

COMBAT

ETHNIC
WEAPONS

COALITION OPPOSED TO MEDICAL AND BIOLOGICAL ATTACK

SUITE 101, 1232 Market St.
San Francisco, CA 94102
tel. no. 415-431-8080

"EDUCATE IN THE PRESENT FOR THE FUTURE" VOL. I NO. I

"The United States has renounced any use of biological and toxin weapons" Richard M. Nixon



"Though ostensibly on the way out of the military weapons arsenal CBR is merely being conducted in a different environment and whenever possible with less public attention" Defense Marketing Survey April '71

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TEL. NO. 415 431-8080

ALL INTERESTED GROUPS ARE INVITED TO

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Up Against the Bulkhead
Veterans Collective
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Anti-War Groups:

Downtown Peace Coalition
Pacific Counseling Service
Committee of Solidarity with
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Committee for the September
2nd Women's Action

Scientists and Engineers for
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Committee of Concerned Asian
Scholars.



Combat Meeting

time:

7pm - Monday
August 9

place:

Manila Town
Community Theater

850 Kearny Street
at Jackson - S.F.

General Meeting
and films on
C.B.W.

All are welcome
to attend



COMBAT MAKES THE FOLLOWING DEMANDS

1. That all U.S. stockpiles of CBW weapons in Asia and in the rest of the world be destroyed.
2. That the U.S. sign the Geneva Accords concerning the use and development of CBW weapons (as interpreted by the U.N.), which it has repeatedly refused to do. Also that the U.S. end all research on CBW.
3. That further planning and construction of the \$28 million WMIR building cease immediately until a CITIZEN'S REVIEW COMMITTEE, made up of representatives from the Third World communities, is formally recognized by the project's administration and empowered to initiate at any time an on-the-spot examination of the research being done at the center. Also until the military turns over administrative control of all research to civilians.

PAPERS

"This whole post is an open book", said the commanding officer of the Pine Bluff C.B.W. Arsenal, "with the exception of the biological operations."

From a large excavation overlooking the lagoon of the Presidio fort will soon rise a building whose prototype is Fort Detrick, now known as the most advanced biological weapons laboratory in the country. Eventually the immense Western Medical Institute of Research (W.M.I.R.) will sprawl out over 8 acres of land.

Will this become another top secret conclave for the study of the science of public death? All attempts to obtain information from the Army about W.M.I.R. have met with the same kind of evasiveness that veiled the development of what turned out to be elaborate chemical and biological weapons research



facilities in other parts of the country.

Such is the secrecy surrounding W.M.I.R. that one is unable to obtain consistent answers as to whether any classified work will be done, or whether the employees would need a security clearance. One gets the feeling that it's so secret that one can't find out just how secret it is.

In a telephone conversation

In a telephone conversation on July 1, Colonel Jordan of the U.S. Army Medical

Research and Development Command said that "the only classified material one might get would be foreign reports" that were classified prior to being sent there, but that material coming out of there is not classified and will be open to the public." When asked if a security clearance would be required of workers there, Colonel Jordan replied "Yes".

The Public Relations Officer (P.R.O.) at Letterman seems to have a different story.

"I can't ... I can make this statement, that as of this time there is nothing classified about this project or the work that is being done. As of right now, today, the best of my knowledge.." (The first stage won't be finished for 600 days).

Interviewer: Can we talk to the people there? (scientists at the present Letterman Army Institute of Research)
P.R.O.: No, their commander will not let them talk.

Interviewer: In order to work here will they need some kind of clearance? Can you find that out?

P.R.O.: No, I can't.

Interviewer: But you couldn't get a specific statement from Washington on that?

P.R.O.: No--and not because they won't tell me, it's because they just don't know.

It was not until several years after the establishment of Fort Detrick at Frederick, Maryland that the shocked townspeople learned that they had been harboring a germ warfare research station.

The Pine Bluff Arsenal in Arkansas also thrived in its anonymity for many years. "This whole post is an open book", said Colonel L. Friar, commanding officer of the arsenal, "with the exception of the biological operations" --which constituted two thirds of the arsenal's work. For the residents of Pine Bluff, the missing pages in the book were the 251 cold storage depots ('igloos') containing such lethal agents as botulism toxin, shellfish poison, staphylococcus toxin, anthrax, encephalitis, rabbit fever, Q-fever, and possibly bubonic and pneumonic plague.

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U.S. CBW POLICY fact or fiction?

"The United States has renounced any use of biological and toxin weapons."

-President Nixon's message to the U.S. Senate, August 19, 1970.

"Despite public announcements to the contrary, the military agencies are not discontinuing chemical and biological warfare research. True, the production of chemical and biological agents is being discontinued--but this phase of Chemical Biological warfare has always been the lesser phase of the activity." Defense Marketing Survey report

In light of recent exposure brought about by the now famous "Pentagon Papers" the need for in-depth scrutiny of official government and military policy becomes painfully apparent. An analysis of these policies and resulting overt actions must be made with regard to political propaganda and strategic military advantage. The handling of this country's chemical and biological warfare policy is a prime target for such scrutiny. When viewed in the light of what may be now considered standard Pentagon deceptive operating procedures and recent technical advances, one may easily be led to suspect that the CBW effort in the United States is not declining, but is rather growing and developing along insidious lines.

A good starting point for an analysis would be a recent chronology of official government and military statements of policy on the subject of CBW:

November 26, 1969

President Nixon announces new CBW policy for the U.S.: pledges no first use of chemical weapons and a ban on all biological weapons.

December 12, 1969
State Department criticizes the United Nation's interpretation of the Geneva protocol.

January 26, 1970
Administration studies the question of how to classify toxins.

February 14, 1970
Nixon includes toxins in biological warfare ban.

February 17, 1970
The United States calls on the Geneva Disarmament Committee to negotiate the use and production and possession of biological warfare agents.

August 20, 1970
President Nixon takes the 1925 Geneva accords to the Senate and asks for its ratification.

December 19, 1970
The Army discloses plans to destroy stockpiles of CBW weapons.

A cursory look at the above list would certainly lead one to believe that not only is the United States opposed to chemical biological warfare, but it is perhaps even a leader among nations in the effort to abolish them. Nothing, of course, could be further from the truth, as can be seen by placing this chronological list in the context of events and public opinion surrounding the subject of chemical biological warfare.

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"The only serious drawback I can see about bringing this weapon into production is that it might bring civilization, as we know it, to an end."

U.S. CBW POLICY (cont.)

A useful perspective of contemporary CBW policy can be gained by an examination of the Geneva Protocol of 1925.

In 1925, at an armaments conference called under the auspices of the League of Nations, what is now known as the Geneva Protocol came about. This document which banned the use in war of all "asphyxiating, poisonous, or other gases and all analogous liquids, materials and devices" and of "bacteriological methods of warfare" was signed by the United States, but was never ratified by the U.S. Senate. The need for such an agreement became apparent due to the existence and extensive use of poisonous gases by both sides in WW I. In fact, the open discussion of the protocol in the U.S. Senate began with the reading of a letter from General John J. Pershing, in which he stated: "I cannot think it possible that our country should fail to ratify the protocol which includes this or similar provisions. Scientific research may discover a gas so deadly that it will produce instant death. To sanction the use of gas in any form would be to open the way for the use of the most deadly gases and the possible poisoning of whole populations of non-combatant men, women, and children. The contemplation of such a result is shocking to the senses. It is unthinkable that civilization should deliberately decide upon such a course."

Influenced by the chemical industry, the American Legion, and by the Army Chemical Corps, senate opponents of the Geneva protocol presented arguments that gas was a relatively humane weapon. As the debate developed it appeared that the protocol did not have the necessary votes and so it was referred back to committee without having been voted upon. Forty-six years later, with every other major power in the world having ratified the protocol, including the Soviet Union and the People's Republic of China, the United States has yet to ratify it. Recent history of the protocol includes the efforts of the United Nations towards a more universal acceptance and more uniform interpretation of the document. In December 1966, the General Assembly passed a resolution calling for strict observance of the Geneva Protocol and appealing for universal accession. On the 10th of December, 1969, the United Nations' General Assembly Political Committee approved a Swedish resolution interpreting the Geneva Protocol as banning the wartime use of all chemicals, including tear gas and defoliants. Clearly, the U.N. resolutions were directed toward the most blatant violator of the words and intent of the Geneva document, the United States of America.

Concurrent with this overt pressure from the community of nations demonstrating America's grim public image abroad, was a growing anti CBW sentiment at home. This sentiment can be seen as stemming from the general dissatisfaction with the American war policy, brought to the general attention by the NBC documentary of February 4th 1969, and highlighted by the congressional hearings on chemical-biological warfare initiated by Congressman Richard McCarthy (D-N.Y.), beginning on the 19th of November, 1969. It became clear at this time that the administration would suffer greatly of the hands of its critics if it did not move quickly to disarm them with a statement of "new CBW policy." This then set the stage for President Nixon's November 26 announcement. Stated in strategic terms,

the problem facing the administration was how to get the maximum propaganda advantage out of the policy statement and still lose a minimum in military advantage. A report prepared by the Library of Congress for a congressional subcommittee depicts the Nixon announcement as just such a "trade-off":

"It is an attempt to reap the political advantage of adopting a new policy which includes the ratification of the Geneva Protocol, and at the same time retains for the United States a category of weapons which it considers militarily advantageous. Certain sacrifices are made in terms of both political and military benefit, but at the same time, the policy seems to maximize other political and military benefits."

Within this context, the President's carefully worded policy statement and the subsequent government actions can be interpreted and measured against the current status of CBW in the US- to see



what real change in the use, research, development and production has taken place. In his Nov. 25th statement, Nixon said:

1. As to our chemical warfare program, the United States re-affirms its oft-repeated renunciation of the first use of lethal chemical weapons.

Now, this assertion does not prevent the continued production, shipping, or storage of deadly chemical agents such as the nerve gases VX and GB. Nor does it prohibit continuing research and development of new deadly warfare chemicals and the delivery systems. For instance, open air testing of lethal aerosols is still allowed—the same type of test that accidentally killed 6400 sheep near the Dugway Proving Grounds in Utah, in the spring of 1969. In fact, the disposal of certain stockpiles of nerve gas bombs which has created a great deal of fanfare and public concern over the past two years is simply part of a "house-cleaning" effort to rid the US arsenal of obsolete and in some cases dangerously unretainable weapons while maintaining and developing stockpiles of more modern and improved nerve gas weapons such as the new "binary" weapons. These weapons contain two non-toxic components that blend into their deadly state only after the delivery system is in operation.

2. "Extends this renunciation to the first use of incapacitating chemicals."

Although most nations interpret "incapacitating" broadly to include even tear gas, the only CW munition classified by the U.S. Army as incapacitating is BZ, a psychochemical similar to LSD. The Pentagon has found that BZ is very expensive (at \$20 per pound, it takes 10 tons, or \$400,000 to knock out a battalion) and unreliable. Even so the military is not giving up this weapon, just pledging not to use it first and is also continuing research on new psychochemicals. Thus the first use of non-lethal chemicals with the exception of BZ still remains part of US policy. And, a very active part is demonstrated by their use in Indo-China. Gases like Adamsite (DM) which has been used in Vietnam are classified as "riot-control" agents, even though the Army field manual says that DM is not to be used "in any operation where deaths are not acceptable." Even the tear and lung gases, which do not in general kill their victims directly are used to drive them into the open where they can be killed by

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THERE WILL BE PICKETING DAILY DURING THE WEEK OF AUGUST 9-14, BOTH AT THE SITE OF THE CONSTRUCTION AND THE OFFICES OF THE CONSTRUCTION COMPANY.

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PLACE: RICHARDSON AVENUE
ON THE WEST SIDE OF
THE PRESIDIO.

aircraft of gunfire-these too are exempted as "non-lethal" from the President's restrictions. First use of chemicals and herbicides and defoliants also is not prohibited despite the fact that they are used to destroy food crops to starve the enemy and to destroy the jungle cover in order to improve kill ratios. Moreover, these chemicals have been linked with birth defects and outbreaks of Bubonic Plague in South-Vietnam. The "first use" of such chemical munitions as napalm and flame weapons, generally classified as incendiaries is also continuing. Indo-China has proven to be a valuable testing ground for the U.S. chemical warfare efforts. Nixon's new CBW policy" does not remove any strategically valuable weapons from America's present arsenal, nor does it preclude the development of more insidious ones.

3. Consonant with these efforts, the administration will submit to the Senate, for its advice and consent to ratification, the Geneva Protocol of 1925 which prohibits the use in war of "asphyxiating, poisonous or other gases" and of bacteriological methods of warfare.

What the US president failed to mention at the time of his statement was that the US interpretation of the protocol excluded herbicides and tear gases from the prohibition. In addition, the Geneva Protocol does not, in fact prohibit research, development, production or stockpiling of CBW munitions. Thus the Pentagon was able to declare on March 24, 1970, that ratification of the treaty, assuming it was done with the Nixon administration's understanding of herbicides and tear gases, would have no "effect on the present chemical warfare program."

The administration's announcement that it did not consider tear gases and herbicides to be covered was made at a time when two thirds of the signatory nations had already declared that the ban on other gases did include these agents. In early December, the US position on tear gases and herbicides was rebuffed, first by the UN Political Committee by a vote of 58 to 3, and then by the General Assembly itself in a vote of 80 to 3, (the two other nations voting against being Portugal and Australia). The US reaction was swift. On the 12th of December, one day after the Political Committee vote, an official State Department spokesman declared: that the United Nations' General Assembly is not the proper forum to decide such disputed questions of international law. The intent of the original Geneva Protocol is illuminated by Philip Noel-Baker recalling a conversation with Henri Bonnet at the Geneva conference of 1925:

"Oh yes, the form of words they've got is good. It prohibits every kind of chemical or bacterial weapon that anyone could possibly devise and it has to. Perhaps some day a criminal lunatic might invent some devilish thing that would destroy animals and crops." He added that "everyone at the conference agreed with Henri Bonnet."

New York Times, 9th December '69

When subsequent efforts failed to win any substantive support for the US policy on tear gas and herbicides, the US military turned to a new, and somewhat desperate tack to protect its interests. At the end of January 1970 the Pentagon issued a new definition that excluded tear gas and herbicides from the entire category of chemical warfare?



The Nixon administration waited nine months after announcing that they were submitting the Protocol to the Senate before he actually did so, and then only after numerous members of Congress, and finally the US ambassador of the UN Charles Yost, warned the failure to submit the protocol before the convening of the UN in September would be "quite embarrassing" for the US. This delay demonstrates the reluctance on the part of the administration to engage in a more image damaging debate both in the Senate and the international community. When the President finally presented the protocol to the Senate, for ratification, no references were made to the reservations in the formal statement, but rather a passing mention was made in Secretary of State William Rogers' accompanying statement that the US did not regard "riot-control agents and chemical herbicides" as prohibited. The hope was that such an approach would minimize the chance of embarrassing debate in the Senate and eliminate the need to notify other nations involved in the treaty. The government strategy backfired because the Senate has yet to ratify the Geneva Protocol precisely due to the exclusion of tear gas and herbicides from the ban. While certainly no propaganda victory can be claimed for the Nixon administration, nevertheless not a shred of military advantage has been given up, to this point.

4. Biological weapons have massive unpredictable and potentially uncontrollable consequences. They may produce global epidemics and impair the health of future generations. I have therefore decided that the US shall renounce the use of lethal biological agents and weapons, and all other methods of biological warfare.

Here again, the relevant question is: "What real military advantage has been sacrificed?" First of all, since the very nature of biological warfare is secretive both with regard to active agents and delivery systems, their use is difficult to trace and their ban difficult, if not impossible to administer. This is well demonstrated by the fact that the US denies ever having used BW despite carefully documented report of the International Scientific Commission for the Investigation for the Facts Concerning Bacterial Warfare in Korea and China

proving that in fact the US did use it against these two countries in 1952.

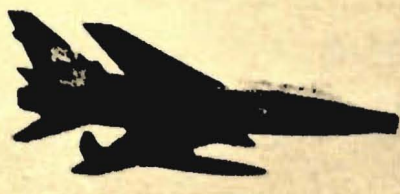
Along these lines it can be seen that the use of biological weapons for retaliation "in kind" presents practical problems that make this policy militarily useless. The determination, for example, that a specific outbreak was in fact an attack and that a specific country was the attacker would require too much time for an effective "retaliation in kind". Thus the long standing ban on first-use of BW remains as suspect as ever while the "new" extension of the ban to include retaliation negates an effectively useless military tactic; however the propaganda gain resulting from the statement is clearly real.

The great reluctance of the military to give up even weapons of questionable strategic value is demonstrated by the uncovered attempt by the Pentagon to retain biological toxins (the disease causing by products of living things) in the US arsenal by re-classifying them as chemicals. The attempt, had it been successful, would have meant retaining the entire establishment of biological warfare production facilities to produce the germs to produce toxins. Thus, far from being banned, as the President implied the use of germs in warfare would merely be refined. Toxins do have the general disadvantage of being less stable than the synthetically pro-

duced poisons, such as nerve gas. These synthetics can be made as lethal as the natural toxins and there every scientific indication that they can be produced to mimic the effects of specifically "desirable" natural toxins. These facts, coupled with mounting congressional, journalistic, and international criticism finally outweighed the interests of the biological warfare career man. Thus the Pentagon finally reversed its attempt and on February 14, 1970 the White House announced that toxins, chemical ones, would be treated in the same way as biological agents, by being banned for all but "defensive" research and development purposes.

Lastly, since the president's stated motivation for the decision to ban biological weapons is the unreliability of such weapons, it

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AMERICA'S ETHNIC WEAPONS:

On September 2, 1945, after centuries of struggle, the Vietnamese people declared their independence. For years they've resisted all attempts by foreigners to dominate their lives. While the Vietnamese shoot down U.S. bombers and lay ambush for foreign invaders, they also build a new society

ETHNIC WEAPONS

"No intention of killing everybody off" by Chairman Carl Charles of a University of Pennsylvania Dept involved in C.B.W. research

The emergence of increasing numbers of Third World liberation movements has forced the American government to reorient its military tactics. No longer is the stock piling of deterrent-type chemical-biological weapons (CBW), used to threaten Russia in the cold war, effective. So, with the disposal of missile warheads full of poisonous germs and gases, and of huge stockpiles of toxins, the U.S. Army has continued to develop new CB warfar weapons systems. The weapons that appear to be now emerging are far more insidious and genocidal. They may be locally and selectively applied against Third World people.

New scientific discoveries are now being incorporated into the development of new CB weapons, almost as fast as they are being made. The understanding of a disease can be used to develop the means of selectively spreading it. The unfolding of our understanding of the basic chemical function of life can lead to the stopping of those life processes and the acquisition of knowledge of physiological differences between groups of people can lead to the control of one race of people by another.

The most genocidal and racist of the weapons in the new CBW arsenal has been referred to in an article by a leading scientist of the United States military and general staff college at Fort Leavenworth, as "Ethnic Weapons." The concept of ethnic weapons refers to a broad class of weapons which can selectively attack - kill or immobilize - a single race (or even tribe). These include the use of chemical and biological agents that selectively block life processes in a specific race.

Ethnic weapons for use against Third World people may also employ what is referred to in medicine as "disease vectors" -

that is information about how and where diseases will or will not spread. In societies which are less mobile the isolation of segments of the population (which occurs extensively only in Third World countries) allows plagues and immobilizing diseases to be easily introduced so as to spread only thru a limited area. A third dimension of "medical" research which has been discussed in conjunction with ethnic weaponry are resistance transference factors (RTFs) and virulence transference factors (VTF).

Scientific knowledge has allowed research investigators to get micro-organisms (small animals) to transfer genetic material. The nature of animals is determined by its genes. This means that scientists can combine genes of two different organisms (read diseases) in a single organism. Genes presently mixable include ones conferring resistance to medications such as antibiotics, and genetic material conferring virulence (which medical dictionaries define as malignancy, noxiousness, infectiousness).

The combination of a virulent plague in a disease producing micro-organism which is also resistant to all known medical treatments and attacks only one race of peoples is not beyond the feasibility of the military thanks to the past and continued research of civilian and paramilitary scientists.

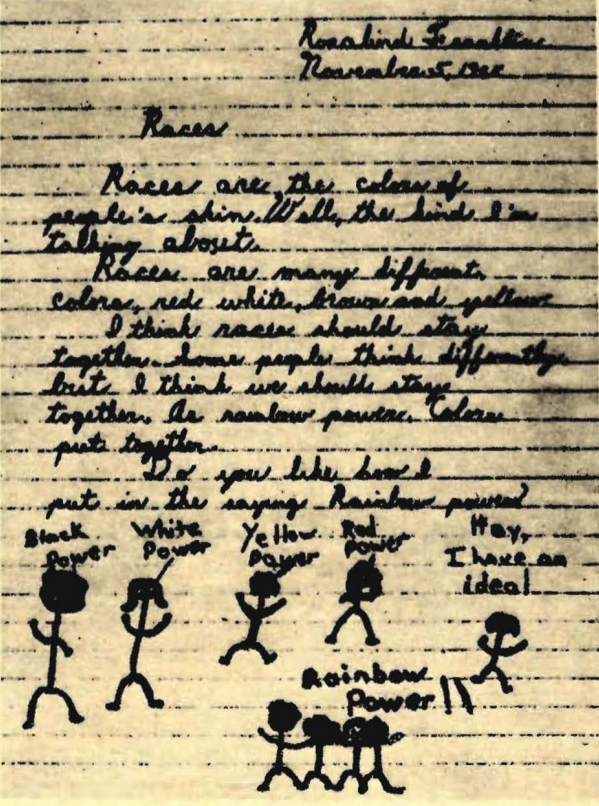
Its interesting to note that you will never see a chapter on CBW in any textbook in a science course where future scientists who might have to decide whether or not to do specific research are being taught.

Even at such a public level as the US Department of Health, Education and Welfare, the US Public Health Service funds research on inheritance of susceptibility to disease. They have supported work not only on diseases affecting North Americans, but also those affecting foreign populations - Brazilian, French Canadian, Japanese, African, Chinese, Thai and Peruvian to mention a few.

A new CBW arsenal could be developed from public information about diseases such as coccidiomycosis (San Joaquin Valley Fever) which affects Asians more severely than blacks and blacks more severely than Caucasians. Another disease which might be useful to ethnic weapons mongers is the inherited deficiency of the chemical Glucose-6-phosphate dehydrogenase (G-6-PD) which occurs in up to half of some Mediterranean populations.

In the case of the G-6-PD deficiency, a US Public Health Service report of research at the University of California Medical Center in San Francisco, it is noted that the deficiency of that enzyme is "responsible for an acute severe self-limiting hemolytic anemia on the exposure to relatively small doses of certain aromatic drugs and vegetable substances so that as many as 1/2 of circulating red 'blood' cells may be destroyed," and that "the study of this deficiency in material obtained from Asia and from various racial groups in San Francisco, is in progress." Other research on this disease is also supported by the Army and the Air Force.

It is clear that research in the development of a new CBW arsenal including ethnic weapons, requires research at every level from the university through the medical research sponsored by the military to military research in medicine up to the production and packaging of these weapons. It is because of this separation of research functions that it is hard to point to a place and say that's where ethnic weapon research is being conducted, but in the chain (see article on the Presidio for role WMIR can play).



DEATH TO THE PEOPLES OF THE THIRD WORLD ?

THIS ARTICLE CONT. ON PAGE 10

A NEW generation of chemical weapons seems to be growing out of information collected and interpreted in research centers in both East and West. So far, chemical agents have been considered effective mainly against tactical targets of limited area. Even if this view may still be maintained, a new edge can be honed to an already formidable weapon. Forthcoming chemical agents with selective manstopping power will put into the hands of an assailant a weapon with which he cannot be attacked.

At the bottom of this new reasoning lies a careful exploration of the reaction of individual soldiers to chemical agents. Tactical consequences of the wide variation of such reactions involve both target analysis and the selection of personnel for special missions.

With or without exposure to toxic products, most molecules of the human organism keep to their ordinary tasks of maintaining structure. A fairly great number of molecules are held in reserve against predicted needs, but a fatal chaos would result if too many molecules were ready to react with each other. Our energy requirements are satisfied by the transformation of molecules, capable of releasing energy, into other molecules with a less energy content. But every transformation, whether it takes place in a gun chamber or in a muscle, calls for the supply of activation energy.

High pressure and temperature are not compatible with vital functions. As in all other living organisms, our

molecules are kept arrayed until particular trigger mechanisms lower the activation energies of chemical reactions. These carefully safeguarded procedures for alerting molecules are extremely selective, and they depend on the activities of enzymes.

Such catalysts of living organisms have attracted an increasing interest, and new methods for the study of enzymes have accumulated some imposing, and mostly new, facts. One way to knowledge about the ladders of chemical reactions furthered at each step by a special enzyme is to study what happens when one enzymatic step is blocked. Material for such studies is provided by nature and by artificial inactivation of particular enzymes, intentional and accidental.

Catalase Activity

The immense laboratory of human natural variation provides many instances of sharp differences in the activities of well-defined enzymes. Catalase belongs to this category. Its task is to split hydrogen peroxide, H_2O_2 , setting free oxygen. Today, hydrogen peroxide may be better known as a rocket propellant than as a disinfectant. If used in the latter capacity, diluted peroxide foams when brought into contact with blood or a fresh scratch in the skin. Without catalase, there is no foam. We need the enzyme to inactivate hydrogen peroxide generated by bacteria trying to invade the gums through minute injuries.

In the early fifties, several Japanese families were observed where some members lacked catalase activity. Their blood produced no gas when in contact with hydrogen peroxide, and they had more or less severe ulceration of the gums with loss of teeth. This enzyme defect is rare, and it follows a simple mode of inheritance,

with the parents of patients having a normal or practically normal catalase activity. The changed gene responsible for lack of catalase is not confined to east Asian populations as was once suspected.

Scores of enzyme failures due to gene mutations have now become known. Many of them cause early death or severe mental retardation. Sometimes, a dietary adjustment suffices to overcome the consequences of enzymatic ineptitude. The study of such heritable disturbances has included their prevalence in different geographic regions.

Basic Pattern

Although some outstanding inequalities between widely separated ethnic groups have been registered, detrimental genes are, as a rule, rare all over. Significant is the basic pattern, repeating itself in scores of enzymatic failures, of a changed gene causing a distinct enzyme block. It does so alone or together with its similarly changed partner gene, carrying its false message unaltered from generation to generation.

Besides these experiments by nature, revealing the existence of an enzyme and its determining gene by replacing the gene with an inert imitation, information about enzymes has been obtained from the study of their inhibitors. Chains of vital processes in the human body, concerned with energy provision and material replace-

ment, can be broken at will. For practical purposes, the effect of a specific enzyme inhibitor is a disturbed function that can be seen or measured with special methods. In effect, a supply point has been demolished.

For widely varying purposes, enzyme inhibitors have long been systematically studied. Their principal modes of operation have been traced, and their practical use includes agents with antibacterial and antitumor activity. The systematic search for enzyme inhibitors, useful as insecticides, began in Leverkusen in the Rhine Province in the thirties. Insects have solved their internal supply problems much in the same way as the gardener or farmer who tries to survive his bug fauna, but there are differences in susceptibility to enzyme inhibitors. In 1937, the Leverkusen laboratories could, however, report a series of organophosphorous compounds that killed the gardener as well as his beetles.

Keeping quiet about these reports, the Wehrmacht began large-scale production in Dyhernfurth in Silesia of what was code-named Trilon. This was in April 1942. By 1945, some 12,000 tons had been produced of tabun or GA. Thus, began the mass production and stockpiling of the so-called nerve gases.

Such highly toxic enzyme inhibitors demonstrate quite convincingly the need for an orderly mobilization of molecules for a given mission—in this case, signal transmission. Too much or too little, too early or too late means chaotic performance by activated molecules.

When the brain orders a muscle to shorten, the signal is dispatched via a nerve which triggers numerous muscle fibers. This is done through the transcription of the nerve signal to a chemical message, acetylcholine being released at the endings of nerve fibers. As long as the flow of impulses

travels through the nerve, acetylcholine is discharged and the muscle remains contracted. What happens when the muscle gets word to suspend action is not only that the transmitter substance, acetylcholine, stops being set free, but the chemical signal becomes muted, and acetylcholine is immediately broken up into inactive compounds. This vital task is fulfilled by an esterase, a specialized enzyme.

Without normal activity of this esterase, acetylcholine remains at the nerve fiber endings. The command to cease action does not arrive. The im-

mediate result is a persistent muscular contraction, a state of cramp, followed by paralysis. And this is exactly what happens when the critical esterase, called acetylcholinesterase, becomes inhibited by a G-type phosphorous compound. When the block-



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between nerve and muscle affects the limbs, the result is temporary inability of service. But muscles of respiration are also involved, with death following exposure to relatively small quantities. Thus, GA can kill in concentrations of 40 milligrams per cubic meter of air during 10 minutes of exposure through inhalation. However, GB and GD have a lethal concentration of only 10 milligrams under the same conditions.

A further development of the G series of chemical agents is represented by the V anticholinesterases which are active after having passed the skin. The G agents are also absorbed through unprotected skin, but they evaporate too fast for full effect. A minute droplet of VE or VX passing rapidly through the skin, into the blood circulation, can kill a soldier.

Questions about the limitations of chemical warfare have been raised from time to time. The high toxicity of G and V-type enzyme inhibitors and the possibility of using strategic missiles with chemical warheads carrying well above four tons of payload have raised the discussion to animated altitudes. With existing ordnance employed on a modest scale, and with only a fraction of the GB now in stock, the inhabitants of Paris, Osaka, or Los Angeles could be asphyxiated. But this does not draw the whole picture.

Blocking Agents

By a peculiar coincidence, an inborn variability in the activity of cholinesterases has been observed. For various medicinal purposes, drugs are used to interrupt the transmission of the nerve impulse where it reaches the muscle. One objective is relaxation of the abdominal wall so that surgical manipulations can be carried out without resort to deep anesthesia.

Blocking agents of the same type are also used to decrease muscular spasms in tetanus and to prevent mishaps in the electroshock treatment of psychiatric disorders. One widely used blocking agent derives from curare, the South American arrow poison. Another is suxamethonium which cuts the nerve-muscle signal by interfering with the shifting of electrons at the critical junction.

The therapeutic effect aimed at should vanish with the need for relaxation, but in some patients suxa-

methonium caused unexpectedly long laming of muscles and dangerous standstill of respiration. While curare was, at an earlier stage of its medical use, the carefully guarded secret of tribal witch doctors, nothing in that way entered modern anesthesiology. The relaxant was right; the patient was unfit. The untoward reaction was brought about by a weak or absent cholinesterase activity.

Persons with this potentially fatal weakness are in excellent health as long as they are not exposed to suxamethonium. The deficient enzyme differs in some respects from the cholinesterase handling acetylcholine. It is produced by the directives of a changed gene and the fault appears in consecutive generations.

Human Variations

Such chance findings of heritable differences inevitably attract the attention of people who study the distribution of different genes in human populations. The esterase differences have been studied in detail with the aid of specific enzyme inhibitors. In essence, their inheritance follows well-known Mendelian patterns. A person who has the usual gene on both of two ordinary chromosomes is endowed with a 100-percent esterase activity; the atypical gene on the same site of both chromosomes renders only 50-percent enzyme activity. If two such persons start a family, their children will each have one usual and one atypical gene, and 75-percent enzyme activity.

Close to four percent of the normal people in Canada and Britain carry the atypical gene with the resulting reduced esterase activity. Similar proportions of 75 percenters have been observed in non-European populations. It is quite possible that the atypical

gene, and a third gene causing, in duplicate, zero esterase activity, will finally be found to have about the same distribution in geographically widely separated populations.

But this is only a stray observation fitting into a repeatedly confirmed pattern of human variation. In brief, human populations can be characterized by frequencies of distinct genes. Sometimes, gene frequencies agree fairly well between widely dispersed populations, but more often there are great differences. This view differs from the concept of typification established in physical anthropology until mathematical models and the observation of simply inherited, normal traits made the study of gene frequencies meaningful.

Biochemical Differences

With World War I came the first impetus to the new approach, blood group frequencies in Allied armies being found to vary considerably among personnel of different geographic origin. Next, blood groups

would seem reasonable that new "advances" in the field of biological warfare which would also remove these objectionable qualities would also remove the reasons for the ban. The development of ethnic weapons, that is, biological weapons which selectively attack on the basis of racial or ethnic characteristics, would appear to be just such an "advance." It is clear again that the administration has bought present propaganda and prestige with the valueless currency of "hollow military concessions.", while still maintaining the potential for developing a far more effective and insidious CBW arsenal.

5. The US will confine its biological research to defensive measures, such as immunization and safety measures.

Dr. Mathew S. Meselson, a professor of biology at Harvard, testified before the Senate Foreign Relations Committee on Chemical and Biological Warfare;

"Well, to speak about biological weapons, it is my opinion that in terms of present knowledge and technology it is hopeless to try to develop a defense against such possible biological agents. Anti-sera and drugs may be useful against one agent or another, but there is no anti-serum no drug, which can be useful against all."

It seems, therefore that one must look further to ascertain the value of this type of research. It turns out that Nixon's statement provides a wide open loophole for biological research and development which has constituted the bulk of US BW activity, for it has been traditional to define such research as "defensive" As "defense" involves producing "offensive" diseases for test purposes, so "offense" involves "defensive" inoculation of one's own troops to the agents being used. Thus the lines between defense and offense are very blurred, to the degree that the distinction becomes meaningless. A report made by the DMS, in March 1970 (DMS known formerly as Defense Marketing Survey,) demonstrates that point

by listing the budget categories for the US Army Medical Research and Development Command (USAMRDC) and those for chemical and biological warfare research institutions:

USAMRD

U.S.A.M.R.D.C.

- In house laboratory and Independent research.
- Biological and Medical Sciences
- Biological and Medical Investigations
- General Chemical Investigations
- Biological Defense
- Chemical Defence
- Chemical/Biological Defense
- Biological Defense Material Concepts
- Chemical Defense Material Concepts
- Therapeutic Development

- CBW Research Funding Categories
- Biological Defense Material Concepts
- Biological Warfare
- Chemical Defense Material Concepts
- Chemical Warfare
- Defense Against Biological Agents
- Defense Against Chemical Agents
- General Biological Investigations
- General Chemical Investigations
- Incapacitating Chemical Investigations
- Chemical Defense Materials
- Incapacitating Chemical Munitions
- Lethal Chemical Munitions Concepts



On September 2, 1945, after centuries of struggle, the Vietnamese people declared their independence. For years they've resisted all attempts by foreigners to dominate their lives. While the Vietnamese shoot down U.S. bombers and lay ambush for foreign invaders, they also build a new society with love -- where health, education and well being are guaranteed. Fighting to be free is a total way of life.

As women, we're changing our lives. We rage against the way our minds and bodies have been ravaged and the Vietnamese Countryside raped. We can't keep smiling sweetly and pretend we're only interested in housework. As we discuss our problems honestly with each other, as we work together in women's clinics, day care and welfare organizations, as we fight together, we get a new strength and joy from our growing sisterhood.

Inspired by the courage of the Vietnamese, we will march with the strength of sisterhood against Pentagon West (Presidio) to defeat the enemy's plan to build a biological warfare center there. It is in these centers that research is done to create diseases that affect only Asian people. We'll also gather for a women's festival to share our energy and experiences to strengthen our day to day work in our communities. We're just beginning to plan for September 2 - 5. We need your ideas and energies to help us create a strong sister's offensive.

S.F. OFFICE:
1380 Howard
861-6466

The duplications in the two lists is readily apparent. The DMS report notes in its USAMRDC chart that "Funding figures are not exclusively for USAMRDC but may be shared with other agencies. The same report states that the same areas of research (in CBW) will continue to be explored, although only the defensive aspects of this research will be pushed to the hardware stage. However, it is possible that defensive measures will require equally aggressive methods of dissemination as the offensive measures. The real changes in CBW research is revealed later in the report:

"Though ostensibly on the way out of the military weapons arsenal, CBW is merely conducted in a different environment, and whenever possible with less public attention. It remains a technology in which there is considerable interest and money."

A shift has definitely taken place, and one that the government and the military can use to a maximum advan-

age. Seymour Hersh, author of Chemical and Biological Warfare—America's Hidden Arsenal, reports that as many as 250 civilian scientists as well as 190 military scientists from Pine Bluff and Fort Detrick, claimed to have been eliminated from CBW research projects, are actually being transferred to other parts of the country where they will continue the "defensive biological program" including at least "one major classified program."

The evidence builds that Nixon's policy statements were designed not only for the propaganda advantage of disarming the critics of this country's CBW establishment, but also to camouflage the slow and treacherous directions that this type of warfare seems to be heading.

I N C A P A C I T A T I N G C B W A G E N T S

| | <u>Example</u> | <u>Effects</u> | <u>Effect of Treatment</u> | <u>Contagiousness</u> | <u>Notes</u> |
|------------------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------|------------------------------------------------------------------------------------------------------------|
| VIRUSES | Dengue Fever | Most incapacitating fever known | None | By insects | Highly infectious, rarely fatal |
| | Venequelan Equine Encephalitis | Severe headache, nausea, prostration; recovery in 1-3 weeks | None | By insects | 1/2% fatal -- mostly infants & the infirm |
| BACTERIA | Brucellosis | Long lasting, recurrent severe fever | Moderate | None | Rarely fatal |
| OTHER ORGANISMS | Q Fever | Severe fever for 1 wk. Joint & muscle pains | Good | Low | Very highly infectious; 1% fatal |
| TOXINS | Staphylococcus toxin | Sudden & severe vomiting & diarrhea | None | None | Recovery in 1 - 2 days |
| FUNGI | Coccidioidomycosis | Mild to severe fever, cough, muscle pains; if severe case, 50% chance of death. | Poor | None | Never severe in Whites, 3% of cases severe in Black males, some evidence of much higher severity in Asians |
| PSYCHO-CHEMICALS | LSD, mescaline | Slowing of activity, giddiness, disorientation, hallucinations | | | Very low doses required |
| | BZ | Blurred vision, disorientation, & confusion for several days | | | |
| TEAR GAS | CN | Eye irritation, tears, coughing | | | The "riot control" gas More than 14 million pounds used by U.S. in Vietnam before 1970 |
| | CS | Intense pain in eyes, throat, & lungs; feeling of suffocation & anxiety; Lung damage & death possible to infants & sick people. | | | |
| | DM (adamsite) | Tears, nausea and vomiting | | | |

D E A D L Y C B W A G E N T S

| | <u>Examples</u> | <u>Effects</u> | <u>Mortality</u> | <u>Effect of Treatment</u> | <u>Contagiousness</u> | <u>Notes</u> |
|-----------------|-----------------------------|-----------------------------------------------|--------------------------------------------------------------|----------------------------|-----------------------|------------------------------------------|
| VIRUSES | Eastern Equine Encephalitis | Fever, destruction of brain tissue, paralysis | Greater than 60% | None | By insects | Especially serious in children |
| | Yellow Fever | High fever, liver & kidney infection | Up to 40% | None | By insects | |
| BACTERIA | Anthrax | Severe coughing, respiratory failure | About 100% | Fair | Low | One of the most stable CBW agents |
| | Cholera | Severe intestinal infection | Up to 80% | Good | High | Must be taken orally, a CBW disadvantage |
| | Plague | Chills, mental dullness, anxiety, fever | 100% | Moderate | High | Kills within 2 - 3 days |
| | Tularemia | Irritant cough, severe fever | Up to 20% | Good | Low | Some strains resist antibiotics |
| | Typhoid | Continued high fever and bad headache | 10% | Good | High | |
| | Melioidosis | Fever producing mania & delirium | 100% | Moderate | None | |
| OTHER ORGANISMS | Rocky Mtn. Spotted Fever | Chills, severe pain, convulsions | 80% | Good | By insects | |
| | Epidemic Typhus | Fever, rash, shaking chills | 70% | Good | By insects | |
| TOXINS | Botulism | Dizziness, neuromuscular paralysis | A millionth of an ounce could kill 20 people; no treatment | | | Quickest BW agent |
| CHEMICALS | Sarin, a nerve gas | Breakdown of respiration | Breathing one thousandth of an ounce is deadly | | | Evaporates, forming invisible gas |
| | VX, also a nerve gas | Breakdown of respiration | Ten times more deadly than Sarin | | | Killed the sheep in Utah |
| | Mustard Gas | Blisters & burns; poisons cells | High dose is fatal -- symptoms similar to radiation sickness | | | |
| | Hydrogen cyanide | Stops cells from breathing | Almost immediate death if high enough dose. | | | |
| | Phosgene | Lung damage | Almost immediate death if high enough dose. | | | |

E T H N I C W E A P O N R E C I P E S ?

Natural genetic differences between ethnic groups are the basis for "ethnic weapons." The following examples of such differences are taken from the book "Hereditary Basis of Disease: A Review of Research Grants Supported by the National Heart Institute, 1948 to 1967."

| <u>Example</u> | <u>Differences Between Ethnic Groups</u> | <u>How Weapon Might Work</u> |
|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| G6PD Deficiency; G6PD is vital red blood cell enzyme | Substantial numbers (10 - 50%) of male Blacks, Sephardic Jews, and Sardinians have the deficiency; it has not been found in Caucasians | People with G6PD deficiency get "severe anemia on exposure to relatively small doses of certain... drugs" |
| Hemoglobin E is a form of the oxygen-carrying component of red blood cells that has a defect in one of the two protein chains | "In Malayan aborigines the frequency of Hemoglobin E is high, ranging from 8 to 50% in different ethnic groups." | Since Hemoglobin E is chemically different from the normal form, an agent might be made that would attack or inhibit only the defective form, killing blood cells of Hemoglobin E people |
| Haptoglobin is an enzyme that binds free hemoglobin; Two types of genes commonly control haptoglobin production | One of the two types of genes is most common in Black people, intermediate in Whites, and "extremely low" in Asians | A substance would have to be found that would inhibit the enzyme's activity in one ethnic group but not in others |

RACIAL GENOCIDE (cont.)

were used to map the world population. In central Asia, the B-gene frequency comes near 30 percent; in American Indians, this gene is originally absent. When new blood group systems were discovered, European, Asian, and African populations could be characterized by a number of independently varying gene frequencies.

Widely used in such studies of human populations is the ability to taste diluted solutions of phenylthiourea. Persons who carry a variant of the taster gene on both of the critical chromosomes are nontasters. If somebody were to dissolve a sufficient amount of phenylthiourea in the drinking water in Mahar, India, 54 percent of all water drinkers would complain of the bitter taste. Among

Brazilian Indians, an identical experiment would make little more than one percent aware of the admixture.

Several other biochemical differences between human beings have been studied with an increasing awareness that some of these differences may be adaptive. When a simply inherited variant of the red coloring matter of blood, practically absent in Europe, was observed to be common in a broad belt across central Africa, it was brought into relation with the high incidence of malaria in these regions.

Carriers of the changed gene have an increased chance of becoming grandparents in spite of the high mortality among their children where the abnormal gene in the duplex state is a merciless killer. The cause is the greater resistance to malaria granted by a single gene for the deviant pigment. In the Mediterranean region, similar situations include other variants of blood pigment and also an enzyme defect significantly common in old malaria regions.

Enzymatic Reactions

In the present decade, knowledge about enzyme polymorphisms has accumulated. If a deviant gene is too common in a given population to remain prevalent only through new mutations, it has a polymorphic distribution. More often than not, the selective forces balancing such relatively high frequencies of a substandard gene are completely unknown. The chance observation of a reaction to a certain drug is obviously just the shadow on the wall. The real item has to be searched for among entangled molecular supply lines in the living organism. Clearly a relative advantage in one environment granted carriers of a mutant gene can be

entirely void in another environment. But the decisive environmental factors of selection can hardly be examined with drugs, sulfonamides, or BZ-type chemical agents.

Careful analyses of enzymatic reaction patterns to a series of drugs are underway, and we may soon have a grid where new observations of this kind can be pinpointed. One set of reference lines in this grid goes from genes necessary for enzyme production. Another set of lines marks substances turning on and off the making of active enzymes which can, but need not, be alerted.

Recently, a series of widely debated observations have revealed an enzyme deficiency in southeastern Asian populations, making them susceptible to a poison to which Caucasoids are largely adapted. In such situations, the sketchy grid just mentioned is of some use. One looks for the possibility of the poison-provoking enzyme production, an individual adaptation observed in several instances.

The poison now at issue is milk. In Europeans, intolerance to lactose, or milk sugar, occurs as a rare recessive trait. Healthy parents, each carrying

a single mutant gene, have children approximately one-fourth of whom react to milk ingestion with diarrhea, vomiting, malabsorption, and even death. When reports on milk intolerance in various groups of non-European began to accumulate, it was remembered that malnourished children in east Africa got diarrhea when



SOUTH AMERICAN BLASTOMYCOSIS

treated with dried skimmed milk. Then, the enzyme lactase was found to lose its activity in the intestinal mucosa of African infants over the first four years of life.

New reports on milk intolerance in Chinese, Filipinos, and Indians were met with skepticism in that the groups studied might not be representative of their peoples. A study reported from the Chiangmai University in Thailand has, however, revealed a widespread lactose intolerance in adults in northern Thailand, the lactase activity getting lost between the first and fourth years of life. By inference, it has been found likely that Southeast Asians, in general, are deficient in lactase production.

Rapid and Slow Inactivators

Similar observations of geographically distinct enzyme differences are to be expected. Among the obviously inherited differences in enzymatic response to chemical agents, acetylation is marked by a clear separation of people in two groups. Originally, one group was characterized as composed of rapid inactivators of isoniazid, a drug used against tuberculosis. The other group of slow inactivators carries an alternative gene less efficient in converting isoniazid to acetylisoniazid. Europeans, as well as Americans of African descent, have among their numbers about 50 percent slow inactivators. Eskimos and Japanese have approximately 10 percent slow inactivators.

The method of acetylation to inactivate a molecule is not confined to isoniazid. People belonging to the two acetylator classes reveal differences in handling a number of other drugs, including enzyme inhibitors acting upon the central nervous system. Although the study of drug metabolizing

enzymes is only beginning, observed variations in drug response have pointed to the possibility of great innate differences in vulnerability to chemical agents between different populations.

A series of enzyme inhibitors and chemically active substances interfering with signal transmission in the brain and spinal cord have been intensely studied since the early fifties. Many of these substances have a colorful prehistory saturated with tribal sorcery.

The incapacitant known as BZ derives from a drug which before its present renaissance as lysergic acid diethylamide (LSD) caused epidemic outbreaks of Saint Anthony's fire in the Dark Ages. With ditran-like com-

pounds, BZ shares the capacity to produce transient toxic psychosis, sometimes compared to schizophrenia.

Search Continues

Surrounded with clouds of secrecy, a systematic search for new incapacitating agents is going on in many laboratories. The general idea, as discussed in open literature, was origi-

nally that of minimal destruction. Psychochemicals would make it possible to paralyze temporarily entire population centers without damage to homes and other structures. In addition, with the small quantities required for full effect of modern incapacitating agents, logistics problems would be minute. The effective dose of BZ-type agents amounts to micrograms.

It is quite possible to use incapacitating agents over the entire range of offensive operations, from covert activities to mass destruction. One fairly obvious offensive preparation is protection of the country's own personnel by tolerance-building. This is where enzymatic response to psycho-

chemicals enters the scene. Exposure to drugs or to molecules of almost identical composition is known to produce, with varying degrees of accuracy, resistance to the toxic effect at repeated exposure. As this is a known and thoroughly discussed procedure, concealment of large-scale preparations of this type probably would be difficult if not wholly impossible. Another prospect may tempt an aggressor who knows he can recruit from a population largely tolerant against an incapacitating agent to which the target population is susceptible. An innate immunity would offer concealment of preparations and obvious advantages in many tactical situations. When the proper chemical agent is used against intermingled friendly and enemy units, casualties may occur in proportions one to 10.

Such inferences are barely extrapolations of observed genetic differences between major human populations and of research programs known to be in progress. Widely different opinions have been ventured as to the type of chemical operations likely to be directed against military personnel and the civilian population in a future war. There have been some recent tendencies to stress the wide latitude between incapacitating and the lethal action of BZ-type agents. Friendly troops could use them to dampen belligerence. They effectively slow down physical and mental activity, make the poisoned personnel giddy, disoriented, and more or less unable or unwilling to carry out commands.

Friendly forces would discriminately use incapacitants in entangled situations to give friend and foe a short period of enforced rest to sort them out. By gentle persuasion, aided

by psychochemicals, civilians in enemy cities could be reeducated. The adversary would use incapacitants to spare those whom he could use for slaves. There is little that human biology can contribute to prognoses of that type.

The factual basis of absolute enzyme inhibitors of widely different types can be neglected as little as modern methods for their distribution. They need not be gases in a true sense. Well-studied enzymes represent a small proportion of the total number of catalysts necessary for our vital processes. When new enzyme varieties are discovered, some of them are likely to overstep the prevalence limits so far observed, both high and low, in different populations.

But the production of enzymes in the living cell could not be selectively quenched until details of early signal transmission from the gene became known in 1969. During the first half of that year, several laboratories reported factors engaged in passing over the genic message from DNA, the primary command post, to RNA which relays the chemical signal. The enzymatic process for RNA production has been known for some years, but now the factors have been revealed which regulate the initiation and specificity of enzyme production. Not only the factors have been found, but their inhibitors. Thus, the functions of life lie bare to attack.

The preceding article was written by Carl A. Larson, and was published in the Military Review, Nov. 1970 under the title, "Ethnic Weapons".

Carl A. Larson heads the department of Human Genetics at the Institute of Genetics at the University of Lund, Sweden. He holds a Licentiate degree from the Medical School of Lund University and is a licensed physician. Dr. Larson has published research work and popularized science in American and European periodicals.

Subsequently to the appearance of Dr. Larson's article, an avid reader wrote the following letter to the Military Review.

LETTER TO THE EDITOR

Ethnic Weapons

The lead article "Ethnic Weapons" (November 1970) is one of the most thought-provoking to appear anywhere in quite some time. The military implications of the research upon which Dr. Carl A. Larson reported are doubtless greater than any of us realize at this point. I would hope that the article might stimulate further discussion of this matter.

On a far different plane, it seems to me that Major Ruben A. Candia's letter (November 1970) urging that some of the glamour, inspiration, and even fun, be restored to soldiering hits the target. It seems to me that more of the volunteers we seek will be attracted by brass buttons and brass bands than by an image of the tradesman in his worksuit, starched to the point of marginal comfort.

COL O. W. Martin, Jr., USA

Since the early 40's, the army's secrecy has been betrayed by numerous grotesque accidents at its C.B.W. facilities. Representative Richard McCarthy, in a speech inserted in the congressional record, charged that Fort Detrick had 3,300 accidents connected with biological weapons research, just between the years 1954 and 1962.

Detrick officials have had to recognize three deaths (2 from anthrax and 1 from Venezuelan equine encephalitis). Three deaths in 26 years, said a representative from Fort Detrick, is "a good record considering the nature of the work".

Other accidents have included the killing of animals in Utah on a number of occasions, and the inadvertent gassing of 700 children at a public school near the Pine Bluff Arsenal in Arkansas.

Enquiries about the nature of the research program of W.M.I.R. ended in three different blind alleys:

"Scientists will be operating as teams investigating exotic diseases in remote areas of the world where American troops may be stationed."

-Army Surgeon General, March 16, 1971

"To study jungle rot and to develop new mosquito repellants".

-Public Relations Officer, Letterman, July 1971

"Primarily the work will be in tropical skin diseases and how these diseases affect the troops in the field".

-General Taylor, director of the U.S. Army Medical Research and Development Command, Wash. D.C., July 1, 1971

The facility will begin with 700 people, including 100 civilian scientists. Several military research units are gravitating to the Presidio to join with Letterman Army Institute of Research in the formation of W.M.I.R. These are:

-The tropical medicine division of the Infectious Disease Department of Walter Reed Army Institute of Research.

-The Medical and Metabolic Research Sections from the Research and Nutrition Laboratory in Denver, Colorado.

-Psychophysiology, Biophysics and Laser Research Sections from the U.S. Army Research Lab. at Fort Knox, Louisville, Kentucky.



G A T E T O A R M Y
B A S E

But where will the C.B.W. researchers at Fort Detrick and Pine Bluff go, now that their biological weapons facilities are being "phased out"? The answer to that has to be guessed, because the Army won't say anything about it.

Certainly any Fort Detrick researchers would find themselves in a familiar environment at W.M.I.R. (which was prototyped on Detrick). Plans require the provision of extensive biological seals, sterilised air locks, and ultraviolet barriers- devices for closing off building areas against lethal biological agents. This kind of research facility presents hazards at least as severe as those associated with nuclear reactors. This question was raised with the Public Relations Officer at Letterman:

Interviewer: As I understand it, during the L.A. earthquake (Feb. 9, 1971) buildings that were theoretically designed to withstand earthquake shock didn't, and I guess the question that I'm asking is why, given the fact that this is an earthquake prone area, why here instead of elsewhere, why is this hospital being built here?

P.R.O.: The entire project was first considered here because according to studies that the Surgeon General made, S.F. was an optimum area to recruit the kind of mobile scientific talent that a medical research center requires. Therefore it was because of the outstanding scientific talent available in the San Francisco area, and the availability, the excellent teaching facilities of Letterman General Hospital ...

Chief Engineer: In connection with the teaching facilities available, I might say that Letterman Hospital is designed-they've never done it- but there's actually facilities in there to hook up direct communications with U.C. Hospital for consultations and training sessions and everything....so they are planning on using them.

This statement illustrates the cosy, closed-circuit-T.V. relationship between the military research scientists and the university research scientists- a link in the chain of C.B.W. development. 'Pure' discoveries made in the universities are scrutinised by military research scientists for military potential, then by military technicians for battlefield effectiveness, and then brewed into weapons and packaged in the arsenals.

There are other features about San Francisco that might be attractive to those in the C.B.W. profession.

In 1968 a review of National Institute of Health research grants to study the hereditary bases of disease revealed that:

"The study of this (hereditary enzyme) deficiency in material obtained from Asia and from various racial groups in San Francisco is in progress."

The particular disease in question is a hereditary deficiency of the body chemical glucose-6-dehydrogenate-phosphate, and its relationship to the development of C.B.W. weapons to be used in the third world is discussed in the article on ethnic weapons.

The most grotesque expression of military intentions is the use in this area of third world convicts as guinea pigs in experiments with these diseases.

"Colonel E.M.Gershater, the base commander at Fort Detrick, noted with pride that the Fort's "animal farm" is often visited by school groups. It houses thousands of animals used in research and testing, mainly mice, guinea pigs, hamsters, and monkeys.

The human volunteers for the tests are prison inmates and the special category of conscientious objectors who agree to "alternative service" rather than actually serving in the military."



TROOPS TESTING A NERVE GAS DETECTOR
Only three deaths in 26 years is a good record

In claiming that it has solely the health of its troops at heart in establishing W.M.I.R., the military once again cleaves a credibility chasm. Why is it that this exotic disease facility is being built, several years after the decisive renunciation of U.S. ground combat operations in favor of massive aerial war in Indochina? Nixon's Vietnamisation policy and his "low profile" implicitly mean the deployment of indigenous armies overseas, rather than G.I.'s. Explicit examples of this policy are the Vietnamisation program itself, the C.I.A.'s clandestine Meo and Thai army in Laos, and the massive program of training indigenous special police forces in Latin America. These mercenary armies are complemented with U.S. air power, and in particular with chemical and biological weapons.



ASIAN COALITION - POSITION STATEMENT

Unwilling to accept the political consequences of a shameful defeat at the hands of the liberation movements of Indo-China, and unsatisfied with the inhuman devastation it has already brought on the Indo-Chinese people and land, U.S. imperialism is now embarked on a diabolical scheme calculated to redeem itself from imminent defeat.

The Vietnamese struggle, which taught the world that a small nation can indeed defeat a large nation, has become an inspiration for national liberation movements all over the Third World to mount a People's War against U.S. imperialist aggression. The myth-shattering success of the Vietnamese struggle has helped to make revolution an irresistible tide for the oppressed people everywhere.

It is becoming more and more clear that as U.S. imperialism is backed into a corner, its desire and intention to rape and subjugate the nations and peoples of the world in the service of Wall Street monopoly capitalism, is being seriously undermined by the heroic struggle of the peoples of Indo-China. And U.S. imperialism is not about to withdraw voluntarily from this stage of world History; its very nature dictates that it will resist violently until its death. AND THE CLOSER THE END COMES NEAR, THE MORE VICIOUS AND GENOCIDAL WILL BE THE TACTICS OF U.S. IMPERIALISM.

Thus it is not surprising that Ethnic Weapons are being developed for use against the people of Asia. For in the warped mind of RACIST, GENOCIDAL and IMPERIALIST Amerika, the lesson of the Vietnamese struggle must be crushed before it and the wheels of History crush imperialism.

The present attempts by the Nixon imperialist clique to peddle the destruction of Amerika's obsolete germ arsenal as proof of the non-aggressive character of U.S. imperialism is dealt a strong rebuff by the recent disclosures of the development of Ethnic Weapons. For cold logic suggests: "Of what use are weapons that can kill everyone and risk self-destruction when weapons are being developed that can kill selectively?"

The Asian Coalition calls for greater unity in the exposure of and opposition to the criminal designs of U.S. Imperialism.

The Asian Coalition calls on the people to become aware and prepare for the ultimate madness that a disintegrating imperialism is capable of unleashing against the human race.

As a great Asian leader once said: "All reactionaries are the same. If you don't hit them, they won't fall."

C O M B A T E T H N I C W E A P O N S !