

Exhibit G

DAIG-IN 21-75

report on

Use of Volunteers in
Chemical Agent Research

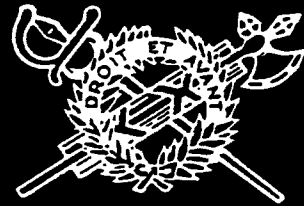
MAR 1976

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by

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the inspector general



department of the army

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FOREWORD

During the 1975 hearings conducted by the Senate Select Committee to study Governmental Operations with Respect to Intelligence Activities, the U.S. Army's role in research and experimentation with hallucinogenic drugs became a matter of interest and concern to the Committee and the public. The coupling of Army efforts in chemical agent research and actions involving the Intelligence community resulted in a spate of publicity both factual and speculative.

During the same general timeframe, the ongoing joint hearings of the Senate Labor and Public Welfare Committee, Subcommittee on Health, and the Senate Judiciary, Subcommittee on Administrative Practice and Procedure, asked questions of the Army about the Human Volunteer Program, the quality of "informed consent" as related to research volunteers, and the adequacy of medical follow-up on those who had volunteered to take part in research projects over the years.

As a result of the several congressional hearings and subsequent publicity, numerous requests for information were received by the Department of Defense from congressional committees, individual members of Congress, private citizens and the media. The nature of the inquiries reflected the different interests involved and resulted in several different staff agencies within Department of the Army being tasked to provide the requested information.

The lack of factual information available to quickly respond to the inquiries illustrated an inadequacy of the Army's institutional memory on this subject area. This inadequacy was aggravated by inconsistencies in the limited data which was available.

These shortcomings in responding fully, accurately, and rapidly, particularly at a time when Governmental agency actions and programs were already suspect, placed an additional strain on the public's faith in the credibility of the U.S. Army.

To assure that requests for information concerning the Army's role in hallucinogenic drug research were answered factually, the Secretary of the Army directed that a research effort be made to determine what had been done in chemical agent research. Accordingly, The Inspector General and Auditor General, Headquarters, Department of the Army, was directed to conduct the necessary research to determine the Army's role in drug testing. A verbatim text of the Letter of Instruction which directed the research effort is reprinted below:

21 Jul 1975

SUBJECT: Letter of Instruction

The Inspector General and
Auditor General
Department of the Army
Washington, D.C. 20310

1. Recent public and Congressional interest in the Army's use and testing of hallucinogenic drugs has generated numerous requests from the news media for information concerning these activities. Records currently available to the Army Staff indicate that these tests were conducted during the period from the early 1950's through the late 1960's at various locations in the United States and overseas. However, due to the lengthy time span involved in the testing program, many of the supervisory personnel involved in the program and the records and reports pertaining to the planning, conduct, and results of the tests have been retired. This situation places the Army in a position of not being able to reply quickly and factually to requests for information from various news and Congressional agencies.

2. You are directed to conduct the necessary research to establish the historical facts and circumstances surrounding the U.S. Army's participation in the testing of hallucinogenic drugs. Specifically, your research will be in sufficient detail to provide, at a minimum, the following information: a clear reconstruction of the programs and projects involved with particular emphasis on the rationale used as a basis for their initiation; appropriate mandates and authorizations upon which the testing programs and projects were initiated, examination of extent of volunteers, the use of subjects without subjects' knowledge; and the costs of such projects and programs funded by the Department of the Army to include the total cost of operation of the Special Operations Division, Fort Detrick, MD.

3. The Surgeon General and the Assistant Chief of Staff for Intelligence will provide technical assistance as required and will provide access to and copies of any reports pertaining to the testing of hallucinogenic drugs by the Army which are required to complete your research. The Commander, U.S. Army

Materiel Command, will provide assistance required by your research teams in gaining access to installations, testing facilities, and records storage facilities. The research teams are authorized access to all records, files, facilities, and information which they consider necessary to accomplish this tasking.

4. Your report will be submitted to the Chief of Staff as expeditiously as possible consistent with the requirement to insure that the information provided is complete, factual, and accurate.

S/
WALTER T. KERWIN, JR.
General, United States Army
Vice Chief of Staff

This mission was unlike the usual directive for inquiry or investigation normally assigned to The Inspector General for action. Instead of determining the facts and circumstances of a specific wrong(s) or allegation(s), the mission was to conduct a form of historical research; research which would determine exactly what the Army had done in chemical agent testing during the period 1950-1975. A period which probably had as many changes, programs, and problems as any comparable period in history: post-World War II; the Korean War; the Cold War; reorganization of Department of Defense; reorganizations of Department of the Army; the war in Vietnam; and major advances in medicine, the sciences, nuclear weapons, missiles, and aircraft. The sheer volume and frequency of change alone provided some indication of the magnitude of the task to be performed. From the outset, the research effort proved to be difficult and cumbersome.

The research was not to include any activities or arrangements between Department of Defense and the Central Intelligence Agency concerning biological/chemical agents and weapons systems for delivery, but was to be limited to the Army's participation in the testing of d-lysergic acid diethylamide (LSD) with emphasis on the rationale used as a basis for test initiation; authorizations upon which the testing programs and projects were initiated; and the costs of such projects funded by Department of the Army. An exception was made to the limitation on the research as it concerned DOD/CIA and biological agents, in that the total cost of operating the Special Operations Division (SOD), Fort Detrick, MD, from 1953 to 1971 was to be determined.

The research scope eventually was enlarged to include drugs other than LSD. Initially, the term hallucinogenic was used as a means of describing the extent of the research, however, as more accurate information was received, the inaccuracy and inadequacy of the term became apparent. Ultimately, the study was to include LSD and also other drugs generally classified as chemical incapacitating agents, to include benzilates and glycolates. All drugs investigated or tested during the period were not included in the research, however, those which figured prominently in the Human Volunteer Program were reviewed.

The search for records was to prove particularly difficult. Current records posed no particular problem, since records handling policies made them reasonably available; however, the majority of the records involved were not current. Most of the research effort, particularly on LSD, occurred during the 1950s and early 1960s; these records had long since been retired and in some cases destroyed in accord with normal destruction schedules. The frequent changes in the U.S. Army organizational structure resulted in many changes in unit designations and locations, resulting in records being retired, destroyed, or relocated without adequate concern for proper disposition of records with historical significance.

Where records were not available or where information gaps existed, plans were developed to interview the personnel involved, both the scientist and the subject volunteer. Since the research spanned a 25-year period, many of the personnel actively involved in the research programs were retired, quite elderly, moved to new locations, or deceased.

The history of the Human Volunteer Program was examined in considerable detail. The use of humans in chemical agent research was examined from the earliest days of the Chemical Warfare Service during World War I through the publication of the Secretary of Defense (Wilson) memorandum in 1953 and then tracing the development of the formal volunteer program in use today. The selection of volunteers, to include the pre- and post test medical examinations, care during the experiments, and most important, the quality of informed consent was examined critically by reviewing medical records maintained on volunteers and in limited cases interviewing the volunteers.

The thoroughness of the research effort is indicated by the following statistical data:

- a. Interviews of 65 witnesses were conducted in 32 cities, in 17 states, and the District of Columbia and involved traveling in excess of 160,000 passenger miles.

b. Tens of thousands of pages of documents were reviewed at various locations to include the National Archives; the National Records Center, Suitland, MD; the Army Records Center, St. Louis, MO; the Army War College Library, Carlisle Barracks, PA; Edgewood Arsenal, Edgewood MD; Aberdeen Proving Grounds, Aberdeen, MD; Fort Detrick, MD; Fort McClellan, AL; and the files of the various staff agencies, commands, or units which might have been involved, no matter how peripherally, with the chemical research program. Additionally, witnesses were requested to provide any documents or evidence which might have come into their possession.

Certain events which occurred during the course of the research effort added to the complexity of the effort and served to stretch out the time required to complete the project. First, there were the allegations aired publicly on TV and other media reflecting on the fitness of the Chief of the Medical Research Division, Biomedical Laboratory, Edgewood Arsenal. The person involved was in charge of the drug testing program. An investigation concerning this matter was conducted and reported separately. Then, during the course of records and file searches it was learned that a civilian patient in a New York psychiatric hospital had died in 1953 after receiving an experimental drug which had been provided the hospital by the U.S. Army (Chemical Corps) as part of a research project conducted by the hospital under an Army contract. An investigation of this incident was also conducted and reported separately. Finally, during the course of the research information was received indicating that the U.S. Army Intelligence Center/School had conducted jointly, with the Chemical Corps, a series of research projects involving LSD at Edgewood Arsenal, U.S. Army, Europe, and the U.S. Army, Pacific. A report of those tests is included herein.

It is in this vein that the research was conducted. Every effort was made to obtain and review pertinent data. Where records did not exist, the testimony of witnesses was solicited to fill in the gaps. Where neither documentary or testimonial evidence was available, then license was taken by drawing logical conclusions or assumptions based on evidence available, past performance, or other indicators. Where this occurred, efforts to clearly identify such license is made.

CHAPTER X

CONTRACTS WITH CIVILIAN INSTITUTIONS

General

The purpose of this chapter is to provide an overview of the contracts awarded to civilian institutions by the U.S. Army Chemical Corps during the period 1950 to 1971 and to briefly discuss the rationale, scope and cost of these contracts. The discussions in this chapter were limited to contracts for which actual contracts or contract progress reports were available.

Contracts with civilian medical, penal and educational institutions were an important and integral part of the Army's Chemical Corps medical research program. The contracts were executed for a wide variety of purposes, ranging from analysis of chemical compounds to the use of volunteers and patients in psychotropic drug experimentation.

Due to the passage of time and the routine records destruction requirements, many of the contracts executed in conjunction with the Chemical Corps medical research program were not located, nor was a determination made as to the actual number of contracts awarded, their cost, or how many volunteers or patients were used by contractors. Although thousands of pages of documents from contracts, contract reports, and conference notes were reviewed, it was recognized that additional information may exist at sources and locations not explored during the research effort. However, the information presented was considered to be based on the most accurate data available.

Available records indicated that the Chemical Corps Medical Research Laboratories entered into numerous contracts with chemical companies, medical schools and hospitals prior to 1950. However, the earliest evidence of a contract or report of a contract relevant to this research effort was dated 18 May 1950. That contract was with the University of Maryland for "Psychological Studies of the Effects of Chemical Warfare Agents." The available reports regarding the contract indicate that human subjects were not involved.¹ In all, 54 contracts or report of contracts were discovered and reviewed during the research effort. The chart at the end of this chapter provides a breakout of 48 of the 54 contracts, to include: contractor, dates of contract, estimated cost, contract number, purpose of contract and the number of volunteers used, as indicated in the available reports. Six contracts for which reports were located were not included on the chart because they did not involve human subjects, drugs, chemical agents or matters related to the research effort. It should be noted, that the contract data, to include

contract dates, cost, and number of human subjects, presented in this chapter may differ from similar type data presented elsewhere in this report. This is not to say that one is more accurate or complete than others, rather the difference lies in the sources from which the information was obtained. An example of such a difference can be found in a comparison of the cost figures presented in Chapter XI regarding the contractual costs. The figures for this chapter were derived from contracts and progress reports which were in many cases incomplete; while in Chapter XI the figures were based primarily on accounting records and available procurement reports. Since neither source can substantiate the figures with absolute certainty, it seemed more appropriate to present the figures as they were determined from the various records rather than use a single data source. Additionally, the total number of volunteers actually used by the contractors may be greater than the number reflected on the chart, however, a higher figure could not be supported by the available records.

Early Contracts

Very little evidence was found regarding contracts or the authority for the Chemical Corps Medical Laboratories to enter into contracts prior to 1953. However, it appeared that authority to enter into contracts was inherent in the missions and responsibilities assigned to the Chemical Corps. That is to say they were assigned the mission for development of "nerve agents" and were permitted to contract for matters related to that mission which could be better accomplished by other agencies. Evidence of this was found in a report of the Medical Committee of the Chemical Corps Advisory Council's 1954 meeting.² At that meeting it was pointed out that the Medical Laboratories were having considerable difficulty procuring support for the Entomology Branch to study insecticides and insect repellants. In order to compensate for their lack of expertise in the entomology field, the Laboratories reported that they had contracted with two colleges that were prominent in the field (Johns Hopkins and Tufts). It was also reported at the same meeting that much of the clinical research of the Medical Laboratories was under contract to other colleges, universities, and hospitals. The list included: Illinois College of Medicine, University of Colorado, University of Utah, Galesburg State Hospital, Montifiore Hospital, University of Louisiana, University of Pennsylvania, Massachusetts General Hospital, University of Wisconsin, University of Indiana, and Howard University. No other details of those contracts were reported; however, they were presented in a light that indicated each contract provided for a service that the contractors were better qualified to perform than the Medical Laboratories at Edgewood. It was apparently in that light that the New York State Psychiatric Institute was granted the first known contract to conduct research in the psychochemical drug

CONTRACT CHART

CONTRACTOR	DATES		COST	CONTRACT NR.	PURPOSE OF CONTRACT	NR. OF VOLUNTEERS	CATEGORY CONTRACT
	START	END					
1. American Inst. for Research	07/01/64	10/23/67	\$192,096	DA18-035-AMC-282(A)	Develop tests to measure effects of incapacitating agents	102	I
2. Baylor University	10/01/61	09/30/62	6,552	DA-CML-18-G-36	Study effects of Analgesic drugs on respiratory center and circulation in humans	31	I
3. " "	1964	1967	44,000	DA18-108-AMC-149(A)		Unk.	I
4. " "	06/02/65	06/30/68	44,000	DA18-035-AMC-397(A)		18	I
5. Hahnemann Medical College	06/26/61	07/31/66	277,863	DA18-108-CML-6623(A)	Evaluation of Therapeutic Compounds in animals and humans	None	M
6. " "	05/24/67	04/24/68	50,060	DAAA15-67-C-0489		65	M
7. " "	06/11/68	12/11/68	25,000	DAAA-1567-C-0489-0641-0295		26	M
8. " "	01/06/69	03/06/70	49,775	DAAA15-69-C-0295		26	M
9. Inst. for Behavioral Research	10/01/62	12/31/65	156,681	DA18-108-AMC-26(A)	Drug Effects and Complex behavioral repertories	10	I
10. Indiana University	06/51	09/53	Unk.	DA18-108-CML-2397	The Physiological effects of Atropine & Atropine Substitutes	7	I
11. Ivy Research Labs., Inc.	06/28/68	12/01/69	78,135	DAAA-15-68-C-0627	To determine threshold dose effects in man	94	I
12. " "	03/70	09/71	48,700	DAAA-15-68-C-0324		Unk.	I

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CONTRACTOR	START DATE	END DATE	COST	CONTRACT NR.	PURPOSE OF CONTRACT	NR. OF VOLUNTEERS	CATEGORY
13. Johns Hopkins Univ.	02/25/60	07/14/65	\$ 91,115	DA18-108-405-CML-704(A)	Determine effects of drugs and CW agents on the EEG	None	N
14. " "	"	"	"	DA18-108-CML-6609(A)	"	Unk.	N
15. " "	11/19/51	01/31/55	152,525	DA18-108-CML-3014	Treatment of injury by GB and mustard effects	10	N
16. " "	02/01/55	02/25/60	18,000	DA18-108-405-CML-704	Studies on EEG Method to aid in evaluation of drugs	None	N
17. Louisiana State Univ.	05/21/54	07/31/58	51,452	DA18-108-405-CML-37	Clinical Pathological and Pathophysiological studies in anticholinesterase poisoning	Unk.	M
18. " "	07/01/55	07/31/58	"	DA18-108-CML-5473	"	None	M
19. Maryland Medical-Legal Foundation	10/11/63	09/07/66	149,530	DA18-035-AMC-102(A)	Search for new Incapacitating Agents	None	M
20. Mount Sinai Hospital	07/01/64	09/30/66	37,064	DA18-035-AMC-281(A)	Hypothalamic Control of Adrenocortical Function	None	M
21. " "	06/01/63	04/31/64	24,378	DA18-108-AMC-147(A)	"	None	M
22. " "	12/12/67	12/11/69	34,022	DAAA15-68-C-0244	"	None	M
23. " "	11/17/66	11/16/67	20,900	DAAA15-67C-0189	"	22	M
24. North American Aviation	09/25/61	06/15/62	51,840	DA18-108-CML-6644	Pilot Performance tests with BZ	18	I
25. New York State Psychiatric Institute	10/09/51	02/28/53	19,807	DA18-108-CML-2913	Determine psychological effects of psychological chemical agents on human subjects	Unk.	I

CONTRACTOR	DATES		COST	CONTRACT NR.	PURPOSE OF CONTRACT	NR. OF VOLUNTEERS	CATEGORY CONTRACT
	START	END					
26. N.Y. State Psychiatric Inst.	10/09/51	02/28/53	\$ 12,444	DA18-108-CML-2914	Determine psychological effects of psychological chemical agents on human subjects	8	I
27. " " "	03/19/53	03/10/54	11,832	DA18-108-CML-4915		6	I
28. New York University	07/01/63	06/30/64	10,550	DA18-108-AMC-187(A)	Endocrinologic effects of altered consciousness	None	M
29. " " "	08/01/64	07/31/66	30,480	DA18-035-AMC-304(A)		Unk.	M
30. Research Foundation for Mental Hygiene, Inc.	12/53	09/30/57	142,739	DA18-108-CML-5198	Psychiatric and Therapeutic studies of compounds	12	I
31. Research Foundation for Mental Hygiene, Inc.	09/57	09/59	25,000	DA18-108-405-CML-49	Mental behavior of human with certain agents	65	I
32. Tulane University	1955	Unk.	53,795	DA18-108-CML-5596	Study behavior during administration, LSD-25, & mescaline	6	I
33. Univ. of Colorado	06/51	09/54	64,295	DA18-108-CML-2412	Investigation and testing of nerve agent casualties; evaluation of therapy and antidotes	None	N
34. " " "	09/21/54	09/30/58	74,736	DA18-108-CML-5586		None	N
35. " " "	09/01/58	03/31/61	36,542	DA18-108-405-CML-264		None	N
36. Univ. of Maryland	05/18/50	06/30/54	114,605	DA18-108-CML-632	Psychological Studies of effects of CW agents; candidate therapeutic agents and CW effects on humans	None	N

CONTRACTOR	DATES		COST	CONTRACT NR.	PURPOSE OF CONTRACT	NR. OF VOLUNTEERS	CATEGORY CONTRACT
	START	END					
37. Univ. of Maryland	06/06/54	06/30/57	\$ 63,178	DA18-108-CML-5519		Unk.	I
38. " " "	03/14/57	08/31/60	89,897	DA18-108-CML-6337		117	I
39. Univ. of Pennsylvania	04/15/51	07/01/55	98,894	DA18-108-CML-2212	Study of CW casualties in man	None	I
40. " " "	07/01/55	04/60	75,029	DA18-108-CML-5752	Research of chemicals and CW casualties in man	40	I
41. " " "	12/15/61	12/14/62	14,990	DA-CML-18-108-0-46	Experimental basis for treating CW casualties	None	I
42. " " "	06/01/63	09/30/66	59,135	DA18-108-AMC-143(A)	Evaluation of drugs in man	10	I
43. " " "	03/01/64	03/31/67	326,840	DA18-035-AMC-126(A)	Threshold doses in humans	320	I
44. " " "	11/66	12/68	37,800	DAAA-15-67-C-0154	Evaluation of drugs in man	Unk.	I
45. University of Utah	04/03/54	08/31/57	37,873	DA18-108-CML-5421	Study effects of CW agents as personnel hazard	40	N
46. " " "	09/05/57	07/31/59	25,000	DA18-108-405-CML-60	Therapeutic effects of chemical compounds	2	N
47. Univ. of Washington	04/10/57	11/30/62	221,529	DA18-108-405-CML-6364	Neurological Action of CW Agents	19	I
48. " " "				DA18-108-405-CML-79	Estimated Total	Unk. 1074	I