pursuing graduate studies in political science at the University of Amsterdam, the Netherlands. She originally wrote this essay for the history seminar at Walla Walla College, led by Professor Terrell Gottschall.

Mountain spotted fever, Rift Valley Fever, and several other diseases. In addition, Whitecoat men were used to compare gas masks and test isolation suits for astronauts, and participated in numerous other experiments that used both men and animals as subjects.³

Adventists Join Whitecoat

The involvement of Seventh-day Adventists in Project Whitecoat began in October 1954, when George E. Armstrong, U.S. Army Surgeon General, contacted Theodore R. Flaiz, secretary of the Medical Department of the General Conference of Seventh-day Adventists. Armstrong wished to obtain church approval for the Army to approach Adventist draftees about volunteering for a research program that would contribute significantly to the nation's health and security.

Church and military leaders gave various reasons for the Army's choice of Seventh-day Adventist men, ranging from the "well-known humanitarian ideals" of the Adventist Church⁴ to the basic need to narrow the pool of candidates. Although not all volunteers were vegetarians, nondrinkers, and nonsmokers,



Adventists did provide a fairly homogeneous group of research subjects. Col. Dan Crozier, commanding officer of Project Whitecoat after 1961, explained, "Because of high principles and temperate living, Adventist men are more nearly uniform in physical fitness and mental outlook. We find the soldiers to be cooperative and willing to serve."⁵

The Adventist Church had previously demonstrated a strong record of cooperation with the military, illustrated by the formation of the Medical Cadet Corps. Also, many Adventist physicians, with the full support of the church, attended medical school on government stipends. In World War II, Adventist doctors and nurses from the White Memorial Hospital staffed the 47th Army General Hospital (reportedly with the best dance band in the Pacific Theater).⁶ As J. R. Nelson expressed it, "Adventists, even though considered non-combatant, are willing to serve their country in time of war."⁷

Church leaders praised Adventist war heroes from World War II, giving special attention to the accomplishments of Corporal Desmond Doss, a noncombatant medic. Doss, who in 1945 saved the lives of more than 75 men in one battle on Okinawa, received the Congressional Medal of Honor. Several years later, the Adventist War Services Commission established a training camp for the Medical Cadet Corps, and named it Camp Desmond T. Doss.⁸

With such events in mind, Flaiz responded positively to Armstrong's proposal. Flaiz wrote that "if anyone should recognize a debt of loyalty and service for the many courtesies and considerations received from the Department of Defense, we, as Adventists, are in a position to feel a debt of gratitude for these kind considerations."⁹

These considerations were most likely related to Sabbathkeeping problems encountered by Adventists in the service. To maintain a positive relationship with the Army, some

measure of participation was expected. As one denominational leader expressed it, "The MCC [Medical Cadet Corps] was set up to help the youth to be partially trained in medical military matters as noncombatants so they could be assigned to the medical service where the problems of Sabbath observance are much simplified."¹⁰ In part, the church supported Project Whitecoat for the same reason.¹¹ One critic of church policy, in a poem about the project, wrote, "We're trained to serve, not think. . . . Our country right or wrong, we say—/Just let us keep our holy day."¹²

Conscientious Cooperators

In the United States, most healthy males registered 1-A, for regular combat duty, while conscientious objectors, who totally opposed war and refused military service of any type, chose the 1-O option. The Adventist Church recommended filing for the compromise status of 1-A-O: conscientious objectors who would enter the military as noncombatants. Noncombatants would serve as medics, but would not bear arms.

The church found ways to support the government while it waged war. On numerous occasions, church leaders equated the 1-A-O position with "conscientious cooperation." Clark Smith explained,

. . . we are not a pacifist church in the technical sense of the way the word is used. Certainly we abhor war. However, war is in the realm of the political rather than the religious and is a matter which we as a church have felt that it is inadvisable to comment as to whether or not the government should wage that war.¹³

In spite of this seemingly neutral position, the church strongly encouraged its young men to register as 1-A-O.¹⁴ A number of men who wished to receive 1-O (conscientious objec-

tor) status felt that the church did not support their decision. The 1969 Autumn Council voted to recommend that young men first consider the 1-A-O classification, but that anyone who made the personal choice of 1-O would also receive the support of the church.¹⁵ Even after this, however, it was sometimes difficult to obtain support for a 1-O position.¹⁶

By advocating the 1-A-O draft position, denominational leaders presented the church in a positive light to the Army. The resulting relationship between the Adventist Church and the U.S. Army Medical Unit (USAMU, later USAMRIID—U.S. Army Medical Research Institute of Infectious Disease) lasted 20 years (1954 to 1973). Army personnel selected Project Whitecoat volunteers twice a year from non-combatant servicemen completing Basic and Advanced Individual Training at Fort Sam Houston, Texas.

To be considered for the project, the men had to have a 1-A-O draft status and indicate the Seventh-day Adventist church as their religious preference.¹⁷ The official Whitecoat recruiters were the commanding officer and detachment commander, USAMRIID. The Director of the National Service Organization (NSO) of the General Conference accompanied these Army officials to Fort Sam Houston.¹⁸ The General Conference official was present to answer questions, and to ensure that there was no coercion on the part of Army recruiters. Eligible individuals received a complete explanation of the project, including discussion of the risks involved. Additional opportunity for the men to question the Army officials was provided the next day, following individual interviews. At that point, those who wished to volunteer for the program signed a consent statement with the understanding that "volunteers may become ill and that the program is not without hazard."¹⁹

Project Whitecoat became especially attractive in the mid-1960s, when the majority of draftees received assignments to Vietnam.

Despite the lofty ideals of service proclaimed by some volunteers, the majority of Adventists volunteered for medical research for more pragmatic reasons—primarily the desire to stay in the United States. Others wished to further their medical knowledge or avoid Sabbath confrontations, while some were encouraged to join by friends and family.²⁰ Some of the participants were selected because of their athletic ability, since the project's commanding officer liked to have a good baseball team.²¹

Some participants say the program was well-known for its easy life-style. If the volunteers were not ill while on projects, they watched TV, played volleyball, horseshoes, and croquet, and worked on hobbies and crafts.²² Cooperators received promotions quickly. In addition, the Army paid volunteers for blood "donated" for research.²³ Some military personnel who did not qualify for the program tried to discredit the project out of jealousy.

Entering the Experiments

Upon arrival at Fort Detrick, Whitecoat volunteers underwent complete medical examinations. If health problems were discovered, volunteers were dismissed as research subjects.

All personnel then received regular assignments as lab technicians, animal caretakers, or office clerks. When a research project had reached the level that the directors felt was safe enough to involve human volunteers, the commanding officer summoned the Whitecoat members. He described the proposed experiment, including the purpose and risk involved, and then allowed the potential subjects to ask questions. Each member could then choose to volunteer for that particular project. After volunteering for each project, participants (with two witnesses) signed a release statement. During their term of duty,

Promises Betrayed: One Whitecoat's Experience

by Doug Morgan

In 1963, Arthur R. Torres, now senior pastor of the Sligo Seventh-day Adventist church, was a medical student at the University of Mexico in Mexico City, unaware that he had committed a felony by leaving the country without receiving permission from the draft board. Upon learning of his status, he voluntarily returned and, along with other Adventist draftees claiming 1-A-O status, was stationed at Fort Sam Houston, Texas. There he was

*Doug Morgan, assistant professor of history at Columbia Union College, is a graduate of Union College. He received a doctorate in American religious history from the University of Chicago; his dissertation, *The Remnant and the Republic*, will be published by Indiana University Press.*

introduced to Project Whitecoat—an alternative form of service with advantages both practical and idealistic. However, the experiences would belie much of the promised advantages.

An assignment stateside is the first practical advantage Torres cites. It guaranteed that one would not be sent to Vietnam or even to field service in Europe. The project offered very good duty—working in a laboratory. Moreover, one would be near the world church headquarters and Columbia Union College, and enjoy abundant dating opportunities.

Torres recalls that a General Conference representative who accompanied Col. Crozier of Fort Detrick in a recruiting trip to Fort Sam Houston also employed an idealistic appeal in very strongly encouraging

participation in the program. He depicted Project Whitecoat as "a wonderful opportunity to serve the Adventist Church *and* your country." Additionally, church representatives conveyed the sense that those selected to participate constituted a kind of Adventist elite. The project was primarily carried out by soldiers who were members of the Adventist Church in good and regular standing. The Adventist chaplain at Fort Sam Houston screened out Adventist applicants known to be smoking, drinking, or not keeping the Sabbath. "It became a badge of honor to be selected," observes Torres.

Volunteers were assured, says Torres, that the project served *only* to help develop defense against biological warfare. "What they didn't tell us," he adds, "is that we would also be supporting the cultivation of

most Whitecoat members participated in one or two experiments. A few volunteered for five or six.²⁴ After admission to the research ward, volunteers received another thorough medical examination before experimentation began.

In addition to the Adventist volunteers, early experiments involved inmates from the Ohio State Penitentiary. However, the arrangement was not made public to prevent identification of the patriotic Adventist soldiers with prisoners.²⁵

Medical research at Fort Detrick fell into three general categories. The first sort of experiment studied the basic nature of disease-producing microorganisms. Researchers examined the effects of diseases introduced by unnatural methods, such as spreading infectious agents through aerosol sprays. In a biological warfare attack, microorganisms would most likely be released in an aerosol

cloud from an airplane, allowing the disease-producing agents to enter the body through the lungs. Pulmonary diseases generally progress more rapidly and are more difficult to treat than other types.²⁶

The second kind of experiment studied ways to avoid and treat infectious diseases. The major focus was developing vaccines to combat potential biological warfare agents.

The third research category involved developing means to diagnose infection within the shortest possible time. Obviously, more lives could be saved if a disease were identified and treated before the onset of clinical symptoms.

Fort Detrick maintained one of the largest animal farms in the nation. Experiments there used more than half a million animals a year.²⁷ Before exposing any human volunteers to a disease, researchers performed experiments on mice and guinea pigs, then rhesus monkeys. At the point where animal

all sorts of toxins—anthrax and other viral and bacterial strains.” Torres explains that toxins milked from organisms in the research conducted in the Project Whitecoat section of Fort Detrick were transferred to another section of the fort, beyond a fence, called the “hot area,” for use in chemical warfare. Torres himself frequently carried anthrax to the hot area in an extremely secure container, a task for which “top secret” clearance was required. “We were told,” he reports, “that this toxin is so virulent that just two or three ounces could destroy a city of 100,000 if it got into the water supply.” He questioned his commanding officer, Col. Martha Ward, but continued to receive assurances that their project was for defensive purposes only. “And yet,” he observes, “all the time I was carrying this toxin over to the hot area”—the side of Fort Detrick dedicated to chemical warfare.

“My difficulty with the whole thing,” says Torres, “is that I went in really thinking that I was going to be helping God and country, that I was going to be a human subject in a voluntary medical, experimental project that was going to yield information to the United States that would help defend us in the event that some mad person started a biological war with us. So I said, ‘Yes, this is something I as a Christian can support, because this is healing.’” That Project Whitecoat resources would be used to create a toxin of such virulence and massive destructive capability represents, for him, a betrayal of the spiritual values that in part prompted him to volunteer.

Not only were participants not fully informed about the true purposes of their work, but Torres also believes “informed consent” concerning the impact of the experiments on the health of volunteers was not achieved. “In one particular

area,” he says, “I believe that seven out of the 10 died within five years after they got out of the service.” Others, he says, have had long-term difficulties such as kidney and liver problems. He acknowledges that the cause-to-effect relationship between Project Whitecoat and these deaths and illnesses has never been established, but adds that the relationship seems “more than coincidental.”

The implications of Project Whitecoat for the relationship between church and state also trouble Torres. “It was obvious that the Adventist Church and the United States Army were in partnership trying to find volunteers,” he says. That partnership sought volunteers for a project which, though frequently billed as a humanitarian endeavor, apparently supported, at least indirectly, development of chemical weaponry with horrifying destructive capacity.

experiments could not be extrapolated to humans, and Army investigators believed the project to be safe, human volunteers could be used to test defensive measures against the disease.

The Military Praises Adventists

The General Conference proclaimed this research to be humanitarian and worth the risk, while saying that the church did not “support” Project Whitecoat—joining it was entirely an individual decision. The official position of the church was that it merely had no objection to its members participating. From the beginning, however, denominational leaders praised the program highly. In the 1955 “Statement of Attitude Regarding Volunteering for Medical Research,” W. R. Beach, secretary of the General Conference, said:

There are still conspicuous blank spaces in our knowledge of disease and its treatment. Research in these areas calls for some of the same selfless devotion in the search for lifesaving knowledge as was manifest by the pioneers of modern medicine.

It is the attitude of Seventh-day Adventists that any service rendered voluntarily by whomsoever in the useful necessary research into the cause and the treatment of disabling disease is a legitimate and laudable contribution to the success of our nation and to the health and comfort of our fellow men.²⁸

In the fall of 1966, a denominational representative at Whitecoat selection gave the required statement that the Seventh-day Adventist Church “has investigated the Project Whitecoat and feels that this activity would be in the best Christian tradition.” He then assured the volunteers that “your church feels that you are doing a very commendable thing”²⁹ and gave the usual list of advantages to joining Project Whitecoat.

The Army also seemed to be under the impression that the General Conference favored the program. Military officials often praised both the volunteers and the church for assisting with valuable research. In a letter from S. B. Hays to the chairman of the SDA War Service Commission, the army surgeon general mentioned that “we have had the active support of several members of the General Conference.”³⁰ And in a recorded speech addressed to a 1965 youth congress, Col. Dan Crozier gave the names of a number of church leaders who “have all been active in this project and have played a significant role in its continuing success.” The names included Joseph R. Nelson, National Service Organization director; Clark Smith, National Service Organization associate director; and Thomas Green, civilian chaplain for the Washington, D.C., area.³¹

For a number of years, the Army paid Clark Smith’s expenses to travel with the Whitecoat recruiters³² to explain the church position and ensure that all questions were answered. In 1973, Col. Crozier presented Smith with an Army award—the Outstanding Civilian Service Medal—for his work as associate and then director of the NSO, praising him for “distinguishing himself by outstanding service to the U.S. Army.”³³

The level of General Conference support varied through the years. Some prospective volunteers reported feeling no church urging at all,³⁴ while others felt strongly encouraged to join the research program.³⁵ But even if the General Conference did not always specifically urge Adventist draftees to join Whitecoat at recruiting sessions, it certainly came close to doing so in church publications. There, the enthusiastic praise is in black and white. A *Review and Herald* article in November 1955 stated:

It is with pride in the courage and unselfish devotion of the men who participated in this project that we indicate that they properly belong

in the ranks of those who have gone “above and beyond the call of duty.”

Sustain these men with your letters and your prayers as they carry on for God and Country.³⁶

A later article called the program “humanitarian service of the highest type.”³⁷

The General Conference National Service Organization printed a pamphlet for prospective Whitecoat volunteers, which also painted the program in glowing colors. The pamphlet, written by chaplain Thomas Green, glossed over many negative aspects of the program. Instead, Green listed some of the benefits of being stationed at Fort Detrick: knowledge of assignment location, variety of job opportunities, fellowship with other Adventists, and being near the General Conference headquarters and Columbia Union College.

He then addressed the disadvantages. To those who complained that they missed their chance to go overseas, Green replied, “Some have used leave time, however, to take trips overseas in military aircraft.” To those who were unhappy with their jobs, or did not get along with their associates, he said that such problems could happen anywhere. The most serious objection involved risking one’s health. Green stated that of the more than 1,000 Adventists participants, only a half-dozen had felt that their health had been damaged. He concluded that “most feel they have benefited by the very thorough physical examinations they have undergone upon arrival in the unit.”³⁸

Despite such defenses, criticism of the church’s involvement in Project Whitecoat intensified. National Service Organization leaders claimed that the church was not involved: “This is a project of the United States Army and each person engaged in the project makes a personal decision as to whether or not he will volunteer for it.”³⁹

Even when an Adventist official told the men to make their own decisions, having a Na-

tional Service Organization official from the General Conference present during the recruitment certainly made Adventist draftees conclude that the church supported the program. One volunteer said that he joined the program in 1955 because he was naive and easily influenced, assured by the mere presence of G. W. Chambers that Project Whitecoat was perfectly acceptable.⁴⁰

Adventists Involved in Making Biological Warfare Weapons?

Chemical and biological warfare research received increasing coverage in the press. Both the National Broadcasting Company (NBC) and Columbia Broadcasting System (CBS) aired programs early in 1969. The networks linked Project Whitecoat with development of offensive biological weapons.⁴¹ Many newspaper and magazine articles appeared as well, some without adequate background study.

Seymour Hersh, a Pulitzer Prize-winning journalist and author of a well-documented book on chemical and biological weapons,⁴² published an article on biological warfare in the *New York Times Magazine*⁴³ that referred to Adventist involvement. A few months later, Hersh published an exposé in *Ramparts*. “Adventist leadership,” he said, “has elevated service in Project Whitecoat almost to an act of faith.” Hersh proceeded to accuse the church of being “content with a morality of form without substance, one in which the arts of disease can be presented as the healing arts, and in which germ warfare can be embraced in pious obedience to a divine injunction against death.”⁴⁴

Hersh, an otherwise reputable journalist, failed to contact Fort Detrick before writing about Project Whitecoat. He believed that Project Whitecoat was classified, and that he would therefore receive no information. To

his credit, Hersh did contact the Adventist Church.⁴⁵

In both the *New York Times Magazine* and *Ramparts*, Hersh included a description of symptoms an anonymous Whitecoat participant claimed to experience after being injected with an endotoxin: "Within an hour, the top of my head felt like all the gremlins in Hades were inside trying to emerge by hitting the underside of my skull with sledge hammers."

This quote also appeared about the same time in the *National Examiner*—in a first-person narrative account written by Steven Heczke. Heczke claimed that three of his friends in Project Whitecoat died "horrifying deaths" from anthrax. He himself eventually recovered, received \$50, and was free to leave. If he "breathed a word of the experiment," Heczke was told, he would be "held for breach of defense secrets."⁴⁶

Col. Crozier responded to the *National Examiner* article, stating that none of the four draftees mentioned had ever participated in any Whitecoat experiment, nor had anyone died as a result of experiments at the unit. Crozier concluded, "There are so many errors and falsifications in this article that further detailed refutation is not considered necessary."⁴⁷

Nevertheless, the amount of negative publicity that Project Whitecoat received led many Adventists to question the involvement of their church in the program. Martin Turner, a leading critic of church participation, wrote:

Even if none of the allegations by NBC, CBS, and Mr. Hersh are, in fact, true, the fact remains that the church, rightly or wrongly, has reaped a significant amount of unfavorable publicity from its involvement at Fort Detrick. This hardly seems in line with the instruction to "avoid even the appearances of evil." Even if the Whitecoats are morally just that—lily white—the appearances have been such that two major networks and the author of a well-documented book have been misled.⁴⁸

Finally, in 1969, the General Conference acknowledged the need to examine the project

more closely. Chair of the nine-person Whitecoat Study Committee was Neal Wilson.⁴⁹ Although none of the committee members was an avowed opponent of Project Whitecoat, several did have reservations about the church's involvement. After a two-hour interview with Col. Crozier, head of Fort Detrick, each member of the committee was invited to ask additional questions. The minutes report that the committee "indicated a complete satisfaction with answers given by Col. Crozier and a unanimous agreement with the program now being carried on." The committee then recommended that an article appear in the *Review and Herald*, "as clearly and completely as possible emphasizing the positive aspects of this humanitarian program."⁵⁰

General Conference officials also explained Adventist participation on the basis that Whitecoats engaged in only defensive research—treatment of communicable diseases. However, both the offensive and defensive branches of CBW research were located at Fort Detrick. Furthermore, funding for offensive and defensive research came from different sources, but the two facilities were kept together to enable them to share certain equipment.⁵¹ Whitecoat members did participate in some experiments in the "hot" area, however, so all were required to have a security clearance.

At the end of this fateful year, President Richard Nixon announced on November 25, 1969, that he would submit to Congress for ratification a ban of chemical and biological warfare. Nixon stated that the United States would renounce the use of chemical and biological weapons and destroy current stockpiles. However, this did not have a great effect on Fort Detrick. There was some pressure to demilitarize the institution and reassign the study of infectious diseases to the National Institutes of Health, or some other similar organization,⁵² but the defensive research remained unaffected by any new policies.

Adventists Linked to *Offensive* Biological Weapons

The announcement regarding the end of offensive chemical and biological warfare experimentation did not end the controversy over Project Whitecoat. Skeptics claimed that a mere public statement by the Army regarding a change in intent would not necessarily involve any real revisions in procedure. Congressman Richard McCarthy, a New York Democrat leader in the campaign against chemical and biological warfare, studied government policies and came to the conclusion that Project Whitecoat was “offensive, not defensive, and that the Seventh-day Adventists are being duped.”⁵³

At first, church leaders seemed unwilling to admit that the line between offensive and defensive research is hazy. Pure research in and of itself is neither good nor bad; the results can always be used to help or harm others. Once results are published, it is difficult to prevent misuse or misapplication. And any discoveries made in defensive research laboratories will most likely be adapted for offensive purposes.

Indeed, some critics believed that Project Whitecoat experiments were primarily intended for offensive purposes. The program came under suspicion for several reasons. First, vaccines must be available for one's own troops before it is safe to use any given agent in germ warfare. The Army claimed that having a known immunization for a disease would remove that microorganism from the world's biological weapons arsenal, but as Elinor Langer expressed it,

In the context of biological warfare even life-saving techniques such as immunization take on a strange aspect: immunity among one's own population and troops is a prerequisite to the initiation of disease by our own forces, as well as a precaution against its initiation by others. Some diseases are currently excluded from active consideration as BW [biological warfare] agents chiefly because no vaccines against them have yet been developed.⁵⁴

To be a serious threat as a biological weapon, an organism must be highly infectious, producible in quantity, stable, suitable for aerosolization, and, of course, applicable to the mission. Although these criteria limit the po-

Adventist volunteers for Project Whitecoat. Left to right, FRONT ROW: Harry Galland, David Ludwig, Galen Carruth, Ronald Kwakenat, Fredrick Murray, Albert Wear, Russell Friend, and Carlos Olivares. BACK ROW: Joseph Calvert, Shannon Goodwin, Gary Norman, Terry Carlisle, John Morris, Robert Read, Charles Creech, Kenneth Thompson, David Green, and Dennis Gustafson. Photograph courtesy of General Conference Archives.



tential chemical and biological warfare arsenal to some degree, enemy forces could still use variable strains of familiar microorganisms that would be more resistant or would produce slightly different symptoms than the target population expected.⁵⁵

The primary use of the research done at Fort Detrick was for the military. And because the majority of the diseases researched were tropical, it seemed likely that the Army was planning for the safety of its troops overseas. The program had begun with an emphasis on developing vaccines, but by the late 1960s, Army officials had realized the impracticality of full-scale immunization (even for the military) and had shifted the focus to finding more effective means of diagnosis and treatment.⁵⁶

The research actually did benefit the public as well as the military. Col. W. D. Tigertt, commanding officer of Project Whitecoat before Crozier, stated in 1961 that despite the risk involved, the program would have benefits: "The results obtained will be applicable to the control of disease, whether or not use of biological weapons ever becomes a reality."⁵⁷ Fort Detrick published much of its work, and several of the vaccines developed controlled serious epidemics of disease. For example, a 1969 outbreak of VEE in Ecuador traveled north and reached Texas by 1971. Thousands of horses were immunized, 85 to 90 percent of which would have died without the vaccine.⁵⁸

Publication of research results calmed some fears that Whitecoat members were engaging

A Brief History of Fort Detrick

At Camp Detrick, during World War II, scientists initially carried out research on animals, believing that livestock might be the prime target of a biological warfare attack. Army researchers developed several vaccines before turning the program over to the Department of Agriculture in 1954.¹

During the Korean War, many more soldiers died of infectious diseases than from wounds. Because most American servicemen had never been exposed to such diseases, they had no natural resistance. Not only were soldiers susceptible overseas, but such diseases might also be used in biological warfare against the United States. No programs to develop immunizations for such diseases were underway, so the Army established the forerunners of Project Whitecoat. The program had a dual purpose: defense against naturally acquired diseases and protection from microorganisms used in biological warfare.

The authorization to use volun-

teers in the defensive biological warfare project came in 1955. The program was required to follow the criteria for medical research established at the Nuremberg Military Tribunal following World War II. These requirements included voluntary consent, no human experimentation that could "predictably lead to death or permanent disabling injury," and adequate medical care. The experiments had to be of value to society, the results of which would be unavailable otherwise. All unnecessary suffering must be avoided, and risks should never exceed the potential benefits. Volunteers could withdraw at any time from experiments taking them beyond the limits of their physical or mental endurance.²

In 1956, the Army organized and activated the U.S. Army Medical Unit (USAMU) at Fort Detrick in Frederick, Maryland. It was administratively attached to Walter Reed Medical Center in Washington, D.C. USAMU would be responsible for conducting research and develop-

ment in defensive biological warfare.³ The following year, Ward 200 was established at Fort Detrick to provide medical treatment for military personnel in the program. In 1969, the government redesignated the USAMU as the United States Army Medical Research Institute of Infectious Diseases (USAMRIID). Its mission statement said its purpose was to conduct "studies related to medical defensive aspects of biological warfare" and to develop "appropriate biological protective measures, diagnostic procedures, and therapeutic methods."⁴

1. Richard M. Clendenin, *Science and Technology at Fort Detrick: 1943-1968* (Frederick, Md.: Fort Detrick Technical Information Division, 1968), p. 30.

2. United States Army, U.S. Army Medical Research Institute of Infectious Diseases, "Project Whitecoat: A History," February 14, 1974, p. 2.

3. Clendenin, p. 34.

4. United States Army, USAMRIID, "Mission Statement: U.S. Army Medical Research Institute of Infectious Diseases," n.d.

in secret offensive experiments. Others, however, felt that the Army was still capable of hiding the truth. Part of the controversy stemmed from questions about whether or not Project Whitecoat research was classified.

A 1967 article in *Science* explained part of the reason that Whitecoat research was not given more publicity:

The chemical and biological weapons program is one of the most secret of all U.S. military efforts—not because it is the most important of our military R&D activities, but because the Pentagon believes it is the most easily misunderstood and because it provokes the most emotional distress and moral turbulence.⁵⁹

This perceived secrecy contributed to the conspiracy theories in circulation.

A military fact sheet about Project Whitecoat defended the program as follows:

The entire research program of this organization is unclassified and all information accruing from these studies is reported, if appropriate, in the medical literature. Thus the results of the total effort in the Army research program in medical defenses against biological weapons is made available to the scientific world.⁶⁰

Clark Smith reported Col. Crozier as saying that only one project had been classified during the whole history of Project Whitecoat, and that this project was “strictly medicinal in nature,” having “nothing to do with offensive warfare.”⁶¹ Not all of the experiments resulted in published articles because many were either still incomplete or too inconclusive to be of value to others. Crozier further explained that all of the clerks in the office who kept records and typed up research reports were Adventists, so there was nothing secretive about the project; the Army was not hiding anything from the church.

However, Martin Turner and Emanuel Fenz also talked with Col. Crozier, and were told that some of the early Whitecoat research

(before Crozier arrived) had indeed been classified. In addition, Crozier said that 73 volunteers had participated in another series of classified experiments in the mid-1960s. Turner and Fenz reported their findings in a letter to the editor of the *Review and Herald*.⁶²

In this letter, Turner and Fenz confronted several other issues as well, including the fact that of the 160 articles and reports that had been published by USAMRIID, only 23 dealt with Project Whitecoat volunteers, and only five had been published during the first 12 years of the program. Although a number of university campuses tried to deny any connection to chemical and biological warfare,⁶³ many of the medical research institutions furnished with vaccines from USAMRIID were universities and private laboratories that held contracts to conduct biological warfare research for Fort Detrick.

One member of the General Conference study committee had stated that “none of the work of this organization [Project Whitecoat] is used directly or indirectly to improve bacteriological weapons of the United States,” and that the offensive and defensive branches were “in no way related.”⁶⁴ But in reality, the separation of the offensive and defensive areas was less complete. Crozier told Turner and Fenz that some defensive projects were done in the high security area, while offensive research was also done “outside the fence.” Researchers in both programs exchanged technical information and coordinated research.⁶⁵

However, the letter from Turner and Fenz was not published in the *Review* because the editor felt that “very few, if any, *Review* readers have sufficient information to be able to discuss the question intelligently.” Turner then wrote to Theodore Carcich, vice-president of the General Conference, expressing concern that the National Service Organization defended the church position on the basis that joining Project Whitecoat was an individual decision; in fact, Turner said, the church

wouldn't allow opposing viewpoints to be heard.⁶⁶

Even unclassified Whitecoat research was not above suspicion. Dr. Matthew Meselson, microbiologist at Harvard University and consultant to the Arms Control and Disarmament Agency in the area of chemical and biological warfare, examined the published documents and stated that about 90 percent of the articles represented research for offensive purposes.⁶⁷

Dr. Alvin Kwiram, then chemistry professor at Harvard University, also questioned the purpose of Whitecoat research. He examined several published articles, showing how the research reported could be used offensively, and how difficult it is to separate offensive from defensive studies. Kwiram concluded that, in actual practice, the best defense against germ warfare agents is a gas mask, as stated in the July 1969 United Nations report on chemical and biological warfare. Most of the diseases likely to be used would be viral, without a known cure.⁶⁸ Regardless of the precautions taken, the results of chemical or biological warfare would be unpredictable. In Kwiram's words,

It could be a disaster of unparalleled proportions, which every sane person should do everything in his power to work against. Again it is particularly important that the Adventist Church as a church not be found working in close collaboration with the military.⁶⁹

Part of the problem was the question of whether or not the military could be trusted to tell the truth about its programs. In March 1968, for example, 6,400 sheep in Skull Valley, Utah, died when a cloud of nerve gas drifted 45 miles from the Army's Dugway Proving Grounds. The Army initially denied responsibility.⁷⁰

In other cases, the Army conducted secret germ-warfare tests over populated areas, assuming the simulants used were totally safe.

Between 1949 and 1969, various types of bacteria were released over 239 populated areas. No monitoring of public health took place during or after the experiments, and Army officials denied that increased health problems in the areas had anything to do with government tests.⁷¹

The Army's questionable record of honesty also brought up the issue of the health risks involved in Project Whitecoat. Some participants felt that the Army gave the misleading impression that the risk was minimal or non-existent.⁷² Others said that although the recruiters were straightforward, officers intimidated the newly enlisted men, preventing them from asking many questions about the program.⁷³

Some Adventists believed that it was noble to risk one's life for the sake of medical science, but others felt that one's body should be treated as the temple of God, and that knowingly taking in disease-producing agents was not only dangerous but wrong. As one concerned Adventist wrote to the General Conference president, "We believe that by maintaining good health we are helping to maintain clear channels of communion with God, and yet these boys are being encouraged to join Operation Whitecoat which demands that one expose himself to man-made diseases."⁷⁴

Clark Smith acknowledged the risks:

Though no human subject is ever knowingly exposed to an infectious disease-producing agent unless it is known that the vaccine, drug, or method of treatment under study is adequate to effect a cure or that the disease is self-limiting, nevertheless it requires courage of a high type to accept willingly such disease-producing agents into one's body.⁷⁵

Col. Crozier, who took almost all of the vaccines himself before allowing them to be tested on his men, said, "Our boys are soldiers, and they're darn good soldiers. They know that the only promise I make is if they come

here, they'll get sick."⁷⁶ On recruiting trips, Crozier met with prospective volunteers to answer questions, and one of the most frequent concerns was whether or not there would be any aftereffects. "Of course, we can't give them a definite answer on that question," he said, "because if we knew the results of what we are doing, we wouldn't need them as volunteers."⁷⁷

Ultimately, any vaccine or treatment developed must be tested on humans. The Fort Detrick protocol, if followed, provided reasonable safety precautions. Even so, it would be unusual if none of the 2,200 Adventist participants had any long-term problems.

One early Whitecoat member said that although he had had some health problems after participating in Q-fever experiments, nothing could be directly linked to his time at Fort Detrick. He was unable to receive Veterans Administration benefits because his records had been sealed.⁷⁸ Another volunteer, who was exposed to Q-fever and observed for several weeks before being treated, experienced severe pain and stated that he would not have subjected himself to the organisms if he had known how severe the symptoms would be. The experience was frightening because he had no way of knowing at the time if the effects would be permanent.⁷⁹

A later participant said that there could be more health problems than were reported, because Project Whitecoat volunteers had to sign a release form before leaving the service, stating that they would not hold the Army responsible for any medical complications

that might arise later.⁸⁰ He explained that the risk involved was not only from diseases given intentionally, but from accidents in the lab. Those volunteers dealing with animal research, for example, had more opportunity for contact with dangerous microorganisms. Sometimes, patients would arrive on Ward 200 from behind the "hot" offensive area, and no one knew what they had been exposed to—often a virus or chemical without a known antidote.⁸¹ Both intentional and accidental infections resulted in unexpected medical problems that were never reported.

In 1966, Fort Detrick's Public Information Office reported that since 1950 there had been 292 accidental infections which resulted in illness, and three deaths. A 1965 study by Fort Detrick's safety office, however, recorded 3,330 laboratory accidents between 1954 and 1962, one-sixth of which resulted in infections serious enough

to make employees too ill to work. The study reported 9.06 laboratory infections per million man-hours of labor during those years, considerably higher than the National Institutes of Health, which ranked second with 3.41. New laboratories and improved equipment lowered accidental infection rates substantially, from 11.31 accidents per million man-hours in 1959 to 3.16 in 1962.⁸²

Public Health Service officials agreed, on the basis of obligations to national security, not to announce infection cases unless an "epidemic hazard" existed. Doctors did not report some diseases, such as pneumonic plague, because the Army did not want to alarm anyone.⁸³

Military officials believed that Fort Detrick's

Col. Crozier, who took almost all of the vaccines himself before allowing them to be tested on his men, said, "Our boys are soldiers, and they're darn good soldiers. They know that the only promise I make is if they come here, they'll get sick."

excellent hospital facilities and first-rate physicians were qualified to handle any medical emergencies that might arise. And this may have been true. If the Army followed all of its published safety regulations, the risk involved in Project Whitecoat research was probably reasonably low—at least when compared to the dangers of service in Vietnam. Also, the experiments may not have been as sinister as Project Whitecoat's detractors made them out to be.

Lessons to Be Learned

In light of Seventh-day Adventist views on the separation of church and state, perhaps church officials should have been more cautious in their patriotism. The project seemed to present the denomination as an “American” church, willing to cooperate with anything unless the commandments were directly broken. This position failed to take into account the potential results of individual actions. Emphasizing the value of individual thinking would have discouraged the blind acceptance of church positions on both Project Whitecoat and the draft status. Such an attitude on the part of the General Conference officials would have led to a more objective presentation of Project Whitecoat, and an earlier change in the

church position on the draft status—allowing for full support of any decision based on honest conviction.

Although both the church and the Army may have been completely honest and sincere throughout the relationship, the General Conference praise of Project Whitecoat was probably a bit excessive. Denominational leaders should have been more willing to acknowledge the possibility of error: either that church officials in the 1950s may have been too hasty in their initial approval of the project, or that the nature of this important military program might have changed after it began.

Denominational leaders can be praised for trying to find Adventist draftees an acceptable means of avoiding both combat duty and Sabbath conflicts. However, if church officials had investigated the project more thoroughly in the beginning, they would have admitted that there were moral and philosophical gray areas involved—such as the health risks and possible offensive uses of research results. These ethical issues could then have been discussed publicly. The Seventh-day Adventist Church could have kept its reputation clear by allowing all prospective Whitecoat volunteers to hear both sides of the argument and by supporting those volunteers neither more nor less than those who served as medics or went into regular combat duty.

NOTES AND REFERENCES

1. United States Army, USAMRIID, “Project Whitecoat: A History,” February 14, 1974, p. 5.

2. *Ibid.*, pp. 3, 4.

3. Whitecoat Survey, conducted by Dr. Robert Mole, chaplain, Jerry L. Pettis Memorial Veterans Hospital, Loma Linda, California, 1990.

4. General Conference of Seventh-day Adventists, National Service Organization, Clark Smith, “Project Whitecoat: A Statement by the Director of the National Service Organization of the General Conference of Seventh-day Adventists to Be Given to Those Who Are Being Considered for Project Whitecoat,” n.d., p. 1, Whitecoat File, General Conference Archives (hereafter abbreviated as GCA).

5. Don A. Roth, “Operation Whitecoat,” *The Youth's Instructor* (October 15, 1963), p. 16.

6. Robert Mole to the author, January 10, 1991.

7. Roth, p. 16. For a history of the Adventist Church and its relation to the military, see Robert Mole, *He Called Some to Be Chaplains* (Washington, D.C.: General Conference of Seventh-day Adventists, 1982), Vol. 1, Part 1.

8. Booton Herndon, *The Unlikeliest Hero* (Mountain View, Calif.: Pacific Press Publ. Assn., 1967), p. 194.

9. Theodore R. Flaiz to George E. Armstrong, October 19, 1954, Whitecoat File, GCA.

10. Clark Smith to Kenji Soneda, May 21, 1971, Whitecoat File, GCA.

11. Henning Guldhammer, interview by the author, February 19, 1991. Guldhammer was a Project Whitecoat volunteer from 1967 to 1968.

12. V.B., "Operation Whitecoat," September 14, 1969. This poem was most likely written by Vinson Bushnell.

13. Clark Smith to Vinson Bushnell, November 6, 1969, Whitecoat File, GCA.

14. Charles Morrison, interview with the author, March 14, 1991. Morrison was a Project Whitecoat volunteer from 1969 to 1970.

15. General Conference of Seventh-day Adventists, National Service Organization, C. D. Martin, associate director, "Autumn Council Action Concerning Military Service," May 6, 1970.

16. Terrell Gottschall, interview by the author, May 22, 1991.

17. They also had to be assigned to the U.S. Army Medical Training Center and have no future assignments already in progress [Smith, NSO, p. 1]. Potential Whitecoat volunteers were not to receive immunizations for typhus, yellow fever, cholera, or plague prior to arrival at Fort Sam Houston [United States Army, Staff Communications Division, DA Message 767602 from HQ OPO WASH DC to CGUSCONARC, June 7, 1966]. Because these vaccines could be related to some of the bacteria, viruses, and rickettsiae that Whitecoat participants would be exposed to, Army researchers wished to prevent any immunological bias that might invalidate the experiments.

18. USAMRIID, "Project Whitecoat: A History," Appendix 26, "Fact Sheet: Project Whitecoat," (November 28, 1969), p. 2.

19. United States Army, USAMRIID, "Consent Statement: For Use at Fort Sam Houston, Texas," n.d., Whitecoat File, GCA.

20. Mole, Whitecoat Survey.

21. James Cornelison, interview by the author, April 23, 1991. Cornelison was a Whitecoat Project volunteer from 1969 to 1970.

22. William Hoffer, "I Was a Guinea Pig for the Medical Corps," *The Washington Post* (November 2, 1969), p. 28.

23. ValGene Devitt to the author, May 3, 1991. Devitt was a Project Whitecoat volunteer from 1962 to 1964.

24. United States Army, USAMRIID, "Volunteer Participation in Research Programs 1957-Sep 1969," Whitecoat File, GCA.

25. W. D. Tigertt, "Memo for Record," May 7, 1957.

26. Matthew Meselson, "Hearing Before the Committee on Foreign Relations," United States Senate, Ninety-First Congress, First Session, April 30, 1969, pp. 8, 9.

27. Mike Wallace, Transcript of "60 Minutes Highlights I," CBS, Broadcast July 8, 1969, p. 9.

28. General Conference of Seventh-day Adventists, W. R. Beach, Secretary, "Statement of Attitude Regarding Volunteering for Medical Research" (1955), Whitecoat File, GCA.

29. General Conference of Seventh-day Adventists, "Notes for a Speech at Whitecoat Selection," October 5, 1966, Whitecoat File, GCA.

30. S. B. Hays to A. V. Olson, September 14, 1955, Whitecoat File, GCA.

31. Dan Crozier, Address to SDA Youth Congress, April 21-24, 1966, Recorded April 14, 1965, Whitecoat File, GCA.

32. United States Army, Office of the Surgeon General, "Travel Voucher," Clark Smith, May 13, 1966, Whitecoat File, GCA.

33. "Director Receives Rare Civilian Award," *For God and Country* 24 (First Quarter 1973), p. 1.

34. Charles Morrison, interview by the author, March 14, 1991.

35. Les Brown, interview by the author, May 9, 1991. Brown was a Project Whitecoat volunteer from 1967 to 1969.

36. A. V. Olson, "Beyond the Call of Duty!" *Review and Herald* (November 3, 1955), p. 20.

37. Clark Smith, "Adventist Medics in America Volunteer to Serve Humanity by Assisting in Disease Research in Project Whitecoat," *Review and Herald* (March 20, 1969), p. 20.

38. Thomas Green, *Project Whitecoat* (Washington, D.C.: General Conference of Seventh-day Adventists, National Service Organization, n.d.).

39. Clark Smith to R. Bullas, July 13, 1970, Whitecoat File, GCA.

40. Richard Miller, interview with the author, May 21, 1991. Miller was a Project Whitecoat volunteer from 1955 to 1956.

41. The NBC broadcast was "First Tuesday," on February 4, 1969; the CBS program was part of "60 Minutes," on July 8, 1969.

42. Seymour Hersh, *Chemical and Biological Warfare: America's Hidden Arsenal* (Garden City, N.Y.: Anchor Books, 1969).

43. _____, "Dare We Develop Biological Weapons?" *New York Times Magazine* (September 28, 1969).

44. _____, "Germ Warfare: for Alma Mater, God, and Country," *Ramparts* 8 (December 1969), pp. 22, 24.

45. Clark Smith to Vinson Bushnell, October 24, 1969, Whitecoat File, GCA.

46. Steven Heczke, "I Was a Guinea Pig for Army Germ Test," *National Examiner* (December 1, 1969), p. 4.

47. Dan Crozier to Commanding Officer, U.S. Army Research and Development Command, November 26, 1969, Whitecoat File, GCA.

48. Martin Turner to Clark Smith, September 10, 1969, Whitecoat File, GCA.

49. The group consisted of W. H. Beaven, president of Columbia Union College; Stuart Nelson, M.D., a Takoma Park physician; and several General Conference personnel: T. S. Geraty; D. W. Hunter; L. C. Kozel; C. D. Martin; Philip S. Nelson, M.D.; and Clark Smith.

50. General Conference of Seventh-day Adventists, Project Whitecoat Study Committee Minutes, October 2, 1969, Whitecoat File, GCA. The article that resulted was an interview with Clark Smith, published in the November 27, 1969, *Review and Herald*.

51. Clark Smith to Vinson Bushnell, October 24, 1969, Whitecoat File, GCA.

52. Malcolm Russell, "Civil Control May Supply the Answer," *Sligonian* (January 29, 1970), p. 1.

53. Richard McCarthy, "Response of Congressman Richard McCarthy to a Question About Project Whitecoat," Typescript, December 13, 1969.

54. Elinor Langer, "Chemical and Biological Warfare (I): The Research Program," *Science* 155 (January 13, 1967), p. 175.

55. Dan Crozier, "The Threat of Biological Weapons Attack," *Military Medicine* (February 1963), pp. 82, 83.

56. Dan Crozier, Transcript of interview by Emanuel Fenz and Martin Turner, November 17, 1969.

57. W. D. Tigertt, "Defensive Aspects of Biological Weapons Use," *Military Medicine* 126 (1961), p. 508.

58. Jane Allen, "Army Vaccine Helps Fight Sleeping Sickness," Bureau of Public Relations, General Conference of Seventh-day Adventists, n.d., unpublished as of November 30, 1971, Whitecoat File, GCA.

59. Elinor Langer, "Chemical and Biological Warfare (I): The Research Program," *Science* 155 (January 13, 1967), p. 174.

60. United States Army, USAMRIID, "Fact Sheet," n.d.

61. Clark Smith to Martin Turner, May 14, 1969, Whitecoat File, GCA.

62. Martin Turner and Emanuel Fenz to Editor, *Review and Herald* (December 16, 1969), Whitecoat File, GCA.

63. Seymour Hersh, "Gas and Germ Warfare: The Controversy Over Campus Research Contracts," *The New Republic* (July 1, 1967), pp. 12-14.

64. Winton Beaven to Editors, SDA College Newspapers, October 13, 1969, Whitecoat File, GCA.

65. Martin Turner and Emanuel Fenz to Editor, *Review and Herald* (December 16, 1969), Whitecoat File, GCA.

66. In his letter, Turner wrote, "But this is precisely

where the problem lies because the Church openly and actively supports recruitment for the project, and does not allow conflicting evidence to be heard, thus denying the individual access to the information which he must have as a basis for his decision. . . . The facts will be known, whether through official channels or not. But if unofficial means must be used, the process will take longer and many men will continue to lack the information they need when the time comes for them to make a decision. But perhaps even more important than that, if the youth of this church come to feel that their leaders do not give them straight information, the results will be much more far-reaching than Project Whitecoat" (Martin Turner to Theodore Carcich, January 29, 1970, Whitecoat File, GCA).

67. Adventist Laymen Concerned About Project Whitecoat, "Facts About Project Whitecoat," From Emanuel G. Fenz, Martin Turner, and John Matthews to the delegates to the June 1970 meeting of the General Conference of Seventh-day Adventists (May 1970), Whitecoat File, GCA.

68. Alvin L. Kwiram, "Chemical and Biological Warfare," unpublished, n.d., pp. 8, 10, Whitecoat File, GCA.

69. *Ibid.*, p. 17.

70. Gerald Astor, "A Killing Shame," *Look* (December 16, 1969), p. 67.

71. Leonard Cole, *Clouds of Secrecy: The Army's Germ Warfare Tests Over Populated Areas* (Totowa, N.J.: Rowman and Littlefield, 1988), pp. 6, 44.

72. Les Brown, interview by the author, May 9, 1991.

73. ValGene Devitt to the author, May 3, 1991.

74. A. J. Mejia to Robert Pierson, February 14, 1969, Whitecoat File, GCA.

75. Clark Smith, "Adventist Medics in America Volunteer to Serve Humanity by Assisting in Disease Research in Project Whitecoat," *Review and Herald* (March 20, 1969), p. 20.

76. Jim Scott, "GI Guinea Pigs Risk Death," *Army Times*, (April 1, 1970).

77. Richard Lebherz, "Fort Detrick: A Symbol of Crisis," *The Frederick Post* (November 1, 1969), p. A3.

78. Richard Miller, interview by the author, May 21, 1991.

79. William Key, interview by the author, May 12, 1991.

80. Les Brown, interview by the author, May 9, 1991.

81. *Ibid.*

82. Hersh, *Chemical and Biological Warfare*, pp. 109, 110.

83. *Ibid.*, p. 11.