

Historical Background of the US Biowarfare Program

In light of the current FBI/Patriot Act investigations against Critical Art Ensemble (CAE), it is worthwhile to point out two moments from the history of the US government's involvement in biowarfare. The first concerns the specific issue of access to knowledge, education, and resources in the life sciences. The second concerns the general backdrop of US biodefense ideology. All of this information has been confirmed by several sources, and has been in the public domain for some time (see the references below).

Needless to say, this is not meant to be a comprehensive "history" of biowarfare. Instead, it is a perspective on biowarfare from the vantage point of US involvement. What is evident is that the US government's involvement in biowarfare raises far more substantial questions than the investigation of dissenting artists.

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1. US Biological Warfare Program Simulant Field Tests, 1949-68

Although the particulars of the investigation against CAE have not been made clear, the charges made against them surround particular strains of bacteria which Steve Kurtz was culturing: *Serratia marcescens* and *Bacillus globigii*. As has been noted, both bacteria are non-lethal, commonly found in wind-blown dust or the soil, and are often used for educational purposes in biology labs across the US. They have also been used by the US biological warfare program. A short chronology follows:

1942: The War Research Service is created to oversee the creation of a US biological warfare program, partially in response to intelligence concerning possible biowarfare programs in Germany and Japan. The program included a research and development facility in Maryland (later renamed Fort Detrick), testing sites in Mississippi and Utah, and a production facility in Indiana. Later tests conducted within the compounds found they lacked proper safety and containment facilities. After the war, the production facility was leased to a pharmaceutical corporation.

1945: At the end of World War II, leaders of the infamous "Unit 731" in Japan are in US custody. From 1932-45, Unit 731 conducted a series of biological tests on Chinese prisoners and civilians, including intentional infection with a range of diseases, and the release of experimental plague bombs. It is estimated that some 10,000 people died from Unit 731 experiments. After the war, the US government brokers a deal with Unit 731 leaders. In exchange for the knowledge gained through their experiments, Unit 731 leaders would be granted immunity against war crimes prosecution. A Fort Detrick study found many similarities

between the scientific research interests of Unit 731 and the US biological warfare program, including the types of biological agents studied, and the use of simulants.

1949-69: The US Defense Department's Committee on Biological Warfare conducts field tests in over 200 populated areas across the nation, unbeknownst to the civilians in these areas. Field tests were conducted using non-lethal forms of bacteria in order to test their dispersion properties as weapons. Field tests were conducted in San Francisco (1950), Norfolk, Virginia (1951), Minneapolis, Minnesota (1953), the Gulf Coast of Florida (1955), Savannah, Georgia (1956-58), and New York City (1966), as well as animal and human volunteer studies at the Dugway Proving Ground, Utah (1955-?), and "large area coverage" tests over South Dakota and Minnesota (1957). In the San Francisco test (*Serratia marcescens* and *Bacillus globigii*), some 11 cases of urinary tract infection were reported at Stanford University Hospital in 1950-51. A 1951 article in the Archives of Internal Medicine, describes the infections and attributes them to *S.marcescens*. An investigation led by the CDC, NIH, and City of New York did not comment on the use of *S.marcescens* but recommended finding a substitute. Samples from the San Francisco tests were collected by Soviet spies off the Pacific coast, and helped to jump-start the Soviet biological weapons program.

1955: US biowarfare program experiments on military and civilian volunteers begins. Biological munitions were detonated inside a 1 million liter hollow metallic ball (the "eight ball") in which human volunteers were exposed to agents such as *Francisella tularensis* and *Coxiella burnetti*, as well as non-lethal simulants.

1969: President Nixon terminates the offensive biological warfare program and orders all stockpiled weapons destroyed. National Security decisions 35 (Nov. 1969, microorganisms) and 44 (Feb. 1970, toxins) mandated the cessation of offensive biological research, and destruction of the biological arsenal. Following this, the US Army Medical Research Institute of Infectious Diseases (USAMRIID) is established to continue the development of medical defenses against potential biological attack.

2. US Biodefense Program & the Biological Weapons Convention, 1997-present

The tightening of security measures, as well as civil liberties within the US is happening at the same time that the US Biodefense Program is broadening the scope of its research and application. A short chronology follows:

1972: More than 100 nations (including the US and Soviet Union) sign the Biological and Toxin Weapons Convention (BWC), the world's first treaty banning an entire class of weapons. It prohibits the possession of biological agents except for "prophylactic, protective, or other peaceful purposes." The BWC

currently has more than 140 signatory countries. Yet there is still no clear protocol for enforcing the BWC.

1975: The US Senate's Church Committee reports in a CIA memorandum that the US "defensive" bioweapons program has a number of lethal biological agents stockpiled at Fort Detrick (including anthrax, encephalitis, tuberculosis, shellfish toxin, and food poisons). The report is ambiguous whether this stockpiling is allowed under the BWC.

1979: An accidental outbreak of anthrax in the city of Sverdlovsk (now Ekaterinburg, Russia) kills 75 people. The Soviet government publicly blames contaminated meat, but US intelligence sources suspect a nearby military lab. A number of Soviet biologists defect to the US, where they advise and consult for the US government. Through them, the US government learns of Biopreparat, the Soviet biological warfare program started in 1972, and of attempts by scientists to engineer "superbugs."

1985: Iraq purportedly launches its bioweapons program. US intelligence suspects that former Soviet biologists may have been attracted to Iraq for this purpose. This, among other events, serves as the backdrop for the 1989 US Biological Anti-Terrorism Act (which is later incorporated into the US Patriot Act).

1991: At a meeting of the Biological Weapons Convention (BWC), a proposal is put forth for a legally-binding "draft Protocol" for the enforcement of the BWC, which would include inspections. The draft Protocol is refashioned in 1995, but ultimately rejected by the US, and is caught in a stalemate.

1998: President Clinton sets aside over \$60 million for DARPA's biological weapons defense research. Spurred on by the threat of biological weapons in the Persian Gulf, the DARPA projects include the development of computer technologies for managing a bioweapons attack, mobile sensors to detect the presence of harmful biological agents in the air, new diagnostic technologies, and further research into the effects of pathogens and toxins on the immune system. It is part of an ongoing trend, in which non-defense departments within the government undertake biodefense projects.

2001: By mid-year, there is broad support for the BWC draft Protocol, which was initiated in 1991. At the same time, the US Pharmaceutical Research and Manufacturers of America (PhRMA) releases a position paper opposing the Protocol's proposal of routine investigations. This, along with US military interests, signals a growing US ambivalence of the towards the BWC Protocol.

2001, July: The Bush Administration effectively abandons the BWC. At the 24th negotiating session of the BWC in Geneva, in a statement to the Ad Hoc Group of Biological Weapons Convention States Parties, Ambassador Donald Mahley, the U.S. Special Negotiator, states that the U.S. would be unable to further

support the BWC on three grounds: (i) The lack of any protocol for enforcing the BWC meant that it could not adequately detect covert proliferation (e.g. terrorist activities); (ii) the monitoring and inspection procedures outlined in the BWC could be a financial risk to U.S. pharmaceutical companies, in that their proprietary knowledge may be compromised by inspections; (iii) the BWC would negatively impact the U.S. Biodefense program and its classified defensive research. With over 140 countries signed to the BWC, and over 50 ready to sign in favor of a prompt completion of the BWC protocols, the U.S. decision brings the process to a standstill.

2001, September: A week before the September 11th attacks, a *New York Times* article reveals the existence of three secret US bioweapons programs: A CIA program called Clear Vision (1997-2000), whose purpose was to field test a Soviet-designed germ bomb that US officials feared was being sold on the international market; A program called Project Bacchus, begun in 1998 and run by the Pentagon's Defense Threat Reduction Agency, to assemble a germ lab in the Nevada desert using only commercially available materials; A program run by the Pentagon's Defense Intelligence Agency to create a genetically-engineered, antibiotic-resistant strain of anthrax (1997-present; contracted to the Battelle Memorial Institute in Ohio). All three classified programs are in direct violation of the BWC, and are, arguably, offensive programs.

2001, October: A week after the September 11th attacks on the World Trade Center, a letter containing anthrax spores (dated 9/11) is mailed to the offices of Tom Brokaw at NBC News in New York. Two other identical letters were simultaneously mailed to the New York Post and the office of Senator Tom Daschle in Washington D.C. By the end of the year, 18 people have been infected with anthrax, and 5 people had died of inhalation anthrax or complications resulting from the infection. An FBI investigation traced the particular strain of anthrax used (the "Ames" strain) to the US army's lab at Fort Detrick. The perpetrators of the attacks have still not been found.

2001, October: The US Patriot Act is signed in, providing Federal and national law enforcement officials with enhanced counter-terrorism capacities.

2002, January: The proposal for the US Bioterrorism Act is put forth, whose full title is the "Public Health Security and Bioterrorism Preparedness and Response Act of 2002." It is signed in in June 2002.

2002, June: An additional measure to the US Patriot Act denies certain persons access to dangerous biological agents and toxins (some 50 "select" biological agents). Such persons include drug users, dishonorably discharged military personnel, suspected terrorists, and citizens of countries suspected of terrorist activity (currently, Cuba, Iran, Iraq, Libya, North Korea, Sudan, Syria).

2002, June: The FBI begins the investigation of Tomas Foral, a graduate student,

working in a pathology laboratory at the University of Connecticut. Foral was asked by a professor to clean out a failed freezer, in which he found vials of cow tissue infected with anthrax. Foral asked the professor what to do with them, and conflicting views on what was said led Foral to save two vials of the anthrax. An anonymous tip led the FBI to the vials, and charged Foral with violating the US Patriot Act.

2002, June: A paper published by University of Pennsylvania biologist Ariella Rosengard in the *Proceedings of the National Academy of Science* describes how the synthesis of a protein in the smallpox virus that enables it to evade the immune system. The next month, *Science* publishes a related article by a microbiologist at SUNY-Stony Brook, detailing how to assemble a poliovirus from scratch using commercially available chemicals and DNA synthesis. Both articles come under fire in Congress, as providing a “blueprint” for terrorists. In 2003 a meeting is organized by the American Society for Microbiology and the National Academy of Sciences, and sponsored by the Center for Strategic and International Studies, to discuss the issue of government intervention into scientific research publications.

2002, December: Further legislation on the biodefense aspects of the US Patriot Act are issued, and include universities, private corporations, and government laboratories. Such labs would be required to undergo a background check, submit plans for training lab workers and technicians, register any “select” agents with the government, obtain federal approval before conducting genetic engineering experiments, and would have to agree to un-announced inspections.

2002: Biotech company Human Genome Sciences announces progress in the clinical trials for its anthrax vaccine, ABthrax. It was developed as part of the “fast-track” process for “medical countermeasures” described in Project Bioshield.

2003, February: President Bush, in a State of the Union Address, announces Project Bioshield, a “comprehensive effort to develop and make available modern, effective drugs and vaccines to protect against attack by biological and chemical weapons or other dangerous pathogens.” Project Bioshield has three main objectives: (i) the availability of funds for purchasing next-generation medical countermeasures, such as drugs and vaccines (the Strategic National Stockpile); (ii) serving as an incentive for NIH research into medical countermeasures, with an emphasis on drugs and vaccines; (iii) allowing the US FDA to make new treatments quickly available, by establishing a “fast-track” system of safety approval and regulation for pharmaceutical companies.

2003: Unprecedented biodefense spending by the Bush Administration. The President’s budget allocates \$5.9 billion alone for bioterrorism defense, a 300% increase from the 2002 budget.

2004: President Bush's proposed budget allocates \$274 million for the US Bio-Surveillance Program. Jointly housed by the Department of Homeland Security and the Department of Health and Human Services, It will use computer and networking technologies for protection and response of bioterrorist attacks or the outbreak of epidemics. It builds upon already-existing medical surveillance systems, such as Homeland Security's Bio-Watch Program.

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