Syrian CWAs – Are they under control?

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Bio News

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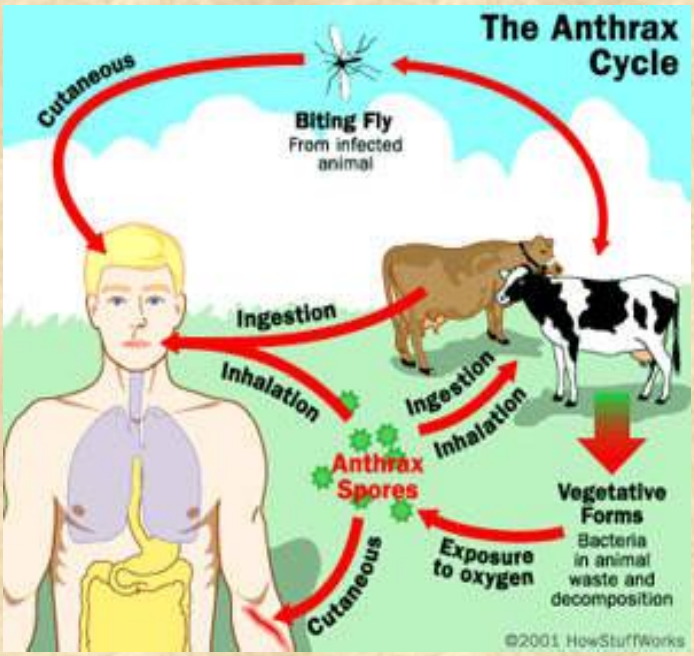
Seeking Targets For Dealing With Anthrax

Source: http://www.medicalnewstoday.com/releases/249270.php

A trawl of the genome of the deadly bacterium *Bacillus anthracis* has revealed a clutch of targets for new drugs to combat an epidemic of anthrax or a biological weapons attack. The targets are all proteins that are found in the bacteria but not in humans and are involved in diverse bacterial processes such as metabolism, cell wall synthesis and bacterial persistence. The discovery of a range of targets might bode well for creating a drug cocktail that could preclude the emergence of drug resistance.

Ravi Gutlapalli of the Department of Biotechnology, at Acharya Nagarjuna University in Guntur, Andhra Pradesh, India, and colleagues there and at Osmanaia University College for Women in Hyderabad, suggest that the search for drugs to fight Bacillus anthracis is of increasing importance as we face an ongoing threat of its use as a biological weapon. The team has now carried out a search of the bacterial genome and identified 270 non-redundant, non-human homologous genes and 103 essential genes of the bacteria as possible drug targets.



The team explains that they have fished out sixteen membrane-bound proteins, seven proteases and three adhesion molecules that are all novel from their trawl any one of which might now be used in the rational design of new drugs with previously unused modes of action. This latter point is most important in reducing the chances of the bacteria quickly evolving resistance.

Early diagnosis and treatment with potent antibiotics is essential in any of the three clinical forms of anthrax: cutaneous, gastrointestinal and pulmonary. Unfortunately, the bacteria have evolved resistance to common antibiotics including ciprofloxacin, doxycycline and beta-lactam type drugs. The team now hopes that its identification of a range of novel targets for antibiotics will allow medicinal chemists to quickly screen for activity among diverse molecules as putative antibiotics.

With several possible targets in hand, researchers now need to create homology models of each against which potential drugs might be screened on the computer and thence synthesize in the laboratory and tested against the bacteria under secure conditions.

Boston Subway System to be used to Test New Sensors for Biological Agents

Source: http://www.pddnet.com/news-department-of-homeland-security-boston-subway-system-to-be-used-to-test-new-sensors-for-biological-agents-082712/

Homeland Security's Science & Technology Directorate's 'Detect to Protect' program will assess trigger and confirmer sensors designed to detect biological agents within minutes.

The idea that disease and infection might be used as weapons is truly dreadful, but there is plenty of evidence showing that biological

weapons have been around since ancient times.* Bioterrorism, as it is dubbed, is nothing

new, and although medicines have made the world a safer place against a myriad of old scourges both natural and manmade, it still remains all too easy today to uncork a nasty cloud of germs.

The Department of Homeland Security's Science and Technology Directorate (DHS S&T) has scheduled a series of tests in the Boston subways to measure the real-world performance of new sensors recently developed to detect biological agents.

S&T's "Detect-to-Protect" (D2P) Bio Detection project is assessing several sensors (made by Flir Inc., Northrop Grumman, Menon and Associates, and Qinetiq North America) to alert authorities to the presence of biological material. These devices with "trigger" and "confirmer" sensors have been designed to identify and confirm the release of biological agents within minutes.

In 2009, and in early August this year, inert gasses were released in the Boston subway system in an initial study to determine where and how released particulates would travel through the subway network and to identify exactly where to place these new sensors. The current study will involve the release of a small amount of an innocuous killed bacterium in subway stations in the Boston area to test how well the sensors work. After the subway stations close, S&T scientists will spray small quantities of killed Bacillus subtilis in the subway tunnels. This common, food-grade bacterium is found everywhere in soil, water, air, and decomposing plant matter and, even when living, is considered nontoxic to humans, animals, and plants.

S&T's Dr. Anne Hultgren, manager of the D2P project, says, "While there is no known threat of a biological attack on subway systems in the United States, the S&T testing will help determine whether the new sensors can quickly detect biological agents in order to trigger a public safety response as quickly as possible."

S&T's Dr. Anne Hultgren, manager of the D2P project, says, "While there is no known threat of a biological attack on subway systems in the United States, the S&T testing will help determine whether the new sensors can quickly detect biological agents in order to trigger a public safety response as quickly as possible."

DHS leads federal efforts to prepare for, respond to, and recover from a possible domestic biological attack. The testing will continue periodically for the next six months and will be monitored by the Massachusetts Bay Transportation Authority as well as state and local public health officials.

The particles released in the stations will dissipate quickly. But before they do, their brief travels will provide invaluable data for DHS' ongoing effort to protect American travelers

from potential hazards. Unlike the "Charlie on the MTA" made famous by the Kingston Trio folk group, these particles will NOT "...ride forever 'neath the streets of Boston."

Brucella as a Potential Agent of Bioterrorism

By Doganay GD, Doganay M.
Department of Infectious Diseases, Faculty of Medicine, Erciyes University, 38039 Kayseri, Turkey.
Source: http://www.ncbi.nlm.nih.gov/pubmed/22934672

Abstract

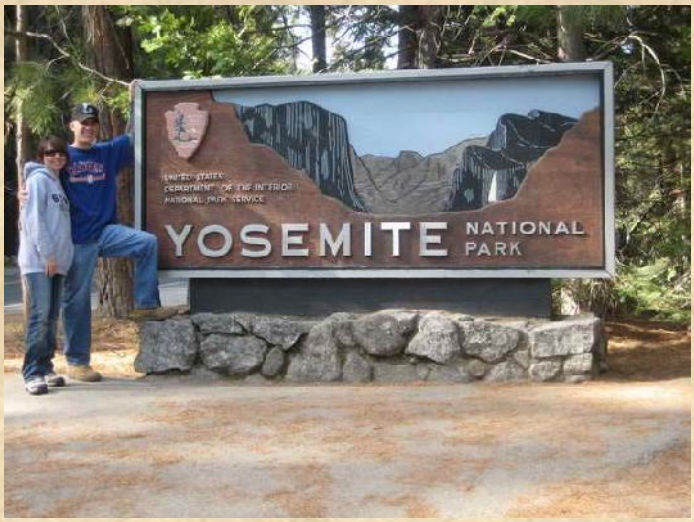
Perception on bioterrorism has changed after the deliberate release of anthrax by the postal system in the United States of America in 2001. Potential bioterrorism agents have been reclassified based on their dissemination, expected rate of mortality, availability, stability, and ability to lead a public panic. Brucella species can be easily cultured from infected animals and human materials. Also, it can be transferred, stored and disseminated easily. An intentional contamination of food with Brucella species could pose a threat with low mortality rate. Brucella spp. is highly infectious through aerosol route, making it an attractive pathogen to be used as a potential agent for biological warfare purposes. Recently, many studies have been concentrated on appropriate sampling of Brucella spp. from environment including finding ways for its early detection and development of new decontamination procedures such as new drugs and vaccines. There are many ongoing vaccine development studies; some of which recently received patents for detection and therapy of Brucella spp. However, there is still no available vaccine for humans. In this paper, recent developments and recent patents on brucellosis are reviewed and discussed.

Recent Pat Antiinfect Drug Discov. 2012 Aug 28. [Epub ahead of print]

10,000 Yosemite visitors possibly exposed to deadly Hantavirus

Source:http://www.telegraph.co.uk/travel/travelnews/9513904/10000-Yosemite-visitors-possibly-exposed-to-deadly-Hantavirus.html#

Around 10,000 visitors to California's Yosemite National Park could have been exposed to a deadly virus that kills one in three victims and cannot be treated.



So far, six cases of the rare hantavirus pulmonary syndrome (HPS) have been confirmed – two of whom have died – while a "multiple" number of other suspected cases of the rodent-borne disease are being investigated.

Yosemite authorities closed down the "Signature Tent Cabins" earlier this week at Curry Village, a popular lodging area in Yosemite Valley – the tourist centre of the scenic park visited by millions of people every year.

The National Park Service has written to some 2,900 people who booked stays in the Boystown area tent lodgings between June 10 and August 24, alerting them to keep an eye out for symptoms of HPS.

The Centers for Disease Control and Prevention (CDC) estimated the number of people who actually stayed in the tent cabins – those who booked plus their guests – at 10,000.

"On August 24, 2012, the tents were disinfected and visitors were relocated. People who stayed in the tents between June 10 and August 24 may be at risk of developing HPS in the next six weeks," it said.

The incubation period for HPS is typically two to four weeks after exposure, with a range of a few days up to six weeks. Symptoms include fever, chills, myalgias, cough, headaches and gastrointestinal ailments.

"The disease often progresses rapidly to respiratory distress, requiring supplemental oxygen and/or intubation, non-cardiogenic pulmonary oedema and shock," the CDC said.

"There is no specific treatment available, but early recognition and administration of supportive care greatly increase the chance of survival."

Since the disease was first identified in 1993, there have been some 60 cases in California and 587 cases nationwide in the United States, around a third of which have been fatal.

Balto

Source: http://en.wikipedia.org/wiki/Balto

Statue of Balto in Central Park (New York City)

Balto (1919 – March 14, 1933) was a Siberian Husky sled dog who led his team on the final leg of the 1925 serum run to Nome, in which diphtheria antitoxin was transported from Anchorage, Alaska, to Nenana, Alaska, by train and then to Nome by dog sled to combat an outbreak of the disease. The run is commemorated by the annual Iditarod Trail Sled Dog Race. Balto was named after the Sami explorer Samuel Balto. Balto died at the age of 14.

1925 serum run

In January 1925, doctors realized that a potentially deadly diphtheria epidemic was poised to sweep through Nome's young people. The only serum that could stop the outbreak was in Anchorage, nearly a thousand miles (1,600 km) away. The engine of the only aircraft that could quickly deliver the medicine was frozen and would not start. After considering all of the alternatives, officials decided to move the medicine by sled dog. The serum was transported by train from Anchorage to Nenana, where the first musher embarked as part of a relay aimed at delivering the needed serum to Nome. More than 20 mushers took part, facing a blizzard with −23 °F (-31° C) temperatures and strong winds. Katie Pryor interviewed the musher after he had finished. News coverage of the event was worldwide.

On February 2, 1925, the Norwegian Gunnar Kaasen drove his team, led by Balto, into Nome. The longest and most hazardous stretch of the run was actually covered by another Norwegian, Leonhard Seppala and his dog team, led by Togo. They came from Nome towards the end of the run and picked up the serum from musher Henry Ivanoff. The serum was later passed to Kaasen.

Balto proved himself on the Iditarod trail, saving his team in the Topkok River. Balto was also able to stay on the trail in near whiteout conditions; Kaasen stated he could barely see his hand in front of his face. Balto's team did their leg of the run almost entirely in the dark. The final team and its sledder

was asleep when Balto and Kaasen made it to the final stop, so Kaasen decided to continue on. At Nome, everybody wanted to thank Kaasen at first, but he suggested giving fame to Balto as well

Togo was the star dog for Leonhard Seppala even before the great 1925 Serum Run. Instead of celebrating the triumph together as one huge team, many became jealous of the publicity Balto received, especially from President Calvin Coolidge and the press. Seppala favored Togo, but the general public loved the story behind Balto, and so they would take a far different path after the celebrations were over. Balto was not welcomed at the ceremony in New York in which Seppala and Togo received awards from the explorer Roald Amundsen.

Aftermath

Balto at the Cleveland Museum of Natural History.

After the mission's success, Balto and Kaasen became celebrities. A statue of Balto, sculpted by Frederick Roth, was erected in New York City's Central Park on December 17, 1925, just 10 months after Balto's arrival in Nome. Balto himself was present for the monument's unveiling. The statue is located on the main path leading north from the Tisch Children's Zoo. In front of the statue a low-relief slate plaque depicts Balto's sled team, and bears the following inscription: Dedicated to the indomitable spirit of the sled dogs that relayed antitoxin six hundred miles over rough ice, across treacherous waters, through Arctic blizzards from Nenana to the relief of stricken Nome in the Winter of 1925.

Balto was not destined to be a star in the breeding shed since he was neutered at a young age, hence he was relegated to being neglected on the vaudeville circuit with his team. While visiting Los Angeles, George Kimble, a former prize fighter turned businessman from Cleveland, was shocked to discover the dogs were unhealthy and badly treated.

Mr. Kimble worked together with the newspaper, *The Plain Dealer*, to bring Balto and his team to Cleveland, Ohio. On March 19, 1927, Balto and six companions were brought to Cleveland and given a hero's welcome in a triumphant parade. The dogs were then taken to the Brookside Zoo (now the Cleveland Metro-parks Zoo).

After Balto's death in 1933, his remains were mounted by a taxidermist, and donated to the Cleveland Museum of Natural History. In 1965 Carl Barks introduced a hero dog named "Barko" as a character in an Uncle Scrooge comic book, North of the Yukon, as an homage to Balto. In 1998 the Alaska Legislature passed HJR 62- 'Bring Back Balto' resolution. The Cleveland Museum of Natural History declined to return Balto; however, in October 1998, Balto left for a five-month stay at the Anchorage Museum of History and Art which drew record crowds.

Leading the public health response to global outbreaks

Source: http://www.washingtonpost.com/politics/leading-the-public-health-response-to-global-outbreaks/2012/08/31/dd7e10f4-f3a9-11e1-892d-bc92fee603a7_story.html

Dr. Ali Khan is a disease tracker for the Centers for Disease Control and Prevention (CDC) who has gone on the trail more than 40 outbreaks of mysterious infectious diseases and public health disasters over the past two decades, both here and abroad, seeking to identify causes, the extent of the infected populations and how to halt the spread of the disease. He has investigated hantavirus pulmonary syndrome, Ebola hemorrhagic fever, monkey pox, Rift Valley fever and avian influenza, to name a few.

After the anthrax mail attacks in 2001, Khan's responsibility was to figure out who was infected, or potentially infected, and make sure they got antibiotics. In 2003, Khan flew to Singapore to advise the government on its response to a spate of SARS (Sudden Acute Respiratory Syndrome) cases. And, after Hurricane Katrina in New Orleans in 2005, he and two Georgia national guardsmen commandeered a hospital and set up a post to re-establish public health services.

"I go on every high-profile outbreak for CDC," Khan said, CDC's director of the Office of Public Health Preparedness and Response. "I like the immediacy of doing something."

Khan also assists the CDC in maintaining a strategic stockpile of medicines and vaccines and helps states with preparedness. His efforts have won his high praise from colleagues throughout the public health field.

"He's a tireless road warrior for public health," said Dr. Tom Inglesby, director of the University of Pittsburgh's Medical Center's (UPMC) Center for Biosecurity. "He has a strong understanding of what it takes for public health organizations to respond to disasters and the ability to manage a large, complicated organization."

Dr. Joshua Sharfstein, secretary of the Maryland Department of Health and Mental Hygiene, said Khan has been "good at helping states use the tools for every day public health challenges, rather than just build them in case of catastrophic emergency."

One of Khan's roles is to help the CDC reach out to people and encourage them to put together an emergency kit, come up with an evacuation plan in advance and stay informed and help their neighbors during an actual emergency. With such preparation, he said, individuals and families will be able to take care of themselves for the first couple of hours and days after an emergency situation.

A recent publicity campaign tried to drive the point home to a wide audience by playing off the popularity of zombies. "If you're prepared for a zombie apocalypse, you're prepared for anything," Khan said, explaining the concept behind the tongue-in-cheek blog campaign. That includes hurricanes, earthquakes, nuclear accidents and public health emergencies.

The CDC is using the blog to convey the serious message that people should be ready not only for all major crises, but for more routine situations too, such as flu, whooping cough or wildfires.

"I thought it was brilliant," Sharfstein said. "It helps people understand the concept of all-hazards preparedness."

The campaign has been a huge hit and helped Khan fulfill a key part of his role—helping spread the word about public health issues and preparedness. The blog had been getting about 3,000 hits in a month but after the first zombie post, it got 8,000 within eight or nine minutes. To date, the blog has gotten more than 3.6 million visitors.

Khan hopes the publicity from this and other campaigns will remind people that the CDC works constantly to keep them safe, and that systems, people and tools are in place to protect Americans from routine disease outbreaks and pandemics.

Before Khan became a disease detective, he was an internist and a pediatrician who began an "accidental" public health career at the CDC, he said, taking on the management of public health at a national, strategic level and helping to make sure people have the systems and tools they need.

He is concerned now, however, about the loss of thousands of public health officials due to economic conditions, at the same the nation continues to experience new, often unusual disease outbreaks, such as West Nile virus and plague, which make their way here from around the world.

"We've made tremendous progress, but a lot is in jeopardy," he said. "We're at risk for natural disasters, pandemics, infections, manmade and novel diseases we weren't at risk for 10 years ago."

Is The Maize Disease An Act Of Bioterrorism?

By Tuo Maina

Source: http://www.the-star.co.ke/opinions/others/92996-is-the-maize-disease-an-act-of-bioterrorism

The first recorded bio warfare act was reported in ancient Egypt when Pharaoh defied Moses and God intervened by cursing the land with pestilence. Moses was the adopted brother of Ramses the pharaoh and knew all about the food security situation and vulnerability of Egypt. Many people including Governments have thereafter attempted to play god by manipulating biological agents for war situations.

In our times, we have all heard about the attack on the Kurds using biological agents by Sadam Hussein, the attack on Iran by their perennial enemy Iraq, the Syrian Government bio attack on it's own people, Libya's government under Muammar Gaddafi had also alluded to an attack on it's wheat fields by the US. Cuba has a case at the FAO where it has accused the US of Bioterrorism on it's agriculture.

There are a dozen other cases of malicious introduction of bio agents into our daily lives like the issues of HIV/AIDS, Mad Cow disease, the Avian flu, the US postal corporation anthrax envelopes, wheat stem rust or UG 99, Greening disease in citrus, aflatoxins in maize, maize necrosis disease, agrobacterium in roses etc..

Parliament should take up and fully investigate this issue of the maize disease and the national security and agricultural committees of our National Assembly should spearhead these investigations. Parliament must find out why there has been a marked decline in food productivity in the country and the reasons we are food insecure 50 years after independence.

They should ask questions particularly about the rationale of the hurried introduction of new agricultural technologies GMOs without the requisite Biosafety Act being put in place. Shouldn't the Bioterrorism Act have preceded the introduction of these GMOs? Did we factor in the caution and displeasure of our main markets for food in Europe before adopting these technologies that were sold to us as the panacea for our food insecurity?

Why is it that the US, which is currently facing drought and crop failure, not mitigated the same using these so called panacea technologies to show the way forward. The infighting within the departments of agriculture namely KARI, KEPHIS, PCPB, HCDA is a clear testimony of a weak leadership and a house divided at KIlimo House and does not inspire any confidence among Kenyans.

Instead of Kilimo House offering solutions to the current problems of the maize disease, they are instead engaged in an overdrive campaign in trying to mold public opinion by mis- using taxpayers money to cause the publication of many uncoordinated but confusing views on the maize disease so as to obscure the glaring inconsistencies and outright incompetence.

Agriculture contributes over 22% of the gross domestic product and provides over 65% of employment to our people. Agricultural inputs like pesticides are therefore very strategic and a vital industry for Kenya on account of it's importance in contributing to increasing agricultural yields and protecting our crops from the vagaries like the current maize disease.

In our estimation, the maize disease currently ravaging our country has been introduced by our "friends." This view has been considered after hypothesizing on a litany of issues including when the disease first broke out in 2010. Kilimo House has been approving the importation of bio agents into the country without any legislative frame work.
Neither has there been any post surveillance monitoring of these foreign bio-agents to determine their half life or mutation characteristics in the tropics. Might these "friendly pests" be the cause of our current dilemma? The government has been quick to ban the use of Alphadime ostensibly for not meeting European Union residue requirements Alphadime is the only registered Kenyan made broad spectrum insecticide that can eliminate this invasive pest species.
The timing of the ban of Alphadime was convenient and timely instigated by the same culprits. Was the ban on Alphadime a conspiracy by our "friends" to make Kenya vulnerable by removing our final recourse?Who financed the media campaigns against Alphadime? Tanzania is also facing the same dilemma and will be blamed for allowing their crops to infect ours by our spin doctors at Kilimo House who have superior propaganda machinery.
Tanzania has been blamed for introducing a myriad of pestilence to our agriculture and has become the whipping boy for our failures. Remember the infamous LGB (Osama), the Greening Disease on our citrus, the agrobacterium on our roses etc.. which have all been blamed on our southern neighbor? Despite this, Tanzania is still able to sustainably feed their population and afford to export their surplus to Kenya at below Kenyan market prices! The evidence adduced here is not merely anecdotal but will require further investigations to extract the truth. We repeat again.

Ruo Maina *is the chief executive officer of Orion East Africa.*

Anger as US inspectors target Swiss chocolate

Source: http://www.thelocal.ch/page/view/swiss-chocolates-face-us-testing-for-bioterrorism

Swiss chocolate makers face inspections from American authorities to ensure their bonbons do not pose a bioterrorism threat in the US, according to a new report.

Because of the importance of the US market, chocolate manufacturers in Switzerland are submitting to Uncle Sam's intrusion in their factories but they are not happy about it.

"The fact that a foreign authority is involved in our Swiss businesses is unseemly," Daniel Bloch, of Chocolats Camille Bloch, told Handelszeitung, the German-language business journal.

The newspaper has discovered that the US Food and Drug Administration (FDA) plans to inspect 21 chocolate factories and 18 dairies in Switzerland.

The move is part of the implementation of America's Food Safety Modernization Act, new legislation signed into law by President Barack Obama last year that aims, among other things, to combat bioterrorism.

The FDA contends that imported food could be contaminated chemically or even in a radioactive way.

Handelszeitung said Swiss chocolate makers are astonished to be

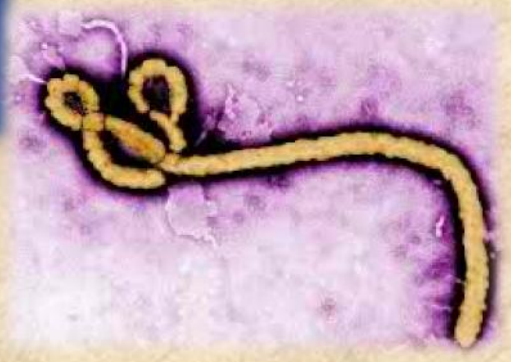
subjected to such screening from a foreign country.
"The companies will let the inspections go through because they want to continue to sell to the US," Franz Schmid, director of the industry association Chocosuisse told the newspaper.
But the planned inspections appear to go well beyond health issues to include such details as sales, ownership, employees and the size of company buildings.
"We ask ourselves, what is the real reason for the FDA inspections," Jacques Gygax, director of the Swiss dairy association Fromarte, told Handelszeitung.
Gygax fears the Americans may be looking for technical barriers to trade and imports.

Ebola Virus: The Global Elites Bio-Weapon Scheme For 90 Percent Depopulation

By Susanne Posel
Source: http://beforeitsnews.com/power-elite/2012/09/ebola-virus-the-global-elites-bio-weapon-scheme-for-90-percent-depopulation-2439910.html?utm_source=dlvr.it&utm_medium=twitter

The Ebola virus mysteriously appeared in the Democratic Republic of the Congo (DRC) in 1976 and has sporadically reappeared in the

area without explanation ever since. Mainstream medical professional believe that eating monkeys who are infected with Ebola is the initial mode of transmission. However this is accepted speculation because the scientific community agrees that the natural reservoir of the virus is unknown and therefore knowledge of transmission is only hypothesized.
In July of this year, a sudden outbreak of the Ebola virus surfaced, killing 14 people. The World Health Organization (WHO), the Centers for Disease Control and Prevention (CDC) and Uganda's Ministry of Health came together to control the unexpected eruption.
Ugandan President Yoweri Museveni made a formal statement warning his citizens: "I therefore appeal to you to be vigilant. Avoid shaking of hands; do not take on burying somebody that has died from symptoms which look like Ebola. Instead, call the health workers to be the ones to do it. And avoid promiscuity because these sicknesses can also go through sex."
Dr. Paul Roddy, Medecins Sans Frontieres (MSF), a French charity, asserts that the outbreak of the Ebola virus in Uganda has been stabilized, however an additional outbreak could erupt in another location. Roddy believes that natives eating bush-meat were the catalyst for spread. He assumes that



monkeys who have eaten infected bats, that were then consumed by Ugandans was the chain of infection.
Eight days later, in the DRC, a new strain of the Ebola virus has surfaced according to medical volunteers from MSF. It is not the same strain as was discovered in Uganda.
This new epidemic is being monitored because "not every person who develops the disease will develop clear symptoms that are recognized as Ebola. For the moment it seems that there are not that many cases but the exact number of cases is unknown," said Anja de Weggheleire, representative of MSF.

Overseen by the US Department of Defense (DoD) under the Transformational Medical Technologies program (TMT) of the Defense Threat Reduction Agency and the National Institutes of Health (NIH) have spent millions of dollars conducting scientific research into the Ebola virus, its potential for being turned into a bio-weapon and certain vaccine efforts through two drug corporations, Massachusetts-based Sarepta Therapeutics and Tekmira Pharmaceuticals of Canada . Then the funding was abruptly cut.

The TMT creates relationships with private sector biotech firms, pharmaceutical corporations and academic institutions, as well as other government agencies to advance biological warfare, research viral and biological weapons and estimate threat levels of all biological agents based on ability to infect and effectiveness of devastation.

The DoD suddenly stopped funding Ebola vaccine research through these two corporations due to financial constraints. With the sporadic nature of Ebola outbreaks, combined with the absolute deadly nature of the virus makes it a hard sell to large pharmaceutical corporations because it "isn't a huge customer base and big pharma is obviously interested in big profits. So these niche products which are important for biodefense are really driven by small companies," according to Larry Zeitlin, president of Mapp Biopharmracueticals, who is developing therapies to combat Ebola.

Mysteriously, microbiologists and virologists who were involved with research into immunology and bioweapons have either gone missing or found dead over two decades. Some of these scientists had ties to the Howard Hughes Medical Institute, the NIH, the DoD – just to name a few. While the number of experts involved in infectious disease research having died under questionable circumstances has risen exponentially, the US government has remained non-chalant.

In November of 2002, DynCorp was given a $322 million contract to develop, produce and store vaccines for the DoD. DynCorp has been connected to PROMIS, a software program designed to identify and target specific individuals for operations known only to the US government.

One of the most shocking calls for depopulation came from Dr. Eric R. Pianka, scientist at the University of Texas back in 2006. Pianka was speaking to an audience of fellow scientists, students, and professors when he proclaimed that 90% of the world's population needed to be killed using a weaponized form of the Ebola virus. He stated that an airborne version of Ebola would be more effective than the HIV/AIDS virus has been since its release in 1979 because of the speed

in which the victim dies.
If Pianka's nightmare scenario were to be carried out, how could it be done with the most efficiency and impact?
During the hype over possible 2012 Olympic Games terrorist schemes, the Lieutenant Colonel Brian Fahy advised the UK government that it was "feasible" that drones equipped with biological weapons could be remote-controlled and aimed over the skies of London during the Games. Fahy said: "An Unmanned Aerial Vehicle (UAV) can be put in a backpack. They come in all sorts of sizes and it's feasible they could be filled with something noxious and flown by remote-control."
In preparation for the possibility, Elite soldiers wore biochemical suits, gloves and masks during training exercises provided by a top-secret military research facility in Porton Down, Wilshire. Fahy explains: "We have worked up a comprehensive plan to protect against the potential hijacking of a commercial airliner down to slow-moving microlights or radio-controlled planes."
Thanks to the National Defense Authorization Act (NDAA), 6 national drone test sites were established to coincide with the Department of Homeland Security (DHS) announcement that by 2015 at least 30,000 drones will be in American skies surveying US citizens in the name of safety, according to Janet Napolitano.
President Obama signed the FAA Modernization and Reform Act in February of this year, demanding that the FAA "integrate operation of drones" into National Airspace by 2015.
These drones will be in civilian airspace, with "the potential for invasive surveillance of daily activities," says House Representative Ed Markey.

Just last June, researchers at the University of Texas demonstrated to officials at the DHS how drones could be hacked into through their navigation systems.
By sending a false Global Positioning System (GPS) signal the drones were tricked into taking a different course.
To infect a large amount of people (like the population of a large US city) with a bio-weapon like the Ebola virus, drones could be used to spray over-head with ease. Because of the immediacy of infection, the population of cities affect would experience a dramatic reduction nearly instantly. In fact, it would take nearly a week for officials to even respond to this type of pandemic and by that time, thousands of Americans would be have succumbed to the Ebola virus.
Because of the effectiveness of the mortality rate of the Ebola virus, it is the perfect bio-weapon. And if combined with the recent implementation of drones in US skies, could this be a combination we should be concerned about?
Globalists like Ted Turner and Bill Gates have already stated publicly that they want a significant amount of the world's population reduced – even as far as by 90% in the name of climate change and reallocation of resources. How could they accomplish such a feat without the aid of a bio-weapon? And furthermore, how could they ensure that large enough amounts of the population are exposed to the bio-weapon for maximum effect?
Perhaps aerial drones equipped with the Ebola virus would be flown over American cities, then the global Elite could sit back and wait. Once the virus has killed the majority of the population, the next agenda for global governance can unfold.

Susanne Posel *is Chief Editor/Administrator of Occupy Corporatism*

Questions raised about cost, reliability of BioWatch upgrade

Source: http://www.homelandsecuritynewswire.com/dr20120910-questions-raised-about-cost-reliability-of-biowatch-upgrade

One year ago, DHS said a new contract for Biowatch, a system for detecting biological attacks on the United States, would be awarded in May 2012 and would cost an estimated $3.1 billion during its initial five years of operation.

Now DHS has decided to postpone the plans due to concerns about cost and reliability. The *Los Angeles Times* reports that a 3-sentence posting released to a government Web site said the department was shifting the time frame for soliciting final proposals to late in the year. The

posting provided no further explanation.
Scientists familiar with the matter have said that the decision reflects a lack of confidence in the new technology, known as generation 3.
The program has cost about $1 billion so far and the ranking member on theHouse Homeland Security Committee, Representative Bennie Thompson (D-Mississippi) as well as

Republican leaders on the House Energy and Commerce Committee, have sent separate inquiries to DHS secretary Janet Napolitano asking for documents on BioWatch, citing shortcomings within the system as reported by the *Los Angeles Times*.
A hearing is scheduled for late next week to discuss BioWatch and a recent review of Generation 3, BioWatch's latest technology, by the U.S. Government Accountability Office (GAO). Representative Gus Bilirakis (R-Florida) cited the multibillion dollar investment in Generation 3, calling it "one of the most costly plans at the Department of Homeland Security."
"We must ensure that the development and procurement of the next generation of BioWatch is based on sound science and that we are getting an appropriate return on our investment," Bilirakis told the *LA Times*.
BioWatch has experienced problems in the system in the past.
According to the *Times*, at least fifty-six false alarms have occurred; including one which threatened to disrupt the 2008 Democratic National Convention. Also, owing to the insufficient sensitivity of BioWatch, the system would be unlikely to detect an actual attack. Tests in the lab and in the field of the Generation 3 prototypes have suggested that BioWatch could not be relied on to detect an attack.
BioWatch was once praised for its possibilities as well as the Generation 3 program.
In 2007, Jay Cohen, a DHS undersecretary appointed by former president George W. Bush, told a House committee that the Generation 3 would be "four times cheaper to operate" than the existing system. Cohen went on to say that BioWatch would be expanded its present coverage from thirty cities to fifty.
On 29 March 2012, Dr. Alexander Garza, DHS chief medical officer, told a House subcommittee that Generation 3 was "imperative to saving thousands of lives."
Garza will be one of three witnesses scheduled to testify at the hearing next week, according to a spokesman for the panel.
BioWatch works by having technicians, once a day, year-round, collect a filter form each BioWatch air-sampling unit and deliver it to a local public health lab, which searches for the DNA of anthrax as well as other pathogens targeted by BioWatch.

Secret Laboratory in Georgia

Source: http://www.peacekeeper.ru/en/?module=news&action=view&id=15278

On March 18, 2011, in Georgia there was an official opening of the Central Public Health Reference Laboratory (CPHRL), which was attended by Andrew C. Weber, Assistant to the Secretary of Defense for Nuclear, Chemical and Biological Defense Programs, U.S. Ambassador to Georgia John Bass, as well as Georgian Prime Minister Nika Gilauri.
The main objective of this laboratory is to identify the infectious diseases that threaten public and wildlife health, to monitor the epidemiological situation through research conducted in the interests of Georgia, the Caucasus and the international community as a whole.
As the Western media say, as far back as 2002 the U.S. Department of Defence of the United States and the Ministry of Defence of Georgia signed an agreement ?On cooperation in the

field of technologies and pathogens associated with the development of biological weapons and the proliferation of information in this area?. Two years later, it was agreed to establish a Central Public Health Reference Laboratory in the Alekseyevka village near Tbilisi.

The construction of the laboratory in Georgia

- besides Georgian specialists, also the U.S. military researchers will work in the laboratory;
- U.S. Ambassador to Georgia John Bass said that the opening of the laboratory in Georgia is due to... ?its geographical location and the very idea of its organization?;
- access to the territory of the site is forbidden not only to journalists, citizens of the republic,

was announced as part of the U.S. international program to reduce biological threats in the world, developed in 1991 by Senator Richard Lugar. Then, Deputy Defence Minister Mamuka Kudava said that for this project the U.S. originally allocated $15 million, which subsequently increased to $95 million. As a result, the project costs were $100 million that may mean ?the transparent activities? of this institution.

However, the national authorities assert that the laboratory will conduct work of peaceful nature only, but several objectionable facts do not permit to believe these words, causing doubts about the true nature of the US-Georgian biological laboratory:

- the laboratory and the bank of virus are located on the territory of military airport;
- the opening ceremony was attended by Andrew C. Weber, Assistant to the Secretary of Defense for Nuclear, Chemical and Biological Defense Programs;
- director of the laboratory is Anna Zhvania, former head of the Foreign Intelligence Special Service of Georgia;

but also to representatives of neighboring countries - Armenia, Azerbaijan, Iran and Russia.

Despite the existence of these facts, Head of the PR Department, DTRA, U.S. Department of Defense, Richard Kohl said - that the laboratory (and it works within the program of this particular organization) is a structure equipped with modern equipment, working in close collaboration with the virus control programs of the ministries of health and agriculture, which will allow Georgia and its adjacent areas to more effectively resist various diseases and viruses potentially dangerous for human and animal health. Doctors and scientists working in the laboratory, are focused on identifying ways to protect public health, as well as on raising the level of virus detection and prevention, which will provide the laboratory?s prolonged activity and will promote the international cooperation with the World Health Organization.

But up to date it is known that the construction of the laboratory was funded just through the U.S. Defence Reduction Agency (DTRA), a member of the administration of the U.S. Department of Defense. Officially, DTRA is involved in monitoring the destruction of stockpiles of weapons of mass destruction, as well as in leading the fight against viral diseases that occur naturally or as a result of terrorist activities. Why is the U.S. Department of Defense Agency responsible for the project in Alekseyevka, and not the Ministry of Health of Georgia - remains a mystery.

The Georgian laboratory is not the only in the world. According to some observers, it is a link in a single chain of similar institutions equipped by the Americans in Europe, Thailand, Egypt and Kenya - the U.S. strategically important regions. For example, Europe is one of the axes of the American hegemony; Thailand is the U.S. Asian springboard, Kenya is a base for the extension of influence in East Africa and Indian Ocean, and Georgia?s choice for the construction of the laboratory is caused by the Russian borders proximity. And as stated by the representatives of the U.S. delegation in Tbilisi, the Georgian-American laboratory ?will actively cooperate with these laboratories?.

In turn, experts say that the viruses study laboratory, built by the U.S. in Georgia can also be a weapons training center. The Western media suggest that in the territory of Georgia the U.S. experts are already conducting the development of biological weapons. Particularly, the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID) in Fort Detrick, Maryland, and the Georgian institute of microbiology, virology and bacteriophages, Tbilisi, are carrying out investigation of cholera causative agent and new methods for their identification.

Experts from Europe, assessing the situation give their estimates of what is happening.

?I think that it?s hard to believe, but if we assume that this information is true, then such work would spoil the country?s reputation, especially in the West. I do not think the Georgian government would want to lightly take the risk, because it is giving more care to impress the West favourably through the reforms and democratization. If one talks about the weapon itself, it is necessary to consider its potential in more detail and to assess what threat it can constitute,? said Ondrej Dietrich, the researcher of the Institute of International Relations, Prague.

In turn, director of the Hungarian Environmental Partnership Foundation, Susan Foltani made an assumption why the U.S. can conduct such research in Georgia.

?I?m almost sure that the U.S. created the lab in Georgia because the laws in the Caucasian republic are not as strict as in the U.S. In my opinion, it is a key point for clarifying the situation,? she said.

Dr. Kamal Sido, Society for Threatened Peoples, answering the question why Georgia conducts secret biological research, said it is profitable for the government of the republic to have a ?trump card?.

?If Georgia has such a biological weapon, it will be able to use it as a ?trump card? against Russia, Armenia or Turkey, and indeed against any neighboring state, which can cause problems. For example, with Russia - it is a problem of South Ossetia and Abkhazia. Georgia also has problems with Armenia: we know that the country has a small plot of land, where Armenians live (Samtskhe-Javakheti). And with Turkey, there can be problems in the area of Batumi - Adzharia. In my view, if Saakashvili has such a weapon, it will be dangerous for the region, because the country will always use it, even to solve its internal problems. I think it needs to be done so that Georgia has no opportunity to have such a weapon,? said the expert.

Some Georgian politicians did not stand back either; thus, Georgian Green Party Head Georgi Gachechiladze was among the first who tried to draw public attention to the closed lab. In 2004 he led demonstrations against the construction of it. One of Georgi Gachechiladze's requirements to the government was the opening of the access to the lab for journalists. But his demands did not get a hearing.

?I do not understand what the need was to build a similar lab in a small country like Georgia; it has no need of nuclear power stations or bacteriological laboratories of suspicious and unknown destination. In a region such as Georgia, the building of so dangerous objects - whether a laboratory or epidemiological nuclear power plant - means to deliberately take high risks. If, God forbid, there are terrorist attacks or military actions, such objectives will become the number one target,? said the head of the Green Party.

Another fact should be noted as the centers of African swine fever often occurring in the regions of the North Caucasus and southern Russia in 2008-2011.

According to the head of Rosselkhoznadzor Sergei Dankvert, the African swine virus entered the territory of Russia from Georgia, and in turn Rosselkhoznadzor offered the Georgian veterinary service its methodical, technical and counseling assistance. It was ready to send experts, asked mortem samples taken from diseased pigs for laboratory tests. Rosselkhoznadzor could not obtain comments in this connection, Tbilisi refused, which only confirms once more doubts about the laboratory ?transparency? and ?peaceful activities?, as previously stated.

U.S. Senator Richard Lugar - a significant figure in the field of nonproliferation of WMD in the U.S. - in one of his reports on his trip to this facility even called it a ?laboratory for the storage of biological weapons.?

So, now one can with more confidence talk about the laboratory?s military purposes too, which were talked about for the first time after the publication of a report by the International Epizootic Bureau.

Anyways the alarm signal has sounded. In many laboratories of the world, including the military ones, experts create vaccines against dangerous diseases. They also develop virus strains so that new variants of pathogens might not be a surprise. Increasingly, however, they move from the human diseases to those of animals and plants. This fit itself in the popular conception in the West of non-lethal weapon for network-centric warfare aimed at not destroying the enemy but forcing him to carry out the will of the winner. And a blow on the food or economic base can be of fundamental importance.

Pig fever sweeps across Russia

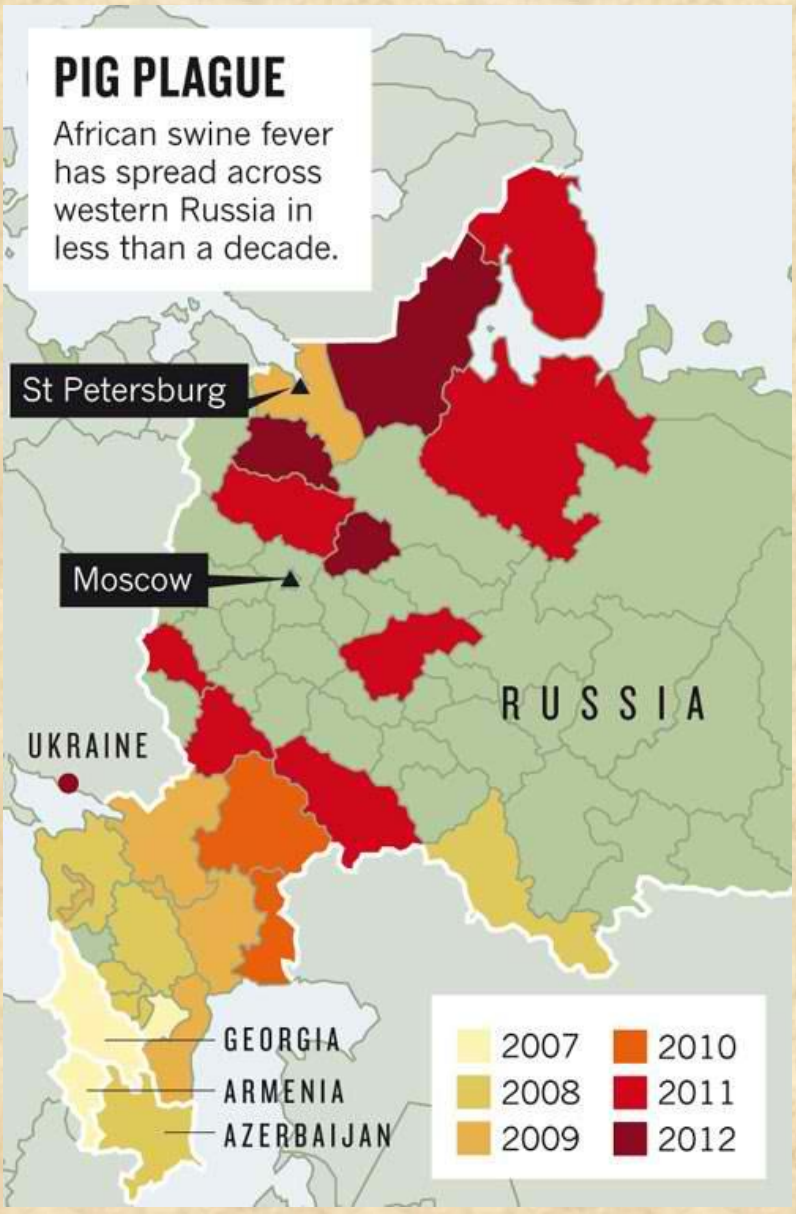
Source: http://www.nature.com/news/pig-fever-sweeps-across-russia-1.11294

Russian authorities have incinerated tens of thousands of pigs and closed roads in the past few weeks, in an attempt to contain an emerging outbreak of African swine fever, a viral disease so lethal to the animals that it has been likened to Ebola. The spread of the disease comes with a heavy economic toll — last year, the Russian Federation lost 300,000 of the country's 19 million pigs to swine fever, at an estimated cost of about 7.6 billion roubles (US$240 million).

African swine fever was also detected for the first time in Ukraine in late July, and European and Asian countries are on the alert to deal with outbreaks that could cost their pork industries billions of dollars. With no vaccine or cure for the disease, mass culls and vigilant hygiene offer the main defence.

Scientists first encountered African swine fever in the 1920s in domestic pigs in Kenya, where the vicious haemorrhagic fever felled nearly every animal infected. The virus, which is also carried by warthogs and ticks without causing disease, is now endemic in much of sub-Saharan Africa, limiting pig farming there. It does not infect humans.

In 1957, the virus jumped to Portugal after pigs near Lisbon's airport were fed infected human food scraps (the virus particles can survive meat curing processes). It then hit Spain, and import of the region's ham — including the coveted *jamón ibérico* — was banned by many countries, until the disease was eradicated in Spain and Portugal in the mid-1990s.



The cases now flaring up in Russia, Ukraine and other countries in the Caucasus have their origins in a 2007 outbreak in the former Soviet republic of Georgia, where the virus gained a foothold after being imported from Africa. "It wasn't diagnosed for several months because they weren't really looking for it," says Linda Dixon, an expert on African swine fever at the Institute for Animal Health in Pirbright, UK. The disease quickly jumped to neighbouring Azerbaijan, Armenia and Chechnya, before fanning out across Russia.

The recent spread of the virus means that the Ukrainian outbreak, now under control after authorities culled 208 pigs and instituted quarantine measures, did not come as a surprise, says Juan Lubroth, the chief veterinary officer at the Food and Agriculture Organization of the United Nations (FAO) in Rome, who is in charge of the organization's response to the outbreak.

Nearby countries, such as Moldova, Belarus and the Baltic states, could be next. To the east, the disease has been detected on the doorstep of Kazakhstan, which shares a long border with China, home to more than 1 billion pigs. China also risks importing the virus through its growing trade with African nations.

Europe's large pig farms are buffered by better biosecurity and hygiene practices. But agencies such as the UK Department of Environment, Food and Rural Affairs in London are nevertheless watching the situation closely. "How this will pan out, we don't really know," Lubroth says. "You're asking me to look into a crystal ball."

The variety of ways in which African swine fever spreads only increases the uncertainty. Pigs can leave virus particles on transport vehicles, for example, exposing whole shipments of uninfected animals. Biosecurity measures, such as scrubbing trucks and decontaminating farmers before they enter and leave pig pens, can help to contain outbreaks. But infected wild boar, whose populations stretch across Russia and Europe, pose a transmission threat that is harder to control. "Boars don't require visas to

move across borders," says Lubroth.
The pigs' food can also carry the virus if it includes contaminated pork products. Swill feeding, in which pigs are fed scraps of human food waste, is popular among small-scale farmers. Limiting this practice (which is banned in the European Union) or heat-sterilizing the food scraps can prevent disease transmission, says Dixon. "I remember being taken to a little backyard farm near Nairobi, and that farmer was doing everything correctly. He had a cooker with a big pan of entrails that he was feeding to pigs and he had a little tray of disinfectant outside the pig pens."
The FAO warns that continued spread of African swine fever could be very costly. Russia does not export its pork, but trade restrictions could prove expensive for other countries where the disease becomes endemic.
"If you are a small producer, and you lose all your five pigs, that is devastating to the family." Denis Kolbasov, director of the National Research Institute for Veterinary Virology and Microbiology of Russia in Pokrov, says that officials often have little appetite for expensive countermeasures such as widespread culling and quarantine that could disrupt Russia's billion-dollar pork industry. Meanwhile, backyard farmers often do not report suspected cases for fear of losing their livelihood.
"If you are a small producer, and you lose all your five pigs, that is devastating to the family," says Lubroth. "That is the situation I see in many parts of Europe and Africa." African swine fever was especially costly in South Ossetia during a 2008 conflict with Georgia, because many farmers there could not grow crops and relied on livestock for food and income.
While animal-health officials focus on containing the spread of African swine fever, scientists believe that it should be possible to develop a vaccine to eradicate the disease. The lucky few pigs that survive infection are rendered immune, so Dixon's lab and others are working to identify which of the virus's 175 or so genes trigger the immune system. In principle, researchers could engineer these genes into the genome of a harmless virus to create a vaccine. Alternatively, identifying and switching off the disease-causing genes in the virus could lead to an attenuated vaccine. In the longer term, these options offer the best chance of halting the march of the virus, says Lubroth. "I wish I had a vaccine."

Nature 488, 565–566 (30 August 2012)

New angle on Anthrax story: Projects "Clear Vision" and "Jefferson"

Source:http://www.democraticunderground.com/discuss/duboard.php?az=view_all&address=389x3724982

"Three veteran investigators have independently narrowed the field of anthrax

mailings suspects to a single Russian defector affiliated with two heavily implicated defense contractors and the Central Intelligence Agency (CIA). . . Kanatjan Alibekov, alias 'Ken Alibek,' the President of Hadron Advanced Biosystems, should be re-interrogated by the FBI, according to three researchers who arrived at this conclusion independently. They say Stephen Hatfield-the military virologist cited by FBI officials in recent weeks as a chief subject was not likely involved in the mailings at all.
Suspiciously, Dr. Alibekov and BMI had contracted with this anthrax ace in the Spring of 1998 to predict the dispersal and damage capability of mailing such a hyper-weaponized germ much like the one sent to select members of the media and legislators on Capitol Hill.
The three independent investigators each cite economic and political motives for the targeted anthrax mailings. Given the high grade and technical difficulty in producing and handling this grade of anthrax, they reasoned, 'white collar criminals' with access to military or pharmaceutical

labs most likely acted on behalf of those who benefited most from the attacks and ensuing fright. Hadron and its affiliates, including DynCorp and BMI, lead the pack of corporate and institutional suspects, the investigators say."
http://www.tetrahedron.org/news/NR020830.html

Interestingly, Ken Alibek was the program manager for something called the Battelle Memorial Institute (BMI)-a leading military contractor and the "chief CIA contractor for project 'Clearvision'-an effort to produce the deadliest Ames strain anthrax ever developed. It was hyper-concentrated, silica-laced, electro-magnetized, and extremely transmissible. The facts indicate Dr. Alibekov, one of two leading anthrax experts contracted by the CIA at the time of 'Clearvision,' may have managed the entire program."

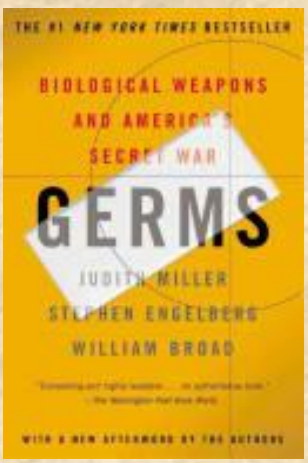
Project Clear Vision:
Judith Miller, of all people, reported in the NYT on September 4 2001:
"Over the past several years, the United States has embarked on a program of secret research on biological weapons that, some officials say, tests the limits of the global treaty banning such weapons.
The 1972 treaty forbids nations from developing or acquiring weapons that spread disease, but it allows work on vaccines and other protective measures. Government officials said the secret research, which mimicked the major steps a state or terrorist would take to create a biological arsenal, was aimed at better understanding the threat.
The projects, which have not been previously disclosed, were begun under President Clinton and have been embraced by the Bush administration, which intends to expand them.
Earlier this year, administration officials said, the Pentagon drew up plans to engineer genetically a potentially more potent variant of the bacterium that causes anthrax, a deadly disease ideal for germ warfare.
The experiment has been devised to assess whether the vaccine now being given to millions of American soldiers is effective against such a superbug, which was first created by Russian scientists. A Bush administration official said the National Security Council is expected to give the final go-ahead later this month.
The C.I.A. drew up plans to replicate the strain, but intelligence officials said the agency hesitated because there was no specific report that an adversary was attempting to turn the superbug into a weapon.
This year, officials said, the project was taken over by the Pentagon's intelligence arm, the Defense Intelligence Agency. Pentagon lawyers reviewed the proposal and said it complied with the treaty. Officials said the research would be part of Project Jefferson, yet another government effort to track the dangers posed by germ weapons.
A spokesman for Defense Intelligence, Lt. Cmdr. James Brooks, declined comment. Asked about the precautions at Battelle, which is to create the enhanced anthrax, Commander Brooks said security was 'entirely suitable for all work already conducted and planned for Project Jefferson."'
http://online.sfsu.edu/~rone/GEessays/germtreatylimits....

Mother Jones reported in 2004:
"Even more worrisome to many experts is the apparent growth in secretive, or 'black box,' biodefense research by the U.S. intelligence community. 'There's all kinds of secret research going on right now,' says Matthew Meselson, a Harvard biologist who has worked closely with the military. 'The more you create secret research in biology,' he warns, 'the more you create risk.' One program that has become public is **Project Jefferson**, a Pentagon effort to genetically engineer a vaccine-resistant version of anthrax. After the program's existence was revealed by the New York Times in 2001, the Pentagon announced that it intended to complete the project and that the results would be classified. "natural instinct is to exploit the technology and keep everybody else away from it,' says John D. Steinbruner, director of the Center for International and Security Studies at the University of Maryland. 'In their hands, this technology is potentially extremely dangerous."
http://www.motherjones.com/news/outfront/2004/03/02_400...

Ken Alibek, quoted in ths same article says of the US efforts to create new supebugs, "We are playing games with fire. It is kind of a Pandora's box. As soon as you open it, there is no way of putting it back in." I guess he'd know.

Project Bacchus

Source: http://www.enotes.com/topic/Project_Bacchus



Project Bacchus was a covert investigation by the Defense Threat Reduction Agency US Defense Department to determine whether it is possible to construct a bioweapons production facility with off-the-shelf equipment.

The secret Project Bacchus was revealed to the public in a September 2001 article in *The New York Times*. Reporters Judith Miller, Stephen Engelberg and William J. Broad collaborated to write the article. It is presumed that the reporters had knowledge of the program for at least several months; shortly after the article appeared they published a book that detailed the story further. The book, *Germs: Biological Weapons and America's Secret War*, and the article are the only publicly available sources concerning Project Bacchus and its sister projects, Clear Vision and Jefferson.

Bacchus ran from 1999-2000 and investigated whether "would-be" terrorists could build an anthrax production facility and remain undetected. In the two-year simulation, the facility was constructed, and production of anthrax-like bacterium was successfully completed. The participating scientists were able to produce about one kilogram of highly-refined bacterial particles.

9/11 WTC Program Adds 50 New Cancers

Source: http://www.medicalnewstoday.com/articles/250138.php

Fifty types of cancer have been added to the list of diseases that have affected 9/11 victims and will be federally funded, the National Institute for Occupational Safety (NIOSH) announced today (Sep 12).

This means another 70,000 emergency service workers as well as other 9/11 survivors will be entitled to free medical care.

According to the CDC (Centers for Disease Control and Prevention), approximately 1,000 deaths have been linked to exposure to toxic dust that originated from Ground Zero. Thousands of people became ill during the ten years following the terrorist attack on the Twin Towers, including emergency personnel, construction workers, office cleaners, and others.

A 2011 report found that WTC (World Trade Center) disaster rescue workers and exposed civilians have a higher burden of mental and physical illness compared to the rest of the general population.

Last June, the National Institute for Occupational Safety, which is part of the CDC, had announced that it was in favor of including fifty types of cancer for federal coverage, after an advisory committee advised them to do so.

The new cancers included all pediatric cancers, leukemia, and cancers of the breast, bladder, colon, rectum, thyroid, stomach, esophagus, larynx, liver, ovary and lungs.

President Barack Obama signed the Zadrga 9/11 Health and Compensation Act in 2011. Authorities today said this Act will be used for the expanded coverage.

Before today's announcement, only people with respiratory diseases caused by the fumes and dust that came from the terrorist attack were eligible for free medical treatment.

World Trade Center Health Program administrator, John Howard, said of the latest announcement:

"An important step in the effort to provide needed treatment and care to 9/11 responders and survivors".

New York City Mayor Michael Bloomberg yesterday:

"*Tomorrow we will remember those we lost to the 9/11 terrorist attacks and also those who bravely responded during and after the tragedy. As part of our ongoing commitment to our first responders, New York City led the way in ensuring that the Zadroga*

Act included reviews of the medical evidence so that all those ill from exposure to the aftermath of the 9/11 attacks receive the care they need. We have urged from the very beginning that the decision whether or not to include cancer be based on science; Dr. Howard's decision, made after thorough consideration of the latest available research and data, will continue to ensure that those who have become ill due to the heinous attacks on 9/11 get the medical care they need and deserve."

The World Trade Center Health Program (WTC Health Program

The World Trade Center Health Program (WTC Health Program) was set up by the James Zadroga 9/11 Health and Compensation Act of 2010. It was created to provide medical and support services for volunteers, responders and workers who helped out in the recovery, cleanup, and rescue at the WTC (World Trade Center) and other sites in New York City which were devastated by the 9/11 terrorists attack. The program also provides services for people who were in the NY City disaster area, either lived, worked or went to school there, and survived.

Am I eligible for free medical care? If you want to find out whether you are eligible, you need to fill out an Application Form and send it to the Program together with the required documents. The Program organizers say there are four eligibility categories:

- **FDNY Responder** - you must be (or had been) a Fire Department of New York City member who took part for at least one day in the recovery and rescue effort in at least one of the former World Trade Center sites. Several studies have shown that firefighters who were involved in the aftermath of the 9/11 WTC disaster consequently developed higher risks of developing respiratory diseases and some cancers. An article in the *Lancet* in September, 2011, reported that Firefighters who survived the 9/11 WTC disaster had a 19% higher risk of developing cancer during the seven years following the disaster, compared to the general population.
- **NYC Responder** - you were a responder or worker, but affiliated with the Fire Department of New York, but who provided any of the following services in the aftermath of the September 11, 2001 attacks on the WTC: rescue, recovery, debris removal, demolition, and related support services.
- **NYC Survivor** - you were present in the disaster area in New York City, either during or shortly after the terrorist attack. You either worked, lived, went to school, or attended an adult day care in the disaster area.
- **Pentagon/Shanksville, PA Responders** - if you were an emergency responder, recovery workers, cleanup worker, or a volunteer who was directly involved in the response effort to the 9/11 2001 terroriist attacks on the Pentagon in Arlington, VA and the Flight 93 crash near Shanksville, PA

Detecting a subway bioterror attack

Source: http://www.newscientist.com/article/mg21528825.300-detecting-a-subway-bioterror-attack.html

It's 3 am (Sep 12), and the subway station has long since shut for the night. As I watch, a small group of people move along the platform in the eerie quiet, their anticipation palpable as they prepare to release a cloud of bacteria into the tunnels beneath the densely populated Boston area.

Among them is a woman holding an array of translucent green nozzles, ready to release the agent. Her radio crackles to life: "The train has just left; we're a go."

Anne Hultgren isn't a terrorist: in her hands she holds a batch of dead *Bacillus subtilis* bacteria which, when dispersed, will form nothing more than a harmless cloud. It's all part of an experiment by Hultgren's employer, the US Department of Homeland Security (DHS). Her team is testing whether its new detection equipment could work as an early warning system if a deadly agent like anthrax was released into a city's metro network.

The faint rumble of the inbound train gets louder, and Hultgren starts spraying. Almost immediately, the cloud begins to waft through the tunnel towards downtown Boston, pushed by a column of air in front of the train.

As the train pulls in to the station we watch and wait to see if the sensors at the next stop down the line will detect the bacteria.

At our station, several bulky grey sensor boxes called triggers are slung on metal racks at four points along the platform. The triggers were installed around a year ago and since then have been measuring background levels of biological material - one of the keys to avoiding the false positives that have dogged previous biosensing systems. Hultgren can't go into detail about the technology inside, but similar commercially available systems count biological particles as they pass through a beam of light inside the box.

Anything over the background level will send a signal that activates a bright red box at the end of the station. Hultgren calls it a confirmer, and says it is the real novel technology in this test.

Hultgren and her team were brought in to improve the beleaguered BioWatch programme (see "Crying wolf on terrorism"), and the confirmer is the result. She says that her team has miniaturised the equipment needed for a process commonly used to identify DNA, called the polymerase chain reaction.

"Previous biodetection programs relied on continuous daily testing," Hultgren says. "Air filters would be collected every day by hand, and brought to a lab for analysis."

That lab analysis has now been engineered into a suitcase-sized box, and happens on site whenever the triggers detect unusual quantities of a biological agent. "We are aiming to do in 20 minutes what used to take two days," Hultgren says.

A few days after the test, Hultgren tells me the system worked as planned, both detecting and identifying the bacteria. "The confirmer collected a sample and about 30 minutes after the release we had a positive detection of the material at a station over a mile away down the track," she says.

The tests will continue for five months, helping the DHS understand how biological agents move around the subway when the weather is colder, for instance.

Janet-Martha Blatny, who runs a similar biosensing project for the European Commission, says that tests like this are crucial to improving biodetection systems.

"Trials resembling real-life conditions have been lacking and are one of the major causes explaining the high rate of false alarms of current biodetectors," Blatny says.

Scientists Bid to Develop Anthrax Vaccine to Counteract World Bioterrorism Threat

Source:http://www.sciencedaily.com/releases/2012/09/120917123420.htm?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+sciencedaily+%28ScienceDaily%3A+Latest+Science+News%29

A team of Cardiff University scientists is leading new research to develop a vaccine against anthrax to help counteract the threat of bioterrorism.

Working with scientists from the Republic of Georgia, Turkey and the USA, Professor Les Baillie from Cardiff University's School of Pharmacy and Pharmaceutical Sciences is leading a NATO project to tackle the potential misuse of anthrax.

"Currently the majority of the world's population is susceptible to infection with *Bacillus anthracis* the bacterium which causes anthrax," according to Professor Baillie, who leads the multi-national research collaboration.

"The US postal attacks in 2001 highlighted the vulnerability of civilian populations and brought home the need to develop effective, rapid, robust medical countermeasures to combat the threat posed by terrorist use of this organism," he added.

It is the growing concern over the threat posed by bioterrorism that has prompted world authorities like NATO through its *Science for Peace and Security Programme* to support efforts to develop more effective vaccines and medical countermeasures.

Efforts have so far been hampered by the fact that cases of naturally acquired human infection are rare in NATO countries. As a consequence, researchers have been forced to employ animal models to develop new vaccines.

The problem with this approach is the immune responses of animals and humans differ and as a consequence human clinical trials represent an essential element in confirming the efficacy of any new vaccine.

Such trials require access to several thousand volunteers at risk of infection and as such would be almost impossible to perform in Western Europe or the US.

In contrast anthrax represents a significant disease of animals and humans in the Cacuses and Central Asia. For this reason researchers from the UK and US have joined with colleagues from Turkey and the former Soviet republic of Georgia to tackle the problem.

Professor Baillie added: "These unique resources, combined with the expertise of NATO researchers offers us an unparalleled opportunity."

The outputs of this study are expected to underpin the development of future vaccines capable of conferring broad-spectrum, robust protection following minimal dosing.

Such vaccines would impact on two levels, locally they would directly improve the life of workers at risk of contracting anthrax such as farmers, and globally they would contribute to the protection of citizens from the use of anthrax as an agent of bio-terrorism.

An additional benefit of this work will be the establishment of a research centre in Georgia which will support infectious disease research and ultimately improve the lives of all of the people in the region.

U.S. schools not ready for next pandemic

Source:http://www.homelandsecuritynewswire.com/dr20120919-u-s-schools-not-ready-for-next-pandemic

Many U.S. schools are not prepared for bioterrorism attacks, outbreaks of emerging, infectious diseases, or pandemics, despite the recent 2009 H1N1 influenza pandemic which resulted in more than 18,000 deaths worldwide, Saint Louis University researchers say.

The study, led by Terri Rebmann, Ph.D., associate professor at SLU's Institute for Biosecurity (photo), surveyed about 2,000 nurses working in elementary, middle, and high schools across twenty-six states. A Saint Louis University release reports that the findings reveal that only 48 percent of schools address pandemic preparedness and only 40 percent of schools have updated their plans since the 2009 H1N1 pandemic that spread illnesses in more than 214 countries.

"There is a lot of research that shows influenza spreads quickly in schools because it's a communicable disease and kids interact closely," Rebmann said. "Schools need to have a written pandemic plan in order to be prepared to put interventions into place quickly when an event occurs."

The study suggests that every school should review and update its pandemic preparedness plan annually and address gaps in infectious disease emergency planning. Schools also need to coordinate these plans with the local and regional disaster response agencies, and organize disaster drills and exercises, including holding drills that involve an infectious disease scenario.

Published in the *American Journal of Infection Control*, the study also found that 44 percent of schools do not participate in community surveillance that tracks the presence of a disease based upon symptoms reported by area residents. These efforts are coordinated through local public health departments that assess indicators of biological threats.

One reason for lack in participation is that many communities may not have a surveillance program that uses school data as an indicator, said Rebmann. Another reason is that several schools might share a nurse, which can lead to inconsistent, inaccurate or unreported data.

In order to have a regular and strong pandemic preparedness program, Rebmann suggests that school nurses should be involved in building and assessing the plan.

"Health care professionals can best inform school administrators about unique aspects of pandemic planning that need to be included in school disaster plans," she said. "Results from this study indicate that better prepared schools were ones that involved their nurses in the disaster planning committee. The school nurse is the best person in a school district to know about infection control and be able to make recommendations about the best interventions to implement during a biological event."

— Read more in Terri Rebmann et al., "U.S. school/academic institution disaster and pandemic preparedness and seasonal influenza vaccination among school nurses," American Journal of Infection Control 40, no. 7 (September 2012): 584–89

Bioterrorism and New World Order: US Biological Warfare Programs: "Earth Unable to Sustain High Rates of Population Growth"

Source: http://spyghana.com/opinion/bioterrorism-and-new-world-order-us-biological-warfare-programs-earth-unable-to-sustain-high-rates-of-population-growth/

Part I

An outbreak of an obscure and fast-spreading decease – a pulmonary syndrome caused by hantavirus – was reported in the US Yosemite National Park. No specific cure for hantavirus being on record up to date, three people are already dead and around 8,000 guests are thought to be at risk of having contracted it during their stays in the park's tent cabins in June-August.

According to USA Today and other sources, the threat actually hangs over 22,000 tourists including 2,500 foreign nationals from 40 countries, who visited the Yosemite National Park last summer. The disease is known to be rodent-born and, supposedly, can be passed from human to human.

The US health authorities estimate lethality due to hantavirus at 36%, which is considerably higher than the 2-3% for Spanish flue in the early XX century and marginally comparable to the 30-60% for plague absent any medical treatment…

Due to the long incubation period – two to four weeks after exposure – hantavirus tends to evade timely diagnosing, with the initial signs of illness being mostly flu-like and no specifically-targeted vaccine available.

It may seem strange that the park administration neither closed the grounds following the September 1 fatality reports nor issued any warnings to alert potential visitors. In fact, at the moment the park is open and hosts thousands of travelers.

Questions arise in the context such as where the infected rodents could be from, whether there was any chance that hantavirus escaped from the US armed forces' secret laboratories, and was the timing of the outbreak – shortly ahead of the US presidential elections – attributable to a mere coincidence.

While the origin of most viruses may be hard to track, quite a few are, by credible accounts, human-made. "**Outbreak**", a 1995 American disaster film starring Dustin Hoffman (photo), was based on a fictional story of a lethal virus originally discovered overseas and, much later, surfacing in the US, where, as it transpires, a design exists to use it in biological warfare.

The US army quarantines the town affected and ultimately intends to bomb it to cover up the weapons plan. The virus is then found to be passed around by a monkey illegally brought to the US from Africa, and the movie starts to inch towards a happy end.

In reality, the US used biological warfare for the first time in 1763 when British officers at the besieged Fort Pitt attempted to infect Native Americans with smallpox by giving Delawares' representatives two blankets and a handkerchief from the smallpox ward "out of regard to them" after the Delawares pledged to renew their friendship.

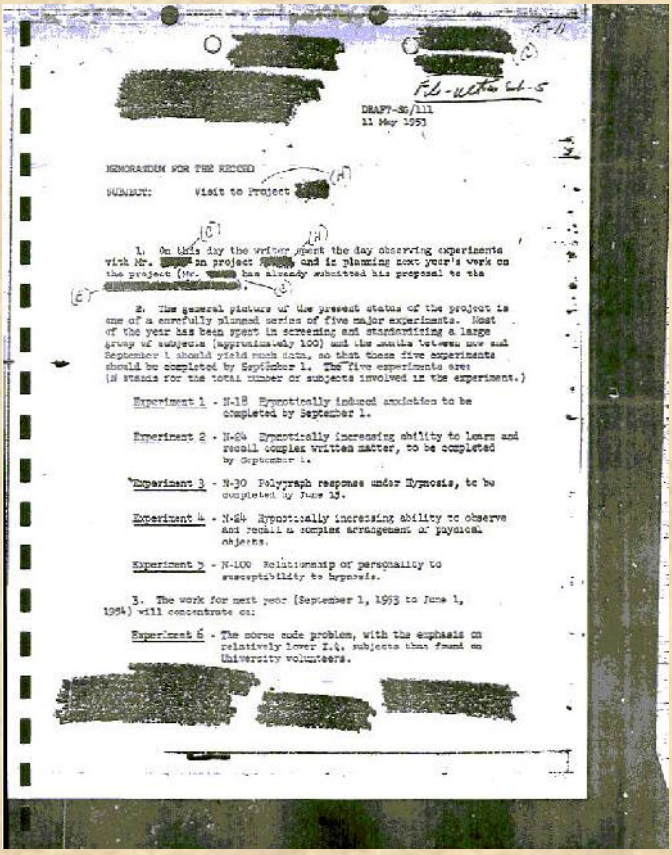
An epidemic swept through Ohio as a result, killing numbers of unsuspecting natives.

The US took to serious research into biological warfare in 1943 at the Dugway Proving Ground in Utah. In 1945, following the defeat of the Kwantung Army, the US got hold of Gen. Shiro Ishii and his notorious Unit 731, a biological and chemical warfare research facility which tested its deadly inventions on Soviet prisoners of war and others at a site near Harbin.

The war criminal was thus allowed to hide from the justice he deserved. Later, the Fort Detrick installation located in Frederick, Maryland, and run by the U.S. Army Medical Command, became the key center where the Pentagon polished its biological warfare capabilities. The same Shiro Ishii contributed seriously to its creation.

The US Army and the CIA cut a secret deal in May, 1952, obliging the Pentagon to share expertise in biological warfare with the spy agency and the latter – to assist in upgrading and testing the potential.

It became clear from the US Army documents which eventually saw the light of day that **in** February, 1956 the US intelligence community and the Special Operations Division (SOD) quartered in Fort Detrick pulled off an experiment code-named "**Operation Big City**"



DRAFT-SD/111
11 May 1953

MEMORANDUM FOR THE RECORD

SUBJECT: Visit to Project

1. On this day the writer spent the day observing experiments with Mr. on project and is planning next year's work on the project (Mr. has already submitted his proposal to the

2. The general picture of the present status of the project is one of a carefully planned series of five major experiments. Most of the year has been spent in screening and standardizing a large group of subjects (approximately 100) and the months between now and September 1 should yield enough data, so that these five experiments should be completed by September 1. The five experiments are: (N stands for the total number of subjects involved in the experiment.)

Experiment 1 - N-18 Hypnotically induced anxieties to be completed by September 1.

Experiment 2 - N-24 Hypnotically increasing ability to learn and recall complex written matter, to be completed by September 1.

Experiment 3 - N-30 Polygraph response under Hypnosis, to be completed by June 15.

Experiment 4 - N-24 Hypnotically increasing ability to observe and recall a complex arrangement of physical objects.

Experiment 5 - N-100 Relationship of personality to susceptibility to hypnosis.

3. The work for next year (September 1, 1953 to June 1, 1954) will concentrate on:

Experiment 6 - The morse code problem, with the emphasis on relatively lower I.Q. subjects than found on University volunteers.

aimed at studying the impact of biological warfare in real-life urban settings.

Americans were exposed to harmful substances in the process without being notified of what was happening.

In 1955, the CIA conducted a secret bacteriological experiment in Florida, spreading pertussis germs from containers disguised as bags and suitcases, the outcome being a whole epidemic.

In 1964-1965, Bacillus Subtilis, a substance from the biological warfare arsenal, was released in Chicago, San Francisco, and Washington at top-crowded locations like bus terminals and airports with the goal of exploring the patterns of disease spread across the US.

Similar experiments involving smallpox were performed later, but the information on them came into the spotlight as a result of the 1975 Congressional probe.

In 1970ies, the scope of biological warfare research in the US widened to include a Naval laboratory in Oakland, the Breeze Chemical Corp. with facilities in Pennsylvania, and a Pentagon laboratory near Baltimore.

Starting in the 1950ies, a large part of Fort Detrick's experimentation on humans unfolded in South Africa, at the Louis Trichard chemical research and development facility.

It routinely emerged as the epicenter of cholera, typhoid, poliomyelitis, and bubonic plague outbreaks. Testing on humans also took place at the Oshakati concentration camp in north Namibia, where South Africa's military exposed prisoners of war to viruses.

The US Army reportedly used biological warfare against the North Korean forces and Chinese volunteers during the Korean war, but its own servicemen were occasionally affected – around 3,000 US soldiers were killed by the hantavirus alone over the three years of the conflict.

US Defense Secretary and business executive Robert Strange McNamara is seen as the chief ideologist behind the US biological warfare programs, his staple being that the Earth is unable to sustain the high rates of population growth.

University of California professor Antony Cyril Sutton claimed in his book "America's Secret Establishment: An Introduction to the Order of Skull & Bones" that AIDS had been

engineered in the US Army laboratories in the framework of a programmed backed financially by the US Congress, the objective being to implement the fanatical elite's dream to eliminate a large part of the global population.

According to Sutton, the creation of the virus responsible for AIDS had been personally approved by McNamara. McNamara said in October, 1970 that the only two options to prevent the global population from reaching the 10 billion mark were to reduce the birth rate or to increase the mortality rate. It is explainable in this light why Africa and Haiti, two economically destitute regions, were the first to be hit by the AIDS epidemic.

In July, 1969, Dr. Donald MacArthur, a high-level Defense Department biological research administrator, told a group of US Congressmen that "within 5 to 10 years it would be possible to create a synthetic biological agent that would disable the human immune system".

A record of the hearings was published in the late 1980ies and carried shocking revelations about the development of artificial pathogens in secret laboratories.

The concept of trimming the world's population with the help of lethal viruses is still popular in the ranks of the "global elite" these days. From time to time, its members bluntly reissue statements to the effect that only around 500 million people on Earth should survive, hinting at what may await the unsuccessful others.

No doubt, the policy is going to materialize in the form of armed conflicts, famine, and epidemic outbreaks. There are indications that the cultivation of novel viruses continues.

Two groups of researchers – one led by Ron Fouchier in Amsterdam and the other – by Yoshihiro Kawaoka from the University of Wisconsin–Madison – had synthesizes brands of the bird flu virus capable of getting transmitted via droplet contact.

The corresponding experiments being performed with rodents, the groups submitted papers to Science and Nature respectively, but the US National Security Board for Biosecurity asked the journals and the authors to refrain from having the research published.

The board's head Paul Keim told the media that the potential of the H5N1 virus is too threatening to air the findings, says Reuters.

Keim warns that the lethality of the virus is around 50%, higher than in the case of the Spanish flu which took 40 million lives in 1918-1919. The board further stresses the peril that bioterrorists might attempt to gain access to the above two modifications of the bird flu virus.

Normally, the creation of a vaccine is coupled to the cultivation of a virus as biological warfare, but Keim mentioned no vaccine in the context, likely because the treatment is not supposed to be available to commoners.

Part II

In February 2009, Baxter, a pharmaceutical company headquartered in Austria, distributed among 16 laboratories in 4 countries some 62 kg of substance to be converted into seasonal flu vaccine.

A technician in a Czech lab discovered that the material carried two live viruses of flu, one – a fairly ordinary seasonal brand which is highly contagious but is known to have the lethality under 1%, the other – a flu which has a limited potential to spread but proves lethal in around 60% of the cases.

The combination could produce a virus both extremely transmissible and deadly, and we owe it to the clever technician that no epidemic erupted, considering that 62 kg of the substance could translate into thousands of dozes of tinted vaccine.

Jane Burgermeister, an Austrian journalist, published her own investigation into the above case and, based on the findings, filed criminal charges against the World Health Organization (WHO), the UN, and the government officials of a number of countries.

She accused Baxter of bioterrorism, but, even though the company admitted that the frightening report concerning the vaccine was true, the corresponding probe stalled within the WHO and Baxter was entrusted with the task of developing the vaccine against the Influenza A virus.

The current ecological situation in the Gulf of Mexico, another shocking example, is best described as state-supported bioterrorism. Ian Crane, former oil industry executive turned human rights activist, expressed a view in a 2010 conversation broadcast by the Voice of America that the objective behind the Gulf of Mexico developments is to exterminate the region's population, where, according to local activists' accounts, over 100,000 people already had the BP flu also known as the Blue Plague.

Millions are yet to be affected, and BP spends enormous amounts of money to prevent human rights activists from

talking on the issue on the nationwide scale.
In February, 2011 Col. Michael Edward (ret.) published an opinion piece titled «The Gulf Blue Plague is Sanctioned Bio-terrorism», where he stated that «this purposefully engineered biological war will soon become a world war as the horizontally transferred synthetic genes extend their silent tendrils through the water and air.
It's already begun to abruptly manifest in fish, birds, mammals, and humans». Edward says four genetically altered bacteria originally designed as oil-munching are, at the moment, to be found in the Gulf and «the skin ulcers, boils, rashes, pneumonia, lesions, internal hemorrhaging, along with many more symptomatic results, are directly tied to these synthetically DNA altered bacteria.
They are responsible for new and unknown pathogenic diseases where current antibiotics have very little or no effect». The «horizontally transferred genes», Edwards holds, cause similar problems in all forms of life from plankton to whales and humans.
Last year, a US national ran across a storage area near Atlanta, Georgia, where the Federal Emergency Management Agency (FEMA) of the US Department of Homeland Security stored 500,000-1,000,000 **plastic coffins** of various sizes, some big enough to contain five

corpses. Moreover, FEMA is known to run a huge number of detention camps scattered all over the US.
In the past years, the Halliburton company has constructed over 800 of them in Texas, Virginia, Maryland, Arizona, Alaska, not far from Fairbanks, and the Mojave Desert in California, with roads or railroads connecting the facilities to a wider transit network and aerodromes or copter sites on premises.
No meaningful official explanation as to the purpose of storing coffins in such quantities or building the prisoner camps has ever been supplied. Hints were dropped that preparations for a massive war on drugs could be the reason, but that sounds unconvincing, especially since anti-narcotics activities are not a part of FEMA's mission.
Information surfaces increasingly often that the US Army is retraining servicemen to operate domestically. The Internet writings by soldiers returning from Iraq leave no doubt that, while in the country, they exercised to launch cleaning raids and firearm seizures in the US.
The Army servicemen have reportedly been offered tests intended to gauge their readiness to shoot, under specific circumstances, their countrymen, including friends and family members.
Washington-based author Rand Clifford published an essay «America! Be Truly Afraid» exposing the US government's secret plans and warning Americans about the repressions they might face in the foreseeable future.
Once the martial law is imposed, the now-idle camps, with the guards already in place, would be fully operational to start absorbing dissenting US citizens. «Like Nazi extermination camps, many of the FEMA camps have red/Blue lines: «Red List – These are enemies of the New World Order.
Two weeks before martial law they could be taken from their homes and flown to camps for immediate extermination. Generally, these are people in leadership roles or other public positions. Blue List – Also enemies of the New World Order but not necessarily leaders. After martial law these people could be rounded up for "re-programming" in the camps.
Survivors will be used mostly for slave labor». Overall, Clifford projects «the scuttling of the United States as a sovereign nation to make way for

the corporate/fascist New World Order» and claims that «Pastors and other religious representatives are being groomed into secret police enforcers who teach their congregations to «obey the government» in the run-up to martial law, property and firearm seizures, mass vaccination programs and forced relocation».

Notably, the coffins storage site and the US Center for Disease Control are located in the same area.

With the US population's living standards falling, the US Administration braces for anti-government campaigns staged by armed Americans who see no justification for extracting astronomic sums of money to bail out private banks instead of helping the hardworking citizens make ends meet.

For the US elite, the martial law or a state of emergency under which FEMA and similar agencies which have trained for decades to handle ambiguous situations may be an attractive option. Under the scenario, the Readiness Exercise 1984 (REX-84) program would be activated, its elements being the slapping of the military law on the country, forced relocations, and the detention of the defiant.

A biological attack launched by an obscure terrorist group – a false flag operation, in military terms – would serve to throw in a pretext for giving the plan the green light. It is widely held that the August, 1995 Hurricane Katrina presented FEMA with an opportunity to practice relocating masses of the population to camps and establishing military rule in a particular region with the hands of private security contractors.

The notorious Blackwater played a big role in the game. It seems that the only issue unclear so far is at what time and under what pretext a decision in favor of the repressive turn is going to be made…

Speaking of the hantavirus outbreak in the Yosemite National Park, the hypothesis that comes to mind is that M. Romney's team will be there to draw maximal gains from the situation by charging Obama and his Administration with lack of attention to the national security in general, and to its biological warfare aspect in particular.

Obviously, Romney will announce that the US needs strong-arm policies to beat the incoming threats, saying nothing about the dictatorship which the policies are supposed to bring about.

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Igor Ignatchenko *is at Strategic Culture Foundation (opinions expresses belong to the author)*

Operation CAULDRON 1952

Source: http://www.youtube.com/watch?feature=player_embedded&v=CPA_yce0Swg#!

In 2008, the Ministry of Defence made it clear that the events portrayed in this 60 year old film [including the use of live animals] in no way represents current practice. This is a historical record of experimental UK Biological Warfare research procedures which were in use over 60 years ago, and should be viewed as such.

Operation CAULDRON

In 1951, proposals were made by the Microbiological Research Department, Porton Down (the UK Government's Chemical and Biological Warfare research facility) to conduct a large series of Biological Warfare (BW) experiments in the open air.

This series of BW experiments, known to Porton Down scientists as field trials, involved the release into the open air of two types of 'hot' BW agents: *Brucella suis* (Brucellosis) and *Yersinia pestis* (Plague). The entire

series of BW field trials was given the codename -- Operation CAULDRON.

The site chosen for the conduct of Operation CAULDRON was located half a mile off-shore near Tulsta Head and Cellar Head on the north-east tip of the Isle of Lewis. The site seemed ideal because it appeared that in an average year there would be 28 suitable days in the months of June -- September in which field trials could take place. Permission to use this site was cleared by the Secretary of State for Scotland.

The central idea of CAULDRON was the use of a floating "island", moored in place. A "Spud Pontoon" (pier-head from "Mulberry", suitably modified) was used: essentially, this was a rectangular box, 200 ft by 60 ft, with 24 watertight compartments. Some of the compartments were flooded, so that the pontoon lay low in the water and was listed until the upwind edge was level with the water: it then presented to the wind an inclined plane, sloping gently up at not more than 1 in 10, up which the air travelled without disturbance.

An arc of test animals (guinea pigs and monkeys) and sampling points, of 25 yd radius, was established on the deck: the centre of this arc was 25 ft beyond the low edge and the source was supported here on a light floating boom. The source was either a bomb or a spray device.

Compartments, not required for flooding, were modified to hold "clean" and "dirty" animals and sampling equipment; other compartments were required for machinery used for flooding, etc.

The proposed procedure was to bring alongside, in a small boat, enough equipment and animals for 2 or 3 trials, set up for the first trial and put the rest in the "clean" room, retire to a short distance leaving men in the gas-tight compartments, and function the apparatus by radio remote control: the men on the pontoon would then rapidly change the layout and be ready for a further trial.

Laboratories, housing for "clean" and "dirty" animals, and accommodation for all CAULDRON staff were required: all these were provided by relatively simple modification of the Control ship, HMS Ben Lomond, which lay moored within a short but safe distance of the pontoon.

Before any decision could be made to undertake modification of the pontoon, the method had to be thoroughly tested.

A site located at Shanklin Bay, IOW, was selected, since it was similar to the proposed site but rather more

exposed to swell and therefore provided a severe test.
Flooding and listing (using improvised pumping arrangements) were found to be most satisfactorily simple and quick. Swinging the pontoon to the necessary crosswind position, also with improvised arrangements, was also easy and rapid. The behaviour of the pontoon in sea conditions as severe as would be practicable for small boat work was 'very gratifying'.
A small trial was attempted in Shanklin Bay on 23rd August, attended by Admiralty representatives. The trial was very satisfactory. It was evident that this was a 'simple and reliable technique for the conduct of trials, which could be carried out accurately and expeditiously with a remarkably small number of men'.

The first CAULDRON field trial was conducted on 26 May 1952 -- the last at the end of September 1952. Clear range duties were performed by a Royal Navy tug - HMS HENGIST. 158 civilian and service personnel were involved in Operation CAULDRON. Some 45 short-term visitors attended for 2-5 nights during the trial.
As the film shows, on at least one occasion, local dignitaries from the Isle of Lewis visited the Control ship (HMS BEN LOMOND) during the trials.
In 1953, scientists returned to The Isle of Lewis to conduct a new series of Biological Warfare field trials. These field trials, codename Operation HESPERUS, involved the open air dissemination of two types of BW agents: *Brucella suis*, and *Francisella tularense*.

The threat of bio-terrorism

By Muna al-Fuzai
Source: http://english.alarabiya.net/views/2012/09/24/239843.html

This is not an article about a revolutionary weapon, which if it lands in the wrong hands would kill only a few people. This is a much bigger issue that must be taken seriously.

In an unstable world where technology is advancing rapidly in both military and medical fields, it is important that the public must be made aware of the ever changing threat of terrorism, especially bio-terrorism.
Although the World Health Organization (WHO) declared the eradication of smallpox in 1980, this contagious and deadly virus remains high on the list of possible bio-terror threats. This issue was at the top of the agenda for discussion by several officials at the WHO meeting in Geneva in 2011.
They were not wasting their time and here is why.
The use of biological weapons against civilian populations is an actual threat to national security. Smallpox can be used as a weapon and can be cheaply reproduced today, both technologically and synthetically. It is a highly contagious and deadly disease, unique to humans and is caused by the Variola virus. Smallpox is an airborne virus and is transmitted via face-to-face contact.
During earlier smallpox epidemics, thousands of samples were taken and frozen in various laboratories around the world. As far as we know there are two virus repositories that officially exist; one is in Atlanta, USA, and the other in Novosibirsk, Russia. However, intelligence exists that a number of other countries also have unofficial biological weapon programs, which raises serious concerns.
Are we completely safe and protected from the use of biological weapons against civilians here in Kuwait and

the wider Gulf Cooperation Council (GCC)?
To answer this question we need to consider all the threat possibilities and act now. The real threat lies in the possibility of a country using a biological weapon to defend itself or a group of suicidal terrorists using this weapon.
But, will that still ensure that no one will try to restructure the smallpox gene in a sophisticated lab?
I guess not.
In his recommendations for a Global Counter-Terrorism Strata given in April 2006, former the Secretary-General, United Nations, Mr. Kofi Annan, clearly stated, "The most important under-addressed threat relating to terrorism, and one which acutely requires new thinking on the part of the international community, is that of terrorists using a biological weapon."
I do believe he is right, because there is no proven cure or antiviral treatment for smallpox, once a person is infected with it.
The threat of bio-terrorism is real and small pox is the most deadly virus that can be used as a weapon of mass destruction. It is possible for a group of terrorists to reproduce and deploy this bio-weapon, as information is easily accessible through publications, and even the internet. We already know some terrorists use the internet to learn how to make bombs.
This threat must be taken seriously.
Should a smallpox vaccine be stocked to keep us safe and as a precautionary measure for protecting the Kuwaiti population?
Every country in the GCC needs to address this threat and buy enough vaccines to protect its citizens. They should also have a stockpile of vaccines and a plan must be put in place, which involves coordination between hospitals, police and the military in the event of an attack. Right now Kuwait has no such plan and no such stockpile.
On the other hand, many countries have a readiness plan and are prepared to meet the largest threat of mass destruction in the 21st century, which is smallpox.
For example the USA, UK, Germany, Norway and Malaysia each have a smallpox vaccine stockpile as well as a fully practiced crisis management plan, in case of a smallpox attack.
For the record, Kuwait had earlier prepared a batch of vaccines with the help of US donations during the first Gulf War. Most of these vaccines have expired now and Kuwait must purchase new vaccines to build a stockpile and be prepared for a potential smallpox outbreak.
The smallpox virus has an incubation period that ranges from seven to 17 days without displaying any symptoms. Therefore, any person who contracts the virus can travel around the globe during this incubation period, exposing countless number of people to the deadly virus, without actually realizing that he or she is doing so. This is a virus that can easily result in a global pandemic and it is the responsibility of every government to have a plan in place and be prepared to counter such an eventuality.
This article is a call to all Gulf governments including Kuwait's, and in particular our Ministry of Health (MOH), asking them to act now and I hope they will.

The lives of millions will be at stake, if we ignore this threat.

Muna al-Fuzai *is a columnist at the Kuwait Times, where this article was published on September 23, 2012*

Genetic sleuthing uncovers deadly new virus in Africa

Source: http://www.homelandsecuritynewswire.com/dr20120928-genetic-sleuthing-uncovers-deadly-new-virus-in-africa

An isolated outbreak of a deadly disease known as acute hemorrhagic fever, which killed two people and left one gravely ill in the Democratic Republic of Congo in the summer of 2009, was probably caused by a novel virus scientists have never seen before.
Described this week in the open-access journal *PLoS Pathogens*, the new microbe has been named Bas-Congo virus (BASV) after the province in the southwest corner of the Congo where the three people lived.
A University of California, San Francisco release reports that it was discovered by an international research consortium that included the University of California, San

Francisco (UCSF) and University of California, Davis (UCD), Global Viral, the Centre International de Recherches Médicales de Franceville in Gabon, the Institut National de Recherche Biomédicale, Kinshasa in the Democratic Republic of the Congo, Metabiota, and others.

"Known viruses, such as Ebola, HIV and influenza, represent just the tip of the microbial iceberg," said Joseph Fair, Ph.D., a co-author and vice president of Metabiota. "Identifying deadly unknown viruses, such as Bas-Congo virus, gives us a leg up in controlling future outbreaks."

"These are the only three cases known to have occurred, although there could be additional outbreaks from this virus in the future," said Charles Chiu, M.D., Ph.D., an assistant professor of laboratory medicine at UCSF and director of the UCSF-Abbott Viral Diagnostics and Discovery Center, who spearheaded the UCSF effort to identify the virus. Chiu and his team continue to work on new diagnostics to detect the virus so that health officials in Congo and elsewhere can quickly identify it should it emerge again.

One odd characteristic of the Bas-Congo virus, Chiu said, is that while a number of other viruses in Africa also cause deadly outbreaks of acute hemorrhagic fever — Ebola virus, Lassa virus and Crimean-Congo Hemorrhagic Fever virus to name a few — the new virus is unlike any of them.

Genetically it is more closely related to the types of viruses that cause rabies, which are known to infect people with a very different sort of disease — a neurological illness that is uniformly fatal if untreated but may take months to develop.

An antibody test developed in this study was applied to the one patient who survived and to others who had come into contact with him. It suggested that the disease may be spread from person to person but likely originated from some other source, such as an insect or rodent.

The identity of this animal "reservoir" and the precise mode of transmission for the virus remain unclear and are currently being investigated by Metabiota and the central African members of the consortium through the PREDICT Project of USAID's Emerging Pandemic Threats Program.

How the new virus emerged

In the summer of 2009 a 15-year old boy in a small rural community called Mangala village suddenly fell ill and developed a bleeding nose, bleeding gums, and bloody vomit. He rapidly worsened, dying within three days of the first signs of illness.

A week later, a 13-year old girl who attended the same school and lived in the same neighborhood as the boy came down with a similar, serious illness. She declined just as rapidly and also died within three days. One week after that, the male nurse who cared for this girl began showing the same symptoms, and he was transferred to a hospital in Boma, a nearby port city that sits along the Congo River upstream from Africa's Atlantic coast.

Members of the consortium, who had initiated a project to diagnose unusual cases of severe hemorrhagic fever, obtained blood samples collected from the nurse by the Congolese doctors and sent them to the laboratory of Eric Leroy, Ph.D., doctor of veterinary medicine at the Centre International de Recherches Médicales de Franceville in Gabon. There the samples were tested for traces of any known virus, but nothing was found. The Metabiota scientists then solicited the expertise of Chiu at UCSF and Eric Delwart at the Blood Systems Research Institute (BSRI) in San Francisco to aid in the diagnosis.

The researchers ultimately identified a completely new virus as the cause of the mysterious illness through a powerful strategy for identifying novel pathogens known as "deep sequencing," in which millions of DNA sequences are generated from a clinical sample and then pieced together using computer algorithms combined with human analysis.

Distinct attributes of Bas-Congo

The release notes that the Bas-Congo virus belongs to a family of viruses known as the rhabdoviruses, a large family of viruses that infect plants, insects and mammals, including humans. The most famous member of this family is the virus that causes rabies. Even among the rhabdoviruses, however, Bas-Congo is something of an outlier, being very genetically distinct from other members of the family.

What's most unusual about this virus, though, said Chiu, is what it does to people.

No other rhabdoviruses are known to cause the acute, rapid, and deadly hemorrhagic fever seen in the three cases in the Congo. Rabies, for instance, can be a deadly disease if untreated, but the course of rabies in humans is nothing like the rapid and deadly onset seen with the Bas-Congo virus. There is some precedent, however, for hemorrhagic disease from rhabdoviruses in the animal kingdom: fish rhabdoviruses are known to cause hemorrhagic septicemia — acute bleeding and death — in affected fish.

The third patient had enormous amounts of BASV in his bloodstream just two days after he fell ill — more than a million copies in every milliliter of blood.

The BASV sequence was also used to design an antibody test for the virus, an effort led by Graham Simmons at the BSRI, another member of the consortium. Antibodies are blood immune proteins produced in response to an infection. The antibody test allowed the researchers to screen both the third patient with acute hemorrhagic fever and other people who had come into contact with the third patient, including the nurse who cared for him in the Boma hospital. High levels of BASV-specific antibodies were found in the third patient, establishing that he indeed had been infected with Bas-Congo virus. The same antibodies were also found in the second nurse, even though he never actually became sick.

"What this suggests is that the disease may be transmissible from person to person — though it's most likely to have originated from some other source," said Nathan Wolfe, Ph.D., founder and chairman of Global Viral, and a co-author on the paper. "The fact that it belongs to a family of viruses known to infect a wide variety of mammals, insects and other animals means that it may perpetually exist in insect or other 'host' species and was accidentally passed to humans through insect bites or some other means."

— Read more in Gilda Grard et al., "A Novel Rhabdovirus Associated with Acute Hemorrhagic Fever in Central Africa," PLoS Pathogens 8, no. 9 (27 September 2012)

Bid To Develop Anthrax Vaccine To Counteract World Bioterrorism Threat By Cardiff Scientists

Source: http://www.medicalnewstoday.com/releases/250358.php

A team of Cardiff University scientists is leading new research to develop a vaccine against anthrax to help counteract the threat of bioterrorism.

Working with scientists from the Republic of Georgia, Turkey and the USA, Professor Les Baillie from Cardiff University's School of Pharmacy and Pharmaceutical Sciences is leading a NATO project to tackle the potential misuse of anthrax.

"Currently the majority of the world's population is susceptible to infection with *Bacillus anthracis* the bacterium which causes anthrax," according to Professor Baillie, who leads the multi-national research collaboration.

"The US postal attacks in 2001 highlighted the vulnerability of civilian populations and brought home the need to develop effective, rapid, robust medical countermeasures to combat the threat posed by terrorist use of this organism," he added.

It is the growing concern over the threat posed by bioterrorism that has prompted world authorities like NATO through its Science for Peace and Security Programme to support efforts to develop more effective vaccines and medical countermeasures.

Efforts have so far been hampered by the fact that cases of naturally acquired human infection are rare in NATO countries. As a consequence, researchers have been forced to employ animal models to develop new vaccines.

The problem with this approach is the immune responses of animals and humans differ and as a consequence human clinical trials represent an essential element in confirming the efficacy of any new vaccine.

Such trials require access to several thousand volunteers at risk of infection and as such would be almost impossible to perform in Western Europe or the US.

In contrast anthrax represents a significant disease of animals and humans in the Cacuses and Central Asia. For this reason researchers

from the UK and US have joined with colleagues from Turkey and the former Soviet republic of Georgia to tackle the problem.
Professor Baillie added: "These unique resources, combined with the expertise of NATO researchers offers us an unparalleled opportunity."
The outputs of this study are expected to underpin the development of future vaccines capable of conferring broad-spectrum, robust protection following minimal dosing.
Such vaccines would impact on two levels, locally they would directly improve the life of workers at risk of contracting anthrax such as farmers, and globally they would contribute to the protection of citizens from the use of anthrax as an agent of bio-terrorism.
An additional benefit of this work will be the establishment of a research centre in Georgia which will support infectious disease research and ultimately improve the lives of all of the people in the region.

Non-lethal cures: new antibiotic cures disease by disarming pathogens, not killing them

Source: http://www.homelandsecuritynewswire.com/dr20121003-nonlethal-cures-new-antibiotic-cures-disease-by-disarming-pathogens-not-killing-them

A new type of antibiotic can effectively treat an antibiotic-resistant infection by disarming instead of killing the bacteria that cause it. Researchers report their findings in the 2 October issue of *mBio*, the online open-access journal of the American Society for Microbiology.
"Traditionally, people have tried to find antibiotics that rapidly kill bacteria. But we found a new class of antibiotics which has no ability to kill Acinetobacter that can still protect, not by killing the bug, but by completely preventing it from turning on host inflammation," says Brad Spellberg of the UCLA Medical Center and David Geffen School of Medicine, a researcher on the study.
An American Society for Microbiology release reports that new drugs are badly needed for treating infections with the bacterium Acinetobacter baumannii, a pathogen that most often strikes hospital patients and immune-compromised individuals through open wounds, breathing tubes, or catheters. The bacterium can cause potentially lethal bloodstream infections. Strains of A. baumannii have acquired resistance to a wide range of antibiotics, and some are resistant to every FDA-approved antibiotic, making them untreatable.
Spelling and his colleagues found that in laboratory mice it was possible to mitigate the potentially lethal effects of the bacterium by blocking one of its toxic products rather than killing it.
"We found that strains that caused the rapidly lethal infections shed lipopolysaccharide [also called LPS or endotoxin] while growing. The more endotoxin shed, the more virulent the strain was," says Spellberg. This pinpointed a new therapy target for the researchers: the endotoxin these bacteria shed in the body.
Blocking the synthesis of the endotoxin with a small molecule called LpxC-1 prevented infected mice from getting sick. Unlike traditional antibiotics, Spellberg says, LpxC-1 doesn't kill the bacteria, it just shuts down the manufacture of the endotoxin and stops the body from mounting the inflammatory immune response to it that is the actual cause of death in seriously ill patients.

Spellberg says this is a direction few researchers have taken when exploring ways to treat infections but that it could make the difference in finding an effective drug. The results also highlight how important it is to find new, physiologically relevant ways of screening potential antibiotics for pathogens with a high degree of resistance, write the authors. Molecules like LpxC-1 that inhibit rather than kill bacteria wouldn't pass muster with traditional antibiotic screens that are based on killing effectiveness.
Liise-anne Pirofski of the Albert Einstein College of Medicine and a reviewer of the study for *mBio* says neutralizing virulence factors is showing a lot of promise as an alternative route for treating infections. "There's a growing

movement in infectious disease therapy to control the host inflammation response in treatment rather than just 'murdering' the organism," says Pirofski.

"This is a very elegant and important validation that this approach can work — at least in mice."

— Read more in Lin Lin et al., "Inhibition of LpxC Protects Mice from Resistant Acinetobacter baumannii by Modulating Inflammation and Enhancing Phagocytosis," mBio 3, no. 5 (2 October 2012): e00312-12

Abstract
New treatments are needed for extensively drug-resistant (XDR) Gram-negative bacilli (GNB), such as *Acinetobacter baumannii*. Toll-like receptor 4 (TLR4) was previously reported to enhance bacterial clearance of GNB, including *A. baumannii*. However, here we have shown that 100% of wild-type mice versus 0% of TLR4-deficient mice died of septic shock due to *A. baumannii* infection, despite having similar tissue bacterial burdens. The strain lipopolysaccharide (LPS) content and TLR4 activation by extracted LPS did not correlate with *in vivo* virulence, nor did colistin resistance due to LPS phosphoethanolamine modification. However, more-virulent strains shed more LPS during growth than less-virulent strains, resulting in enhanced TLR4 activation. Due to the role of LPS in *A. baumannii* virulence, an LpxC inhibitor (which affects lipid A biosynthesis) antibiotic was tested. The LpxC inhibitor did not inhibit growth of the bacterium (MIC > 512 µg/ml) but suppressed *A. baumannii* LPS-mediated activation of TLR4. Treatment of infected mice with the LpxC inhibitor enhanced clearance of the bacteria by enhancing opsonophagocytic killing, reduced serum LPS concentrations and inflammation, and completely protected the mice from lethal infection. These results identify a previously unappreciated potential for the new class of LpxC inhibitor antibiotics to treat XDR *A. baumannii* infections. Furthermore, they have far-reaching implications for pathogenesis and treatment of infections caused by GNB and for the discovery of novel antibiotics not detected by standard *in vitro* screens.

A Cup Of Tea To Battle Terrorism

Source: http://personalliberty.com/2012/10/10/a-cup-of-tea-to-battle-terrorism/

New research indicates that a powerful weapon in the fight against bioterrorism could be a simple cup of tea.

The favorite English beverage has shown in studies the ability to kill certain deadly microorganisms and deactivate toxins. According to Dr. Simon Richardson, senior lecturer in Biopharmaceutical Sciences at the British University of Greenwich's School of Science, and his team of researchers, a principal component of black tea can neutralize ricin, a highly toxic substance that has been used in a number of attempted bioterror attacks.

Ricin is a waste byproduct of the extraction of oil from castor beans.

"One cup of char [British slang for tea] won't cure you if you have been poisoned, but compounds extracted from tea could, with further research, provide an antidote to poisoning following a terrorist attack," said Richardson. "I've been working on neutralizing ricin poisoning for about six years as a by-product of my work in drug delivery…The next stage, as well as securing more funding, is seeing if other components of tea have a greater effect."

There is currently no treatment for ricin poisoning. A number of failed terror attempts in the United States and abroad have involved the bioterrorism chemical in recent years.

In 1978, Georgi Markov, a Bulgarian journalist and activist living in London, was famously killed by a man with an umbrella rigged to inject a poison ricin pellet under Markov's skin.

If refined into a terrorist or warfare agent, ricin could be used to expose people through the air, food or water.

Protecting Civilian Emergency Responders Against Anthrax

Source:http://www.domesticpreparedness.com/Commentary/Viewpoint/Protecting_Civilian_Emergency_Responders_Against_Anthrax/

One of the principal goals of the initiative known as Project Equal Immunization Policies & Practices (EQUIPP) is to help gain approval for the preventive vaccination of civilian emergency responders against anthrax. Since 2008, this grassroots campaign has fought vigorously to eradicate the disparity of access to the only vaccine licensed by the U.S. Food and Drug Administration for anthrax prophylaxis. More specifically, Project EQUIPP has and continues to reverse the upside-down status quo wherein only the second wave of federal WSD-CST (Weapons of Mass Destruction Civil Support Team) personnel – rather than local civilian responders – are preventively immunized.

As a result, some important milestones have been reached. One example is that the anthrax vaccine adsorbed (AVA) is now included as a covered countermeasure in the U.S. Department of Health and Human Services' 2008 Public Readiness and Emergency Preparedness (PREP) Act. This status provides not only important injury compensation awards but also the appropriate indemnification mechanisms needed for the manufacturing, distribution, delivery, administration, and receipt of AVA.

In addition, equal policy guidance supporting the preventive vaccination of emergency responders is now in place, thanks to the publication (in 2010) of the 2009 report on the Final Recommendations from the U.S. Centers for Disease Control & Prevention (CDC) Advisory Committee on Immunization Practices (ACIP). Although these CDC guidelines do not specifically call for the routine pre-exposure vaccination of all emergency responders, they do affirmatively state that "responder units engaged in response activities that might lead to exposure to aerosolized *Bacillus anthracis* spores may offer their workers voluntary pre-event vaccination."

Continuing Inequality But With a Ray of Hope

In retrospect, increased understanding of the dangers posed by an anthrax "weapon" attack – combined with additional information on the supply, safety, and acceptance of AVA – can be credited as having been particularly helpful in advancing this ongoing policymaking process. In that context, there are three key points of particular importance worth emphasizing:

1. In the context of an attack with a weapon or device carrying antibiotic-resistant anthrax bacteria, post-exposure antibiotics will fail and the infected victims will almost always succumb before AVA can confer immunity. As is the case with all types of vaccines, the best and, realistically, only time to immunize is prior to exposure.
2. Since 2008, approximately 500,000 AVA doses in the Strategic National Stockpile (SNS) have been destroyed every month because of expiration dating. It has been estimated that more than 20 million doses of AVA have been wasted in various ways since the October 2007 Government Accountability Office (GAO) admonishment to the U.S. Department of Health and Human Services (HHS) on its management of the SNS materiel. Obviously, therefore, using surplus AVA before its expiration date to immunize civilian emergency responders who meet the ACIP criteria mentioned earlier could protect hundreds and perhaps thousands of other personnel who might well be needed to help cope with a future anthrax WMD attack.
3. In an unpublished 2009 survey carried out by the Missouri State Emergency Management Agency, with a group of 223 emergency responders (73 of which were randomly selected to be asked the question on their willingness to be immunized with the anthrax vaccine), it was determined that approximately two thirds of the civilian emergency responders participating said that they do want to have the option of receiving a voluntary pre-exposure vaccination against anthrax.

Unfortunately, two years after the report on the Final ACIP Recommendations was published, equality in the practice of providing anthrax immunization for local civilian emergency responders has still not been mandated. However, there is a ray of hope from the written testimony

delivered by Dr. James Polk, Deputy Chief Medical Officer of the U.S. Department of Homeland Security (DHS), to the Subcommittee on Emergency Preparedness, Response, and Communications of the House Committee on Homeland Security. In the testimony released on 17 April 2012, Polk commented on 2011 discussions between CDC-SNS and the DHS Office of Health Affairs about "the idea of working collaboratively to determine a use for anthrax vaccine with a short shelf life rather than disposing of the unused vaccine."

"Our national response capability to a wide-area anthrax attack," Polk also said, "would be enhanced by having pre-vaccinated responders, able to deploy immediately and confident that they have been afforded as much protective status as possible for these activities." The "pre-event vaccination of these responders," he further asserted, "will increase the [federal government's] ability to save lives, maintain social order, and ensure continuity of government after a wide-area anthrax attack."

Polk also commented on the creation of a federal interagency working group to discuss the key decision points of a DHS/CDC-SNS program designed to evaluate the possible provision of soon-to-expire AVA to federal departments and agencies as well as to some state and local jurisdictions. In addition, twelve different federal departmental subject matter experts discussed the scientific medical data and policy implications involved, and also developed AVA prioritization guidance for immunization in the event that the vaccine supply available could not fully meet the demand.

The first step in this process, according to Polk, would be to pilot a pre-event AVA vaccine distribution program on a relatively small and manageable scale with the goal of eventually building a full-scale program that would be safe, reliable, functional, and sustainable. The pilot would: (a) include two federal departments or agencies and two state or local jurisdictions; and (b) continue for at least 18 months, time enough to accommodate the lengthy "priming" vaccination series anticipated.

The Future of Pre-Event Vaccination

Despite Polk's testimony that planning began more than a year ago, no publicly discoverable information has been released, and there have been no pre-solicitations or solicitations. Moreover, recent inquiries submitted earlier this year to the DHS Office of Health Affairs by Project EQUIPP, and by at least one state that has volunteered as a pilot location, have yielded no response.

There are several possible reasons for this official silence. It could be, perhaps, that any further action by DHS and CDC-SNS would require an examination of the potential benefits from pre-event/pre-exposure vaccination weighed against the probable resource requirements to implement and maintain the vaccination schedule in the context of the potentially adverse events associated with vaccination. Another possibility is that the unexplained delays can be attributed to a contrarian position that: (a) mandates the presence of a "calculable risk" before changing the modus operandi; and (b) is not satisfied with a programmatic decision based solely on an estimated/presumed risk-benefit assessment.

A third possibility is that the yet unexplained opposition and/or reluctance to make a firm decision is fueled by the belief that, depending on the occupational activities of the vaccine recipient(s), pre-event or pre-exposure vaccination might not completely eliminate the need for the purchase and distribution of appropriate personal protective equipment and post-exposure antibiotics.

Despite the above rationale, it seems reasonable to suggest that the final release of the 26 January 2012 National Response Team Emergency Responder Health Monitoring and Surveillance (ERHMS) Technical Assistance Document would acceptably serve as a safe harbor, if not a catalyst, for a pre-event vaccination program. The ERHMS documentation provided from the National Institute for Occupational Health and Safety is a product of significant consultations with not only the U.S. National Response Team but also a large number of federal agencies, state health departments, labor unions, and volunteer emergency responder groups. In addition to the operational benefits described above, that same document would also:

- Provide the guidelines needed to protect emergency responders operating over a full range of emergency types and settings;
- Serve as an invaluable resource for all who are involved in the

deployment and protection of emergency responders – including but not limited to incident management and response organization leaders as well as health, safety, and medical personnel – and the emergency responders themselves; and
- Legally defines the anthrax vaccine as an immunization that is appropriate to provide to emergency responders.

In a community of emergency response professionals who courageously charge toward the danger – while others in the vicinity are running for their lives – the selfless actions of these professionals speak louder than words. The threat is real. The solution, or at least a significant part of it, is known. Now is the time to deliver.

Notes:

U.S. Public Readiness and Emergency Preparedness (PREP) Act, 6 October 2008, visit http://www.gpo.gov/fdsys/pkg/FR-2008-10-06/html/E8-23547.htm

CDC's "Use of Anthrax Vaccine in the United States Recommendations of the Advisory Committee on Immunization Practices (ACIP)," 23 July 2010, visit http://www.cdc.gov/mmwr/PDF/rr/rr5906.pdf

U.S. Government Accountability Office's "Actions Needed to Avoid Repeating Past Problems with Procuring New Anthrax Vaccine and Managing the Stockpile of Licensed Vaccine," 23 October 2007, visit http://www.gao.gov/products/GAO-08-88

Written testimony of Dr. James Polk for a House Committee on Homeland Security, Subcommittee on Emergency Preparedness, Response, and Communications hearing, 17 April 2012, visit http://www.dhs.gov/news/2012/04/17/written-testimony-office-health-affairs-house-homeland-security-subcommittee

The ERHMS "National Response Team Technical Assistance Document," 26 January 2012, visit http://www.cdc.gov/niosh/topics/erhms/document/

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►Read more on EQUIPP Project
http://www.bioterrorism.slu.edu/education/projects/EQUIPPDocs/Project.pdf

New Ebola antibody treatment protects monkeys from lethal disease

Source:http://www.homelandsecuritynewswire.com/dr20121016-new-ebola-antibody-treatment-protects-monkeys-from-lethal-disease

A new Ebola virus study resulting from a widespread scientific collaboration has shown promising preliminary results, preventing disease in infected nonhuman primates using monoclonal antibodies.

In this week's online edition of the *Proceedings of the National Academy of Sciences* (PNAS), the research team describes a proof-of-concept for using a "cocktail" of monoclonal antibodies, or mAbs, to prevent lethal disease in rhesus macaques. When administered one hour after infection, all animals survived. Two-thirds of the animals were protected even when the treatment, known as MB-003, was administered forty-eight hours after infection.

A U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID) release reports that Ebola virus, which causes hemorrhagic fever with human case fatality rates as high as 90 percent, has been responsible for numerous deaths in central Africa over the past several months. In addition to being a global health concern, the virus also is

considered a potential biological threat agent. Currently there are no available vaccines or treatments approved for use in humans.

The work is the culmination of more than a decade of effort between government and industry partners. According to lead investigator Gene Olinger, Ph.D., a virologist at USAMRIID, this consortium of investigators has taken very distinct technologies and combined them to develop a cutting-edge medical countermeasure against a lethal viral disease.

"It is rare that an antiviral compound prevents Ebola virus infection with limited to no morbidity in treated animals at any point of treatment following infection by this lethal virus," said Olinger. "Until recently, attempts to utilize antibodies to provide protection against Ebola virus have been met with failure. The level of protection against disease that we saw with MB-003 was impressive."

In addition, the production method used in this study offers the potential to make an economical and effective medical countermeasure, according to the authors. Initially developed as a monoclonal antibody cocktail in the mouse model, MB-003 was successfully humanized and then produced in the tobacco plant-based production system.

"We were pleased to see how well the humanized mAbs of MB-003 performed," said Larry Zeitlin, Ph.D., president of Mapp Biopharmaceutical and senior author on the study. "We also were pleasantly surprised by the superiority of the plant-derived mAbs compared to the same mAbs produced in traditional mammalian cell culture."

Further improvement in antibody efficacy was developed at Kentucky BioProcessing (KBP). Using a fully automated production system that operates in accordance with good manufacturing practices (GMP), antibody is produced in a tobacco plant system. This new development process significantly decreases the amount of time required for production, increases the quantity of antibody produced, and slashes the cost of manufacturing, according to Barry Bratcher, chief operating officer of KBP and co-author on the PNAS study.

"Our GMP facility can generate a new antibody lot in two weeks to rapidly address new threats and new outbreaks," said Bratcher.

Olinger said efforts are underway to advance MB-003 to clinical safety testing as his team at USAMRIID continues to determine the true therapeutic capability of the cocktail.

Multiple agencies contributed funding for this and related studies, including the National Institutes of Health, the Defense Advanced Research Projects Agency (DARPA), the Transformational Medical Technologies Initiative, and the Defense Threat Reduction Agency.

USAMRIID's mission is to protect the warfighter from biological threats and to be prepared to investigate disease outbreaks or threats to public health. Research conducted at USAMRIID leads to medical solutions — vaccines, drugs, diagnostics, and information — that benefit both military personnel and civilians. The Institute plays a key role as the lead military medical research laboratory for the Defense Threat Reduction Agency's Joint Science and Technology Office for Chemical and Biological Defense. USAMRIID is a subordinate laboratory of the U.S. Army Medical Research and Materiel Command.

— Read more in Gene Garrard Olinger Jr. "Delayed treatment of Ebola virus infection with plant-derived monoclonal antibodies provides protection in rhesus macaques," Proceedings of the National Academy of Sciences (15 October 2012)

UF UNIVERSITY of FLORIDA

Clinical Toxicology Master's Degree
Source: http://clintox.cop.ufl.edu/programs/ms

Guidance for Protecting Responders' Health During the First Week Following A Wide-Area Aerosol Anthrax Attack

Source: http://www.dhs.gov/publication/protecting-responders-health-after-wide-area-aerosol-anthrax-attack

The Department of Homeland Security (DHS) has issued guidance, based on a federal interagency working group effort, to educate first responders on protective actions they should take in the event of a wide-area anthrax release. The document, "Guidance for Protecting Responders' Health during the First Week Following a Wide-Area Aerosol Anthrax Attack," focuses on a specific scenario of a large-scale aerosol anthrax release in a major U.S. city and the immediate post-attack environment.

The guidance, which is non-binding, provides recommendations for responders risking high, moderate, and limited exposure based on their expected activities and their potential to travel through the affected area in the immediate aftermath of an attack. Pre- and post-event vaccination, the use of personal protective equipment, and personal decontamination (which may include disposal of protective clothing, laundering of all other garments and showering with soap after a work shift) are among the recommendations. The guidance is expected to evolve based on changes to understanding of risks, the availability of personal protections, stakeholder feedback, scientific developments, and new environmental monitoring techniques. The federal interagency working group consisted of subject matter experts in biodefense, infectious diseases, and occupational health and safety including subject matter experts from the U.S. Department of Health and Human Services and the Centers for Disease Control and Prevention.

► **Document:**http://www.dhs.gov/sites/default/files/publications/Guidance%20for%20Protecting%20Responders%27%20Health%20-%20October%202012_0.pdf

Researchers find anthrax can grow and reproduce in soil

Source: http://www.homelandsecuritynewswire.com/dr20121019-researchers-find-anthrax-can-grow-and-reproduce-in-soil

Anthrax has the unexpected ability to grow and reproduce while lurking in soil — increasing the deadly bacteria's chances to infect cattle and other mammals, researchers at the University of Virginia School of Medicine have discovered.

Until now, experts have widely believed that anthrax spores remain dormant in soil until eaten by cattle, then germinate and cause the deadly disease. U.Va. researchers, however, have found that the spores can attack a common soil and water amoeba, Acanthamoeba castellanii, turning these single-celled organisms into anthrax incubators.

"These amoeba normally eat bacteria and kill them, but Bacillus anthracis has figured out some way to manipulate that amoeba so that it can actually grow inside the amoeba and increase its numbers," Ian J.

Glomski, an assistant professor of microbiology, explained.

The process, he notes, gives the anthrax a selective advantage. "The interactions with the amoeba, essentially, are making certain that the anthrax has the tools to kill the amoeba, and those same tools are potentially being used to infect animals and humans," he said.

A University of Virginia release reports that the discovery helps answer longstanding questions about the bacteria and may lead to new techniques to control anthrax and prevent infection around the world.

Anthrax outbreaks typically occur after rainy weather in warm months, usually striking animals that graze in depressions where the grass is greenest. Scientists have commonly thought that rainwater runoff was concentrating spores in low-lying areas. The conclusion was logical, based on what science knew about anthrax.

"If you put Bacillus anthracis into soil with basically any other common soil bacteria, it will be out-competed. The other bacteria will eat up all the nutrients before Bacillus anthracis can do significant growth," Glomski said. "So for all intents and purposes, it has been thought that the spores sit in the ground and do nothing until they go into an animal and cause disease."

The U.Va. researchers, inspired by postdoctoral fellow Rafik Dey, wondered, however, whether something else was happening in the warm, moist, alkaline earth where the spores are most common.

"There's a rich history of amoeba being associated with diseases," said researcher Paul S. Hoffman, a professor of infectious diseases. "We tried to make that connection with the anthrax by asking, 'Could the amoeba have a role in the environment?'"

To find the answer, they set out to recreate the warm, wet conditions in the lab. When they placed anthrax spores in sterile creek water, there was no sign of germination. But when they combined spores and Acanthamoeba castellanii, a type of amoeba active in warm weather, the result was a nearly fiftyfold increase in spores in the creek water within seventy-two hours. Under optimal conditions of approximately 37 degrees Celsius (about 99 degrees Fahrenheit), the spores increased nearly a hundredfold.

The U.Va. researchers believe anthrax preys upon Acanthamoeba castellanii and other amoeba because the bacteria contains two plasmids — a type of DNA molecule — that the anthrax needs for growth.

Lab tests using an anthrax strain without plasmids did not generate additional spores. That information could help scientists begin to determine which genes allow anthrax to reproduce in these amoeba (and potentially other protozoa).

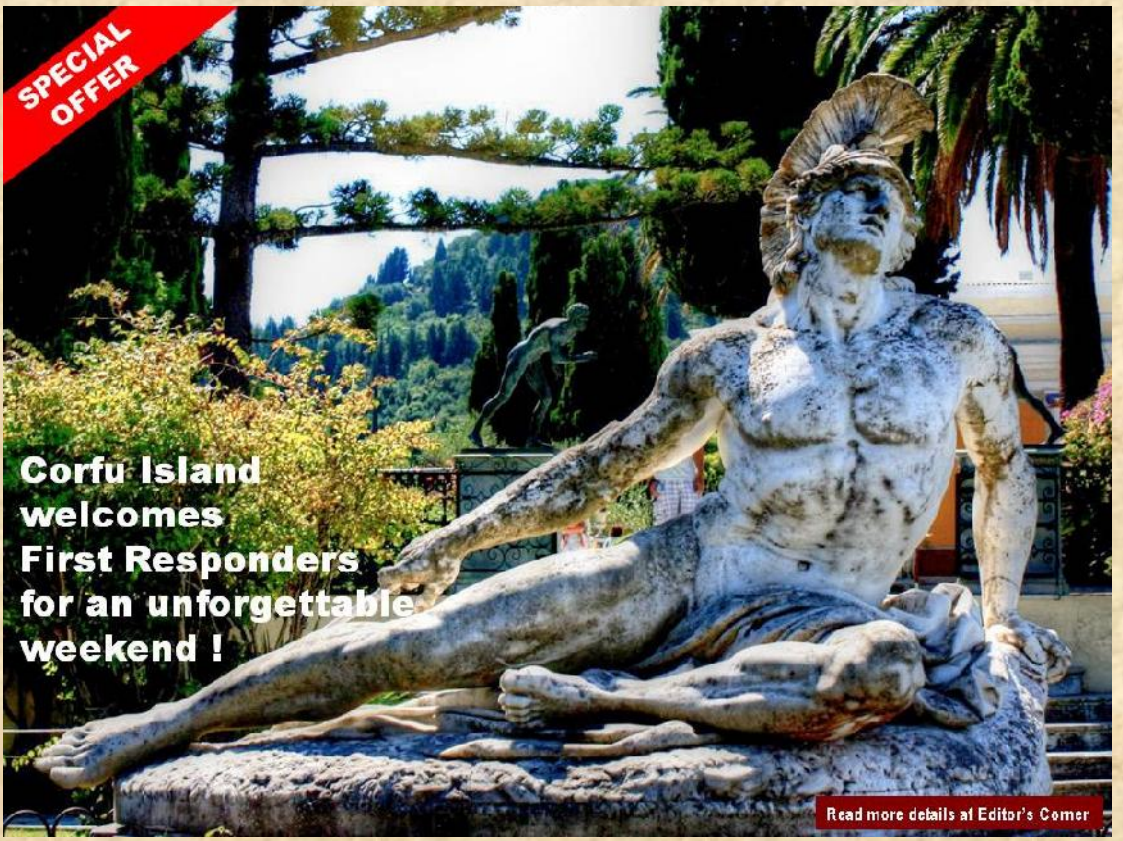
"We may find other species of amoeba that are even better at this than what we were using in the lab," Hoffman said. "We may be at the tip of the iceberg."

The release notes that while the availability of a veterinary vaccine helps prevent anthrax outbreaks in the United States, U.Va.'s discovery could benefit the many areas of the world that struggle with the persistent and pestilent bacteria. Unvaccinated cattle can't graze without dying in some fields in Europe and elsewhere, Hoffman said.

"Just the knowledge gives you a general sense of where not to put your animals if you do have problems," Hoffman said. "In developing countries that don't have a lot of resources, you can strategize how to avoid certain areas because you know that will be problematic at a particular period of the year."

Glomski noted that the discovery offers new targets for researchers seeking to prevent the spread of anthrax. "If we can figure out any way to disrupt the cycle, that would effectively eliminate the problem. It could be doing something to the bacteria, doing something to the amoeba, doing something to prevent their interaction …" he said. "If we really understand those interactions, we'll have more and more points of intervention to think about."

— Read more in Rafik Dey et al., "Germination and Amplification of Anthrax Spores by Soil Dwelling Amoeba," Applied Environmental Microbiology (14 September 2012) (doi: 10.1128/AEM.02034-12)



Detecting biological weapon use

Source:http://www.nato.int/cps/en/natolive/news_90256.htm?utm_source=twitter&utm_medium=social+media&utm_campaign=121016+bioweapon&utm_term=cbrn&utm_content=wmdA&goback=.gde_3711808_member_177800887

A red light comes on in the epidemiological surveillance system alarms. An abnormal increase in diarrhoea cases is reported by the Bundeswehr naval unit physician in Djibouti: 13 cases out of 70 staff in under 48 hours. The NATO Deployment Health Surveillance Capability (DHSC) confirms this information and sounds the alarm. This early warning system, patented by the Health Service of the French Army, could be added to the equipment of NATO's armed forces and detect the use of a biological weapon. Code name: ASTER.

Lieutenant Colonel Benjamin Queyriaux is the deputy head of service and epidemiologist of the Deployment Health Surveillance Capability (DHSC) based in Munich, Germany. He currently has a four-person team. His role is to develop for NATO an epidemiological surveillance system for tracking the state of health of Allied troops in operations. Recent experiences in the African and Balkan theatres, as well as in Afghanistan, have demonstrated the critical importance of real-time tracking of health and of the threats to soldiers in their mission.

In Afghanistan, for example, NATO does not always have a way of knowing the exact number of malaria cases among Allied forces and whether that is affecting the Alliance's operational capabilities in the field.

"*The requirement for developing a real-time epidemiological surveillance and alert system, which is crucial particularly in the event of a biological attack, dates back to the 2002 Prague Summit*" explains Benjamin Queyriaux. "*A stocktaking of NATO's capabilities for countering NBC threats shed light on our inability to detect a biological attack for several days.*"

For that reason, in 2010 the DHSC – a branch of the NATO Centre of Excellence for Military Medicine (NATO MILMED COE) based in Budapest, Hungary – was created on a French and German initiative aimed at overcoming the difficulty of identifying the state of health of forces in the field, detecting an epidemic, and assessing the effectiveness of preventive measures. The DHSC's mission is to contribute to enhanced protection of NATO's deployed forces against the threats of infectious diseases and bioterrorist attacks.

"*The aim is not only to identify the epidemics caused by infectious agents released intentionally, but also to detect and manage natural events, such as epidemics of influenza or malaria that occurred in the past*", continues Benjamin Queyriaux.

In an operation, should an influenza epidemic occur, for example, it is certain that if the forces of one nation are infected, NATO's embedded forces will all quickly be contaminated. It is therefore crucial for the Alliance to have real-time surveillance data to detect and consequently manage any health problem, and not just to rely on the Allies' national capabilities.

Some difficulties still remain to be addressed before NATO will have a real-time health surveillance system that is multinational. A single system will have to combine medical practices and information security rules that differ from one country to another. The retrieval of national information supplied by physicians and nurses which is not standardized and is subject to medical confidentiality may also prove problematic, as may turning that information into epidemiological analyses that are useful for NATO.

But the system is promising. "*ASTER is an important part of NATO's future epidemiological surveillance and alert system*," adds DHSC Commander Hans-Ulrich Holtherm. "*It is a good example of smart defence applied to public health: rather than try to gather fragmentary data from a few Allied nations, NATO is building a single system that will offer a complete overview of the health situation of deployed troops.*"

Today, the new ASTER system is being used for the French and German forces in Djibouti. Once the interoperability problems have been solved, NATO will be able to use this system routinely. Other nations are also interested in development of the DHSC, including the United States, Poland and Canada. And the United Kingdom is even physically taking part in the project, since a British officer will be joining the DHSC in Munich this autumn.

The DHSC is hoping to be fully operational in 2013.

Compounds found in black tea can neutralize bioterrorism microorganisms

Source: http://www.naturalnews.com/037675_black_tea_bioterrorism_defense.html

Could the natural compounds found in black

tea be powerful enough to successfully counter the deadly effects of a biological terrorist attack? New research out of the U.K. seems to suggest so, having found that a specific compound abundant in tea effectively deactivates and neutralizes ricin, a highly-toxic chemical byproduct of castor beans that is often used in attempted acts of biological terrorism.

Dr. Simon Richardson (photo), a senior lecturer in Biopharmaceutical Sciences at the *University of Greenwich* School of Science in the U.K., and his colleagues examined the various compounds naturally found in tea and discovered that one in particular, which was not named in their research, disables ricin's toxic effects. And if extracted from tea into processed form, Dr. Richardson believes the compound could hold the key to potentially thwarting biological terrorism.

"One cup of char (British slang for tea) won't cure you if you have been poisoned, but compounds extracted

from tea could, with further research, provide an antidote to poisoning following a terrorist attack," says Dr. Richardson. "I've been working on neutralizing ricin poisoning for about six years as a byproduct of my work in drug delivery ... the next stage, as well as securing more funding, is seeing if other components of tea have a greater effect."

An earlier study out of Wales found that Epigallocatechin gallate (EGCG), an antioxidant polyphenol that is recognized as a principal property of tea, also has the ability to inactivate ricin. Likely the same compound identified by Dr. Richardson, EGCG was shown to defuse not only ricin, but also a host of deadly microorganisms, toxins, and other harmful compounds.

"We already knew that tea had the ability to inhibit anthrax -- as long as it is black tea with no milk," says Professor Les Baillie from *Cardiff University*'s School of Pharmacy and Pharmaceutical Sciences, who led the research out of Wales. "Our new findings suggest that if the security services want to counter the threat of ricin, they may find the answer in their morning cup of tea."

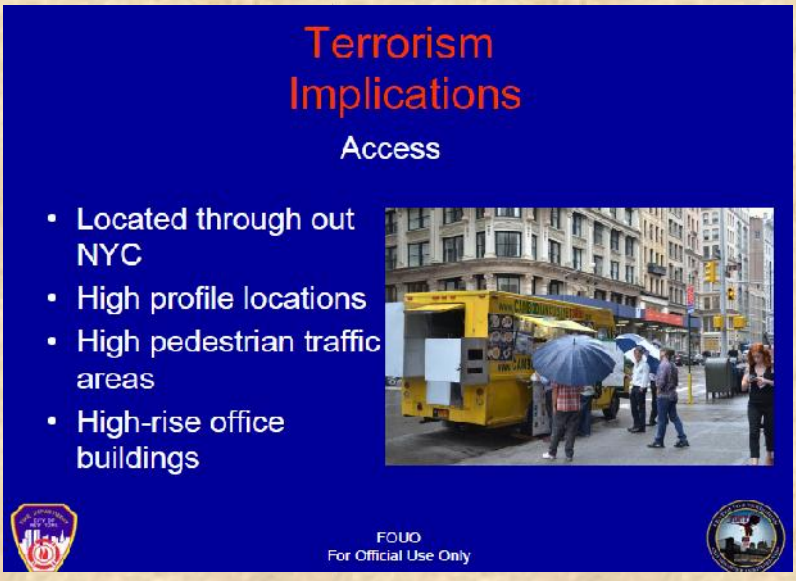
EGCG is already widely available in supplement form, which means the public does not have to wait for further research to be conducted on the compound in order to experience its poison-fighting benefits.

Also commonly marketed as green tea extract, EGCG has been shown to help promote the proper growth and maintenance of brain cells, prevent the development and proliferation of cancer cells, alleviate diabetes, deter heart disease, promote healthy weight maintenance, and prevent the onset of Alzheimer's disease and other forms of dementia.

Are Food Trucks Terrorist Threats?

Source: http://blogs.villagevoice.com/runninscared/2012/10/are_food_trucks.php

According to a recent PowerPoint presentation obtained by the research group Public Intelligence, the Fire Department of New York has been warning its members to keep their eyes out for food trucks of all shapes and sizes. The reason? Well, with more than 3,100 of these guys roaming the streets in large vans each year, a black market for permits is a viable reality. And what's synonymous with the black market? Terrorism.



Unfortunately, the presentation, entitled "Food Trucks: A Transient Hazard," makes a few good points. Sorry in advance but this is the kind of story that you wish you never heard.

For starters, think about the number of food carts in heavily populated areas, like Times Square and FiDi. You know how many halal trucks are downtown? *A lot*. Believe me.

Then think about the "high-profile" areas they can enter with ease. Also, the Department of Homeland Security is mentioned in the presentation as saying that a food truck is about the same size as a surveillance van. Like the ones the Nixon administration followed Woodward and Bernstein with, except much more dangerous.

OK, we'll stop because we're scaring ourselves. Yeah, food trucks could be possible terrorism threats. Watch the presentation yourself and go on with your day. Just don't tell the guys over at Fork in the Road about this. Please!

Terrorism Implications

Surveillance

- According to DHS document a food cart can be used as an excellent surveillance platform due to their access and long duration stays

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Hazards

Hazards when operating at a fire involving a food truck include: (list is not complete)

- Explosion-presence of multiple propane cylinders
- Shock -from high voltage electricity
- Increased fire load-portable gasoline containers
- Burn- hot fryer oil and grills
- Bio-Hazard-from questionable sanitary conditions
- Hazmat-compressed gases

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Remote **BIOHAZARD** Detection

MAB
Portable Biological Alarm Monitor

Our MAB Portable Biohazard Detection System sends an alarm immediately upon detecting any evolution to the atmospheric background. It works on a continuous real-time basis and responds in only seconds. Easily used by untrained people, it has a very low power consumption rate and is especially designed for harsh environments.

MAB has a fast start-up time and can quickly analyze atmospheric particles for chemical signatures of bacteria or toxins such as anthrax, plague, Botox, legionella, etc.

MAB has already been selected by several military forces and is used by several NBC reconnaissance vehicles, as it is not sensitive to diesel vapors and smokes. Test reports are available.

Characteristics

- Size of the box (LxWxH): 300mm x 160mm x 470mm (11.8" x 6.3" x 18.5")
- Total height: 850mm (33.5")
- Weight: 14 kg (31 lbs)
- Operating temperature: -10°C to +50°C (14°F to +122°F)
- Storage temperature: -39°C to +71°C (-38.2°F to +160°F)
- Autonomy: 10 days (refillable hydrogen cylinder included)
- Power supply: 12 - 32 V DC / 110 - 220 V AC
- Can be remote controlled
- Remote data by RS 485 outlet
- Response time: less than 1 minute
- Field tested / Report available

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