#146
4 Feb 2002

USAF COUNTERPROLIFERATION CENTER

CPC OUTREACH JOURNAL

Air University
Air War College
Maxwell AFB, Alabama

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TV film shows how nightmare of biological terror could become reality

Matt Wells, media correspondent
Guardian
Wednesday January 30, 2002

Until the post-September 11 anthrax scares in the United States, the world was sceptical of the threat of bioterrorist attack.

Now, with the help of experienced global disaster planners, a television film has shown the ease with which a determined individual, acting alone, could unleash panic and devastation on a previously unimagined scale.

Over two years, a team from the independent production company, Wall to Wall, developed a scenario in which the smallpox virus spreads from its release in New York to a pandemic that ends with 60m deaths around the world.

With the assistance of scientists, planners and health officials from Britain, the United States and the world health organisation, the producers have completed a dramatisation of terror that could have the same impact as nuclear-scare films such as Threads and The War Game.

In an indication of the seriousness with which the film - to be shown on BBC2 next Tuesday - is being taken, the producer has been asked to speak to Whitehall disaster planners. At the invitation of the WHO, Smallpox 2002: Silent Weapon is to be shown at a G7 conference of health ministers and officials later this year.

The film, shot in documentary style but employing actors, begins with a single, suicidal terrorist who infects himself with smallpox on April 1, 2002. Walking around New York, he passes the virus on to 72 others.

The first patient to walk into hospital is misdiagnosed.

This failure to spot the symptoms of smallpox is repeated in London when doctors, treating a businessman newly arrived from New York, diagnose him as a victim of ebola.

By now, it is too late to prevent a global outbreak that brings many countries to their knees.

Like the 2001 anthrax attacks, the motive of the perpetrator is never discovered.

Smallpox 2002 is filmed from the supposed perspective of 2005.

It combines interviews with those involved in controlling the fictional outbreak with staged news reports of the disaster.

In order to support the illusion, cameras do not go further than they would in reality: there is no depiction, for example, of cabinet meetings or private police discussions.

The makers hope the film will provoke viewers into questioning the preparedness of government for such an attack.

Simon Chinn, the producer, said: "I think it's a scary film that should generate a real debate as to whether we have the appropriate defences against a bioterrorist threat like this."

Daniel Percival, the director, said that British governments had tended to underestimate the threat of a bioterrorist attack.

Officials in the United States became alive to the threat after the discovery in the 1990s that the Soviets had developed smallpox as a weapon on a massive scale during the cold war.

But Britain only sat up after the anthrax attacks of 2001.

"We are a lot slower, we are a long way behind the Americans. Anthrax was a wake-up call," said Mr Percival.

The film, which was funded by the BBC and the Learning Channel, was overseen by the BBC's current affairs department.

Peter Horrocks, the BBC's head of current affairs, said: "There is still a very important place for the conventional, reporter-led documentary.

"But we have been looking at ways of doing journalism through other methods, and the clever combination of documentary and drama in this film has made for an arresting piece of television."

The anthrax attacks in the US came while the film was already half made.

While producers made a number of changes, they felt that the attacks made their scenario even more pertinent.

Mr Chinn said: "For the past 50 years the great fear has been the evils of physics and nuclear science.

"As we move into the 21st century, the issues are biological, genetic, viruses, and the low-tech, ruthless efficiency of terrorism."

Films that shocked

The War of the Worlds (1938)

One evening before Halloween millions of Americans tuned in to a radio show featuring plays directed by and often starring Orson Welles. Welles made the adaptation sound like a news broadcast on an invasion from Mars. Many listeners were tricked into thinking it was a real bulletin. News reports conveyed the panic. There were calls for changes in broadcasting rules.

The War Game (1966), .

Groundbreaking docu-drama made during the height of public fear about the atom bomb and threat of nuclear war. The BBC banned the programme because "the effect of the film has been judged by the BBC to be too horrifying for the medium of broadcasting". It was finally shown in 1985.

Threads (1984)

Gritty television drama made by the BBC. Sheffield, in Yorkshire, is about to become a target of nuclear war between the US and the Soviet Union. The film features two families before and after a one megaton bomb is dropped. It showed how ill-equipped the government was to deal with such an event as people in the story struggled to survive the chaos.

http://www.guardian.co.uk/Archive/Article/0,4273,4345674,00.html

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WIRE: 01/29/2002 5:18 pm ET

Polio Vaccine a Must, Even if Eradicated: Expert

Reuters

By Amy Norton

NEW YORK (Reuters Health) - Even if the paralyzing viral infection polio is effectively eradicated worldwide, polio vaccination should continue, according to one biodefense expert.

The difficulty of ensuring that polio is indeed wiped out--as well as its potential use as a biological weapon even after eradication--argue for continuing vaccination "indefinitely," Dr. D. A. Henderson told Reuters Health.

At the moment, with polio vaccines still being given throughout the world, poliovirus does not seem a good choice as a bioweapon. But an end to vaccination could make the virus "very attractive" to aspiring bioterrorists, according to Henderson, of the Johns Hopkins Center for Civilian Biodefense Studies in Baltimore, Maryland.

And on the more traditional public health front, truly eradicating polio may prove a difficult feat, Henderson writes in the January 1st issue of Clinical Infectious Diseases.

Poliovirus spreads from person to person, and replicates in the body in the throat and intestines. Most infections go unrecognized because they produce mild symptoms or none at all. But when the virus attacks nerve cells, it can lead to paralysis.

The introduction of the inactivated polio vaccine (IPV) in 1955, followed several years later by the oral polio vaccine (OPV), have sharply cut the number of polio cases worldwide each year. The last polio case in the US occurred in 1979.

US children currently receive the IPV, which is injected, because the oral vaccine, which contains a live, weakened virus, has been found to cause polio in rare cases. In the developing world, however, the oral vaccine is still used because it is easier to administer and considered more effective. IPV prevents a person from becoming ill, but does not prevent poliovirus from being shed in their feces--a major concern in countries with poor sanitation.

International health officials have said polio could be eradicated globally by 2005. But Henderson argued that even if this does happen, polio vaccination should continue.

He pointed to the difficulty of surveillance to ensure that the virus--which usually does not cause symptoms but is nonetheless transmissible--is indeed wiped out in developing nations.

In addition, there have been recent small outbreaks of paralytic illness caused by apparently mutated strains of OPV that had been shed from vaccinated people and then circulated among others who were not sufficiently protected.

In Hispaniola, which comprises Haiti and the Dominican Republic, a number of paralytic illnesses among children in 2000 were attributed to an OPV strain that had reverted to virulence. Such a scenario has also been blamed for a number of cases in Egypt in the late 1980s and early 1990s.

Henderson noted that the Hispaniola strain was found to have circulated for 2 years before causing any illness. He said that while it appears rare for shed OPV to mutate, spread and cause illness, these recent reports are a concern in terms of ending polio vaccination. No one knows, he noted, how long such a strain could persist silently in the environment and possibly infect the unvaccinated.

Coupled with the potential of the poliovirus as a bioweapon--or its possible accidental release from a lab--these factors argue strongly for keeping up polio vaccination, Henderson stressed.

He said that public health officials are currently debating how to handle polio once it is considered eradicated. One tactic might be to replace the oral vaccine with IPV for a while, before eventually stopping polio vaccination.
SOURCE: Clinical Infectious Diseases 2002;34:79-83.
http://abcnews.go.com/wire/Living/reuters20020129_512.html

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U.S. stockpiling drugs

Medical arsenal an anti-terror priority

Mike Toner - Staff
Tuesday, January 29, 2002
The nation's medicine chest for terrorist emergencies is getting a transfusion. Spurred by last year's terrorist attacks and anthrax mail scares, the National Pharmaceutical Stockpile has begun an urgent expansion of U.S. defenses against the chemical, biological and nuclear horrors that everyone hopes will never happen.
A total of $644 million is being spent this year to beef up the stockpile. That sharply exceeds the $50 million spent on the stockpile in each of the three years since it was created in 1999, when bioterrorism was considered by many Americans as something that couldn't happen here.
"We're now spending more on drugs than some countries in the world," said Steven Bice, director of the stockpile program at the Centers for Disease Control and Prevention in Atlanta. "And we're going to be expanding very rapidly this year."
In the months since Sept. 11, the stockpile of critical medical supplies has become an integral, but often unseen, part of the nation's new security precautions.
In preparation for the winter Olympic Games in Salt Lake City next month, for instance, the govern- ment has moved large quantities of medical supplies to the area. In addition to 26 miles of electrified fence, 1,000 security cameras and 9,000 law enforcement officers, there are warehoused supplies suitable for treating everything from another anthrax episode to a terrorist attack with mustard gas.
"We have a lot of antibiotics out there just in case," said Bice. "We're prepared, if necessary, to deal with hundreds of thousands of victims."
Some of the stockpile's recent acquisitions --- like $95 million worth of Cipro, enough to treat 12 million potential anthrax victims for 60 days --- are filling gaps exposed by recent acts of terrorism.
Others, like last month's purchase of millions of doses of radiation-blocking potassium iodide pills, are a response to perceived threats that never materialized. Health officials in some states, including Georgia and Illinois, have criticized that purchase because the government still has no plan for timely delivery of the pills in the event of an emergency.
Since Sept. 11, concerns about stockpile inadequacies have prompted officials to increase the number of ready-to-go pallets of drugs and medical supplies. CDC officials say 12 of the 50-ton "push packages" are warehoused in 10 cities, all capable of being delivered anywhere in the 50 states in 12 hours or less.
The contents of the packages, the warehouses, even the cities where they are located, are a closely held secret. "We are relying on a low profile to keep this precious resource out of harm's way," said Bice. "We don't really want people to know what we have. If they know what we have, they'll plan for what we don't have."
Stocking a stockpile without knowing what it's for or when it will be needed is like a chess game that makes anticipating the next move a matter of life or death.
Smallpox tops 'A-list'
In addition to direct funding for the stockpile, the U.S. Department of Health and Human Services will spend $428 million this year to buy insurance against something the government thought it would never need again.
The last known case of smallpox in the world occurred 25 years ago, but the virus is now considered a possible threat again. It's a potential terrorist weapon that could sweep through unprotected populations like wildfire. The government has enough smallpox vaccine to protect 15 million people, but over the next year it intends to buy enough new vaccine to inoculate every American.
"We have a priority list of agents that pose a risk to national security, and smallpox is at the absolute top of the A-list," said Bice. No plans have been approved to launch a nationwide vaccination program, but by early 2003, the vaccine will be stockpiled, just in case.

With serum acquired from the U.S. Army, the CDC also is preparing to build the first national stocks of anti-toxin to deal with any terrorist-instigated outbreaks of botulism, a foodborne bacterial toxin that causes paralytic illness.
Other potential sources of bioterror currently considered top priorities by stockpile managers are the organisms that cause plague, tularemia and deadly viral hemorrhagic fevers such as Ebola and Junin. For some, like Ebola, there are few options for treatment and little the stockpile can do to prepare for them.
"Burn agents pose another kind of problem," said Bice. "So many new compounds are coming into being around the world these days, there is no way to stock something for every one of them. We can only try to treat symptoms they have in common."
The list of most likely chemical and biological weapons was drawn up three years ago, when the stockpile was in its infancy. Now that bioterrorism is no longer just a theoretical concern, officials say a new road map for the program is overdue.
In March, CDC officials and independent health experts will meet in closed session in Atlanta with representatives of the U.S. intelligence community --- the Federal Bureau of Investigation, the Central Intelligence Agency and the military --- to draw up a new list of the most likely agents of terror and plans for dealing with them.
'Just-in-time' inventory
As the inventory of antidotes grows, so does the challenge of managing a stockpile that contains everything from sterile bandages to drugs for Bubonic plague.
Stocks of smallpox vaccine have to be refrigerated. Antibiotics must be replaced regularly as expiration dates expire. Regulations for treatment change. Ventilators and other hardware must be constantly kept in working order. And everything must be ready for delivery on a moment's notice.
To manage such a diverse stockpile, CDC officials have adopted a system akin to private industry's "just-in-time" inventory, which avoids having tons of perishable supplies sitting idle in warehouses until they are used or become useless.
The image of the stockpile as a vast, cavernous repository of medical necessities is a far cry from reality. The push packages, which must be ready for instant delivery, are only the tip of the iceberg. Eighty percent of the stockpile's inventory is scattered about the country in dozens of locations, managed by vendors in much the same way as a pharmacy manages its inventory.
Most of the Cipro used to treat 40,000 people during the recent anthrax episodes, for instance, came directly from supplies owned by the government but held in storage by the manufacturer, Bayer Co.
By leaving most of the stockpile it owns in corporate hands, the government hopes to build a stockpile of drugs that will never become outdated. As drugs near their expiration date, contractors will sell them for commercial use and restock with fresh material.
Keeping track of the far-flung stockpile is proving to be a major challenge. Despite a computerized tracking system, stockpile staffers must continually visit more than 30 sites to make sure the stocks of life-saving material are managed correctly.
It is a job that, in the age of terrorism, might never be finished. "It will probably take between $200 million and $300 million a year to maintain the stockpile," said Bice. "As long as we face threats like this, it will need an annual infusion of funds."
http://www.accessatlanta.com/ajc/epaper/editions/tuesday/news_c36574ef2464412d0036.html

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New York Times
January 31, 2002

Biologists Enlist In Anthrax Hunt

By The New York Times
Saying "it is very likely that one or more of you know this individual," the Federal Bureau of Investigation has asked the world's largest group of microbiologists for help in tracking down whoever mailed the anthrax that killed five people in the fall.
The group, the American Society of Microbiology in Washington, said yesterday that it mailed an electronic copy of the letter, from Van Harp, assistant director of the Washington field office of the F.B.I., on Tuesday to its 32,000 members in the United States. The society has 43,000 members worldwide.

In his letter, Mr. Harp gave away no secrets of the investigation but restated known facts and appealed to the membership for help.
Recent information, he said, "leads investigators to believe that a single person is most likely responsible for these mailings." The person, he said, has laboratory experience and probably has or had "legitimate access" to dangerous germs "based on his or her selection of the Ames strain," the highly virulent Bacillus anthracis in the attacks.
The killer, Mr. Harp added, "has the technical knowledge and/or expertise to produce a highly refined and deadly product."

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Washington Times
February 1, 2002
Pg. 1

'More Deadly' Attacks Seen

Rumsfeld outlines ways to fight terror

By Rowan Scarborough and Jerry Seper, The Washington Times

Defense Secretary Donald H. Rumsfeld announced yesterday an eight-point doctrine for fighting terrorism while warning that the United States faces potential terrorist attacks that are "vastly more deadly" than the September 11 strikes.
Mr. Rumsfeld said the war on terrorism has so far produced eight lessons. They include never ruling out ground forces, avoiding coalitions that dictate U.S. war policy and injecting special-operations troops as soon as possible into a conflict.
Armed with growing intelligence from Afghanistan about terror networks, Mr. Rumsfeld said the United States is vulnerable to new forms of terrorism, ranging from cyber-attacks to strikes on U.S. military bases abroad to ballistic-missile attacks on American cities.
"Our job is to close off as many of those avenues of potential attack as is possible," Mr. Rumsfeld said in a speech at the National Defense University, during which he defended President Bush's decision to boost the 2003 defense budget by $48 billion.
As his defense chief spoke, Mr. Bush was in Florida yesterday, continuing the tough talk against adversaries North Korea, Iran and Iraq — what he has referred to as the "Axis of evil." With his State of the Union speech on Tuesday, it marked the third straight day the president sought support for what he says will be a long war on terrorism, not a just one-war stop in Afghanistan.
"The rest of the world needs to be with us, because these weapons could be pointed at them just as easily as us," Mr. Bush said, referring to the potential of rogue states attaining weapons of mass destruction.
Mr. Rumsfeld's comments came the same day that The Washington Times reported that U.S. intelligence agencies have issued an internal alert that Islamic terrorists are planning an attack upon an American nuclear-power plant or one of the Energy Department's nuclear facilities.
A government official speaking on the condition of anonymity told the Associated Press that about two weeks ago, an intelligence advisory warned of a possible attack on a nuclear plant or other nuclear facilities. The warning, which did not specify a location, was based on questioning of a single person and was not otherwise corroborated, the official said. Nuclear-plant operators were notified.
Mr. Rumsfeld's remarks coincided with new indications that terrorists are considering a wide range of possible attacks. The FBI warned on Wednesday that al Qaeda terrorists may have been studying U.S. dams and water-supply facilities in preparation for new attacks. And in a report to Congress made public Wednesday, CIA Director George J. Tenet said basic diagrams of nuclear weapons were found in a suspected al Qaeda safehouse in Kabul. Other evidence uncovered in Afghanistan includes diagrams of American nuclear-power plants.
In his speech, Mr. Rumsfeld warned of new enemies who may attack in unexpected ways with weapons of increasing range and power. He appeared to be referring to ballistic missiles, a weapon the administration fears countries like North Korea, Iran and Iraq could either use against America or sell to terrorist groups.
"These attacks could grow vastly more deadly than those we suffered" on September 11, he said.
Mr. Rumsfeld's eight lessons in the war on terror are:
•Use all elements of national power, including law enforcement and covert military operations.

•Set up networks that allow all battlefield elements, such as commandos on the ground and pilots in the air, to communicate contemporaneously during a battle.
•Let allies announce how they are helping the United States.
•Do not let coalition-member countries veto U.S. war strategy. "Wars can benefit from coalitions of the willing but they should not be fought by committee," he said.
•Take the war to the enemy before, not after, it attacks the United States.
•Rule out nothing, including the use of ground forces.
•Inject American special-operations forces as soon as possible into a conflict. In Afghanistan, Green Berets helped turn the tide of battle by designating pro-Taliban military targets for pilots.
•Tell the American people the truth. "We need to tell them the truth," he said. "And when you can't tell them something, we need to tell them that we can't tell them something."
Mr. Rumsfeld's eight-point doctrine is in addition to Mr. Bush's overriding approach to the war on terror: the United States will make no distinction between terrorists and the states that harbor and sponsor them.
Meanwhile, FBI Director Robert S. Mueller III yesterday told reporters that "sleeper cells" of would-be terrorists could be operating throughout the world — including in the United States — and that they pose a potential threat for new strikes against U.S. and other targets.
During an informal press briefing at FBI headquarters, Mr. Mueller said the threat was confirmed through intelligence gathered by FBI, CIA and military officials in interviews with captured al Qaeda terrorists and a review of thousands of documents, videotapes and other material recovered in Afghanistan and elsewhere.
"Can I say there are none in the United States? No, I will not say that. Do I know for sure there are some in the United states? I would say I believe there are, but I cannot say for sure," Mr. Mueller said, when asked about the terrorist threat in this country. He said, however, there was little doubt that terrorist cells were operating overseas.
Mr. Mueller added that the possibility of new strikes and terrorist organizations being in the United States was why the FBI was "still on a very high state of alert, and we will be for some time."
He said the FBI, CIA and military officials have begun looking into a massive inventory of captured Taliban and al Qaeda documents and other materials, scanning them into computers and making them available to investigators on a secure digital network coordinated in Washington.
While he acknowledged that the U.S. military offensive in Afghanistan "has disrupted" the al Qaeda network, led by fugitive terrorist Osama bin Laden, the organization still has the ability to carry out new attacks.
Joseph Curl contributed to this report, which is based in part on wire service reports.

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New York Times
February 1, 2002

Rumsfeld Asserts Forces Must Take Risks And Think Creatively To Prepare For New Challenges

By Thom Shanker
WASHINGTON, Jan. 31 — Defense Secretary Donald H. Rumsfeld today urged "new ways of thinking and new ways of fighting" — and billions of dollars in new spending — to prepare for enemies he said may attack with weapons far deadlier than hijacked airliners.
The challenge in this new century is "to defend our nation against the unknown, the uncertain and what we have to understand will be the unexpected," Mr. Rumsfeld told military and civilian students at the National Defense University. "We have to put aside the comfortable ways of thinking and planning, take risks and try new things so that we can prepare our forces to deter and defeat adversaries that have not yet emerged to challenge us."
In his first address on his goal of transforming the military since the Sept. 11 attacks, Mr. Rumsfeld returned to themes of military modernization and cultural change within the Pentagon that proved divisive during a summer of budget and strategy debates. He said his challenge was not only to improve the nation's defenses, but also to make them nimble enough to counter the unanticipated adversary.

Mr. Rumsfeld said the "revolution in military affairs" he advocated was "about more than building new high-tech weapons;" it was about the creative use of existing weapons and personnel, like the Special Forces soldiers in Afghanistan who, riding horseback, called in precision missile strikes from Air Force, Marine and Navy jets.
He also sketched general outlines for shifts in Pentagon spending.
"The experience in Afghanistan showed the effectiveness of unmanned aircraft, but it also revealed how few of them we have and what their weaknesses are," he said.
"The department has known for some time that it does not have enough manned reconnaissance and surveillance aircraft, command-and- control aircraft, air-defense capabilities, chemical and biological defense units, as well as certain types of Special Operations forces," he added. "But in spite of the shortages of these and other scarce systems, the United States postponed the needed investment."
Mr. Rumsfeld said the 2003 budget, to be released on Monday and calling for $38 billion in new military spending and $10 billion in additional money for the war on terror, should include money to protect satellites and buy a new generation of earth-penetrating bombs that "could make obsolete the deep underground facilities where terrorists hide and terrorist states conceal their weapons of mass destruction capabilities."
Some of the changes will be institutional. To meet new responsibilities for domestic defense, Mr. Rumsfeld will in coming days present President Bush with a plan to reorganize the military's command structure.
The Pentagon's role in domestic defense will be managed by a new command that should be up and running by Oct. 1, said Gen. Peter Pace of the Marines, vice chairman of the Joint Chiefs of Staff, who accompanied Mr. Rumsfeld today.
The new Northern Command will oversee land, sea and air defenses, General Pace said. Even now, plans are being drafted for sending troops, at least temporarily, to the nation's borders to bolster federal agencies there, as advocated by President Bush in his State of the Union address Tuesday night.
General Pace gave few details about how the command would coordinate its work with the civilian Office of Homeland Security and other federal agencies. The Northern Command will probably be based near the nation's capital — although not too near, he said, because the Pentagon remains "concerned about some kind of an attack in and around Washington."
For decades, Mr. Rumsfeld said, the Pentagon has been adept at weighing the risks of near-term war presented by various adversaries, but to transform itself to overcome future threats requires a new kind of risk assessment: measuring the risks presented by enemies, the risks of not investing in personnel, and the risks of not modernizing forces — and allocating money accordingly.

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Washington Post
February 1, 2002
Pg. 18

U.S. Warns Nuclear Plants Of Terrorist Threat

Officials Say They Cannot Verify Al Qaeda Member's Description of Plan to Crash Airplane

By Eric Pianin and Walter Pincus, Washington Post Staff Writers
Federal authorities recently issued a chilling new warning that terrorists may be developing a plan to crash a hijacked commercial airplane into a nuclear power plant, but it was based on interviews with a single al Qaeda soldier who was taken into U.S. custody during fighting in Afghanistan two months ago.
A Jan. 23 Nuclear Regulatory Commission advisory to the nation's 103 nuclear power plants said that three terrorists loose in the United States were trying to recruit non-Arabs for a mission to fly an aircraft into a nuclear plant to be chosen by the team.
In the event the plane was intercepted by military aircraft, the advisory said, the hijacked aircraft would be diverted to crash into the nearest tall building.
Officials of the FBI and the White House Office of Homeland Security confirmed the details of the advisory, which was first reported by CNN, but cautioned that authorities were not able to corroborate the claims and are not sure of the al Qaeda member's credibility.

"You can't prove that it didn't have any basis," one senior law enforcement official said. "But everything we checked came up empty, and none of it could be corroborated in any way."
NRC spokeswoman Beth Hayden declined to discuss in detail her agency's decision to issue the latest security warning -- the 20th issued by the NRC to nuclear power plant operators since the Sept. 11 attacks.
"The advisories are a way for NRC to take intelligence information we get from the intelligence community and pass it along to the [power plant] licensees," she said. "Our power plants are still at the highest level of security and they will remain there for some time."
Gordon Johndroe, a spokesman for Homeland Security Director Tom Ridge, stressed that the threat described in the NRC advisory was uncorroborated and did not indicate a specific time or target. He characterized the warning as primarily a reminder to plant operators and others "that we cannot let our guard down."
One FBI official said the NRC advisory appears to be based on a second version of the original report that came to U.S. intelligence from an unidentified foreign country. "It was reintroduced in the American intelligence community, and it was not immediately recognized as the previous information before it was disseminated," the official said. "It took on another life."
Since Sept. 11, the FBI and Ridge's office have issued three general national alerts warning of the possibility of renewed terrorist attacks. The most recent one, issued Dec. 3 during the Muslim holy month of Ramadan, will expire March 11, after the conclusion of the Winter Olympics in Salt Lake City.
Those warnings have been largely based on sizable volumes of credible evidence that another assault could be imminent, and in recent weeks nuclear industry watchdog groups and lawmakers have issued repeated warnings that the nation's nuclear power plants and research laboratories have become prime targets for terrorist attacks.
In a new report, the CIA has warned Congress that the attacks on the World Trade Center and Pentagon and the subsequent anthrax crisis could well be followed by attacks using chemical, biological or nuclear devices.
Publicity about the mailing of anthrax-laced letters to Capitol Hill and major media organizations "has highlighted the vulnerability of civilian and government targets," the agency said in the unclassified version of its regular six-month report to Congress on the acquisition of technology relating to weapons of mass destruction.
The report notes that Osama bin Laden's al Qaeda and several other foreign terrorist organizations have long shown interest in such weapons, particularly since information and technology on them are "widely available, especially from sources like the Internet and the former Soviet Union."
As an illustration, the report notes that crude, handwritten diagrams describing essential components of nuclear weapons have been found in a suspected al Qaeda safe house in Kabul, Afghanistan, according to an unclassified version of a CIA report sent to Congress on Wednesday.
The diagrams explaining use of uranium and high explosives, along with other printed materials that were found, were described as information that was easy for a knowledgeable researcher to obtain, according to congressional and administration sources.
But the finding reinforced earlier reports that bin Laden and his senior officials "showed serious interest" in acquiring nuclear devices, one senior government official said yesterday.
Although the agency said it had "no credible reporting on terrorists successfully acquiring nuclear weapons or sufficient material to make them," it acknowledged that "gaps in our reporting . . . make this an issue of ongoing concern."
In 1988, bin Laden said acquiring nuclear or chemical weapons was "a religious duty," and since the early 1990s he has worked to develop such weapons. At one point his senior aides were in negotiations in Sudan to buy radioactive materials, according to a former al Qaeda member.
Staff writer Dan Eggen contributed to this report.

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Washington Post
February 1, 2002
Pg. 17

FDA Releases Anthrax Vaccine To Military, Approves More

By Justin Gillis, Washington Post Staff Writer

The Food and Drug Administration yesterday released 209,000 doses of a controversial anthrax vaccine to the military and approved a company's plans for making more, decisions that would allow the Pentagon to resume broad inoculation of U.S. troops.
The FDA said the company, BioPort Corp. of Lansing, Mich., had corrected numerous problems found in earlier FDA inspections and could produce a safe, effective vaccine. The agency said the 209,000 doses, made last year, had passed quality-control tests and would be safe to use in U.S. troops.
The decision is certain to renew a debate within the military about the vaccine, which many soldiers have blamed for health problems. Hundreds of soldiers, sailors and airmen have been thrown out of the military for refusing to take the arduous series of six shots, and at least 100 have been court-martialed.
The Defense Department yesterday welcomed the FDA's action and said it would mean a ready supply of vaccine "to protect our troops against the very real threat of anthrax." But the department did not immediately commit to resuming broad vaccinations of U.S. soldiers, saying only that it expects to announce a new vaccination policy "in the near future."
Vaccination of soldiers has been stalled largely because of a critical vaccine shortage caused by BioPort's problems. In the interim the nation had its first bioterrorism scare, involving anthrax -- a dramatic illustration that the germ poses a threat to national security. No one is sure how much skepticism about the vaccine remains among U.S. troops after the events of recent months.
"It's hard to say whether you'll see the same type of opposition in the ranks, because of the change in circumstances," said Mark Zaid, a Washington lawyer who has represented soldiers court-martialed for refusing the vaccine. "I'm sure you will see opposition, but it's unclear how widespread it will be."
In approving BioPort's production facilities and releasing vaccine lots, the FDA toughened the language of its warnings about the vaccine's potential side effects. It emphasized that pregnant women should rarely, if ever, receive the vaccine because an unpublished study suggests that it could heighten the risk of birth defects.
The same anthrax vaccine was recently offered as an experimental therapy to several thousand people in the Washington area, New York, Connecticut, New Jersey and Florida, most of them postal workers, who could have been exposed to anthrax spores during last fall's bioterrorism incidents. Most refused the vaccine, citing concerns similar to those expressed by military personnel.
All the anthrax vaccine stocks BioPort has made to date are owned by the Defense Department. But as the company increases production, BioPort said yesterday, wider use could be possible.
BioPort has no plans to supply the vaccine for broad civilian use, but expects to consult with federal health authorities about whether it should be supplied to groups such as police and firefighters that would be first on the scene of a bioterrorist attack. Some state officials pressed the federal government for vaccine for such workers.
Staff writers Spencer Hsu and Steve Vogel contributed to this report.

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Washington Post
February 1, 2002
Pg. B1

U.S. Doles Out Bioterrorism Funds

Region Receives $54 Million for Public Health Effort

By Spencer S. Hsu, Washington Post Staff Writer

The federal government released the first installment of the $1.1 billion targeted for hospitals and state and local health agencies, including $54 million for the Washington region, to help transform the overlooked science of public health into the country's first line of defense against bioterror.
Around the nation's capital, for instance, District officials propose converting D.C. General Hospital into a contagious-disease quarantine center; federal and local planners are updating the logistics of rushing up to 15 million doses of smallpox vaccine into the region within 12 hours; and the Army is working with area universities to expand a medical surveillance system to detect a covert germ attack.
In ways visible and otherwise, states and communities from coast to coast are bracing local health networks and hospital workers to respond to nuclear, chemical or biological assaults. The government has called on the nation's governors to draw up plans to prepare hospitals to handle "mass-casualty incidents," track suspicious diseases,

expand laboratory capacity and increase communication among the health industry, local health officials and federal agencies.

"We recognize that we have not as a country, nor as a District nor as a state, invested the necessary, scarce resources in our local and state public health systems," Health and Human Services Secretary Tommy G. Thompson said at a George Washington University news conference, where he appeared with Mayor Anthony A. Williams (D) and Wyoming Gov. Jim Geringer (R).

"We now have an opportunity to build a viable, vibrant strong . . . system that will prepare and protect our citizens for any attack that may come," he said.

The Health and Human Services Department released $200 million, with about one-eighth going to hospital emergency planning and most of the rest to public health agencies. The next $800 million will be released once states turn in public health plans March 15. The population-based awards range from $70 million for California to $6.5 million for Wyoming.

The District, counted as both a state and the seat of the federal government, will ultimately receive $12 million. Maryland will receive $19 million and Virginia $23 million. The money is part of a $2.9 billion bioterrorism package signed last month by the president, and Thompson said more will come in 2003.

"We do not sleep well at night," said D.A. Henderson, director of the U.S. Office of Public Health Preparedness. "We are afraid we will have another event. There are just too many other things that are threatening out there."

Across the region, planning for terrorism slowly gained momentum during the last decade, but September's strike at the Pentagon and October's anthrax crisis jolted public health officials into moving faster.

Government and hospital planners opened up 100 hospital beds in the Washington area for victims of the Pentagon attack. But they are now drafting contingency plans for a World Trade Center-scale calamity or an attack even larger that could create 10,000 or even 100,000 casualties, public health officials said.

The capital, of course, has long been seen as an potential target. The federal government has piloted several initiatives locally since 1996, stockpiling drugs and training emergency medical response teams, for example, and recruiting groups of specialized doctors and nurses.

The federal government has lately expanded the vehicle fleet of a 120-member National Medical Response Team, based at two Arlington County fire stations and staffed by Washington area firefighters and rescue workers. The team is equipped to treat up to 5,000 victims of a biological, chemical or radiological weapon. Thompson said similar teams are being organized and funded to cover 122 U.S. cities.

The U.S. Centers for Disease Control and Prevention is leading a task force of county, District and Maryland and Virginia state governments to speed emergency medical supplies to the capital region.

The U.S. Public Health Service keeps a portion of the National Pharmaceutical Stockpile, a 50-ton cache of medical supplies, at an undisclosed suburban Washington location. The supplies are supposed to be deployable within 12 hours of a crisis. The government is increasing the number of such stockpiles from eight to 12 nationwide, aiming to deliver up to 12 million anthrax treatment doses.

And the Walter Reed Army Medical Center has contracted with the George Washington University School of Public Health and the Johns Hopkins Center for Civilian Bioterror Response to develop a Washington Metropolitan Public Health Assessment Center, linking trauma centers, health clinics and schools to detect unusual symptoms. Federal health officials seek to develop a health alert network to link health officials overseeing 90 percent of the population.

The District is considering a plan to expand the number of 2,880 private hospital beds in an emergency. The government is studying an association proposal to mothball the abandoned D.C. General Hospital building as an isolation ward that can be activated with up to 400 beds in an emergency, D.C. Health Department Deputy Director Larry Siegel said.

For clinicians and hospital workers, advances in medical surveillance, antidote delivery and mobile medical resources are crucial. But they say that more must be done to improve communication between health care players, increase hospital capacity and anticipate disease outbreaks.

"There are all these systems that have been in existence, but there hasn't been a lot of coordination or collaboration between these systems," said Christopher Wuerker, chairman of emergency management at Washington Hospital Center, one of the region's three major hospitals.

Virginia, Maryland and District officials are working to create a single communication system among the jurisdiction's hospitals, said Lynn Frank, chief of Montgomery County's Public Health Service.

Hospitals are also working to balance their economic needs with government demands. "The issue is, if you get sick, you have to recognize that people go to the hospital. They go to their doctor," said Bob Malsen, chairman of the D.C. Hospital Association. "Private hospitals need to be recognized as the first responders."

Staff writer Avram Goldstein contributed to this report.

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New York Times
February 1, 2002

In Georgian Region, Race To Recover Nuclear Fuel

By William J. Broad

An international team of experts has flown to the former Soviet republic of Georgia to try to recover two highly radioactive objects that were found near a mountainous region controlled by Muslim rebels, officials said yesterday.

The objects, cylinders not much larger than cans of string beans, caught the attention of three woodsmen because the snow nearby was melting. The men lugged the surprisingly heavy objects to their campsite for warmth and soon became dizzy and nauseated. A week later, they had radiation burns. All three men are now in a hospital in the Georgian capital, Tbilisi, and one is fighting for his life.

The incident, which unfolded with little attention in December, has set off a monthlong international hunt through snowy mountains for the devices, which, it turns out, are abandoned Soviet nuclear batteries.

Eager to keep them out of the hands of terrorists, the recovery team from the International Atomic Energy Agency is planning to haul heavy lead shields into the Georgian woods and recover the radioactive devices this weekend, weather permitting. The cylinders are filled with strontium 90, which has a half-life of 28 years and binds readily with human bones.

"These sources are very powerful," said Abel J. González, director of the atomic agency's division of radiation and waste safety. "The good news is that the place is so remote, so difficult to reach, even for us. So I believe it is not so easy to reach for terrorists."

If terrorists try to take the radioactive cylinders, he added, "they will probably kill themselves."

The Soviets created and, when the union broke up, abandoned hundreds of the nuclear batteries in Georgia, most much less radioactive.

The two cylinders found in the snowy woods are unshielded, officials said. About four inches wide and six inches long, they are the cores of abandoned nuclear batteries that use natural radioactive decay and heat to produce electrical power, rather than actively breaking atoms apart, as nuclear reactors do.

During the cold war, American and Soviet military forces used nuclear batteries to power satellites in space and spy devices and clandestine radio gear on the ground.

In 1998 and 1999, four highly radioactive devices were recovered. But in the wake of the attacks on Sept. 11, American and international officials have developed new jitters about the remaining nuclear batteries and are taking aggressive steps to round them up.

"It's a bigger deal, post 9/11," said a Bush administration official. "We're trying not to do this in an alarmist way. We're taking reasonable steps to help the Georgians deal with these and other sources so they are appropriately controlled."

The fear is that the old batteries could be turned into radiological weapons, sometimes known as "dirty nukes." The poor cousins of nuclear arms, such weapons use conventional high explosives to scatter radioactive materials to poison an area, rather than harness their energy to create heat and a blast. Their effects on people can range from virtually nothing to radiation sickness to slow death.

The radioactive devices to be recovered are near Abkhazia, a mountainous province in western Georgia where Muslim rebels for years have been seeking to break away. "It is clearly a concern, the proximity to Abkhazia," said an official of the international atomic agency in Vienna. The radioactive devices are "right on that border," the official added. "It's a turbulent area."

The Georgian incident is reported in today's issue of the journal Science, which said the men are the first confirmed victims of lost Soviet nuclear batteries.

On Monday, American, French, Russian, Georgian and possibly German officials are planning to meet in Tbilisi to discuss the recovery effort and the lingering danger.

"It's a serious threat," Tom Clements, executive director of the Nuclear Control Institute, a private group in Washington, said of the material falling into terrorist hands.

Melissa Fleming, a spokeswoman in Vienna for the atomic agency, said the men made their discovery in early December. Georgian authorities, alarmed by the find and the men's growing sickness, contacted the agency on Christmas Eve to ask for help.

On Jan. 4, the agency sent in a medical and recovery team to Tbilisi. The doctors helped treat the men while the recovery team, Ms. Fleming said, linked up with Georgian officials and experts. However, the team was unable to reach the radioactive source because of heavy snow.
"The roads are primitive," she said. "It was impossible to reach the area. Now the weather has improved."
The delay let the team do more preparatory work, readying trucks, shielding and remote manipulators. "They're confident they'll be able to get there," she said. If all goes as planned, the recovery should be done by the middle of next week.
Each battery contains 40,000 curies of radiation, she said. By comparison, the accident at the Chernobyl nuclear power plant released about 50 million curies, and the accident at Three Mile Island discharged a minimal 50 curies.
Dr. González said the strontium 90 in the nuclear batteries was in a ceramic form and thus hard to pulverize into the kind of fine dust needed for the most effective terrorist weapons. Instead, he said, a high explosive would shatter most of it into chunks.
Dr. Frank von Hippel, a physicist who advised the Clinton White House and now teaches science policy at Princeton, also said there was little danger that a terrorist could turn the device into a weapon that would kill many people.
"Maybe one thousandth of the strontium would be shattered into dust that could be inhaled, unless you did something fancy," he said yesterday. "It's more a psychological weapon" that, if successful, would play upon popular fears about radiation, he said.
Officials at the agency said that so far 280 radioactive sources had been recovered in Georgia, most of them low level and only four containing the dangerous strontium 90. Dr. González said that an unknown, small number of the powerful ones are still missing.
At the Monday meeting, he added, officials would discuss the long-term problem of missing nuclear batteries.
"We're going to try our best to find the sources, bring them under control and put them in safe locations," Dr. González said. The agency is considering a proposal to let hospitals use some of the strontium 90 for cancer radiation treatments.

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Dallas Morning News
January 31, 2002

FBI Questions A&M Laboratory Workers About Anthrax Strain

Belated discovery of Texas link hasn't hurt inquiry, agency says

By Todd J. Gillman and Michelle Mittelstadt, The Dallas Morning News
Amid revelations that the anthrax sent through the mails last fall originated in South Texas, not Iowa, the FBI has questioned workers at the Texas A&M University lab that isolated the germ. A federal official said Wednesday that a dozen U.S. labs that have handled the spores remain under scrutiny.
But the FBI maintains that confusion over the roots of the anthrax has not slowed or set back the investigation. "It doesn't change where we are going," said FBI spokesman Bill Carter.
Senior Bush administration officials have privately said that little progress is being made in the anthrax investigation, which has involved hundreds of investigators from the FBI, the Postal Inspection Service and other agencies.
Although the FBI has run down all available leads, investigators are no closer to finding the culprit, they say.
For months, federal investigators thought that the strain of anthrax sent to the Senate, NBC anchorman Tom Brokaw and a Florida tabloid had been used in the American germ warfare program that was shut down in 1969, and that it had originated with a cow in Ames, Iowa, half a century ago.
But this week, they confirmed that the strain came from a South Texas cow in 1981. A veterinarian there sent tissue samples to a lab in College Station that forwarded spores to the Army's biodefense facility at Fort Detrick, Md. – using an address label provided by a USDA lab in Ames, Iowa.
The confusion cost energy and time. Dozens of investigators converged on Iowa State University last fall to determine the source of the material used in the mail attacks, and the Iowa governor sent state troopers and the National Guard to protect the school's germ collection.

"Certainly it was a waste of investigational time to have been probing around in Ames, Iowa, but I can certainly see how it would happen," said Dr. Johnny Peterson, a microbiologist at the University of Texas Medical Branch at Galveston. "When we have bacterial culture collections, we don't exactly stamp them."
Dr. Martin Hugh-Jones, a nationally known anthrax expert at the Louisiana State University School of Veterinary Medicine, said the revelation that the Ames strain came from Texas provides "an interesting footnote about how things get into labs, and how mistakes are made."
On the bright side, it limits the number of people investigators need to question.
"We have a deadline of 1981 before which this bug was not in anybody's laboratory," Dr. Hugh-Jones said. But, he added, "Investigative time is never wasted. Remember, you're ruling in and ruling out all the time. ... It just changes the weighting that you put on the evidence."
For now, the Ames strain retains its name, even though investigators and anthrax experts know that it started on a 26,000-acre ranch near Hebbronville, a few hours west of Corpus Christi. Veterinarian Michael Vickers took tissue samples from a dead 14-month-old heifer and sent them to the Texas Veterinary Diagnostic Laboratory in College Station.
The lab, part of Texas A&M, handles about 130,000 samples every year from sick or dead animals. Within the last week, FBI agents spoke with its executive director, Dr. Lelve Gayle, and several others who might have been able to reconstruct events from 1981.
Dr. Gayle said the lab destroys its samples after testing, and he wasn't worried that anyone at the lab is a suspect, since no one would have a clue about turning such material into a weapon.
"There's not a soul in this lab that could do that," he said.
The lab sent a culture of the anthrax to a biologist at the Army's germ defense laboratory in Fort Detrick, who was seeking new strains for vaccine testing. The germs were sent in one of the special containers the USDA provides to veterinary labs around the country, and it bore a return address of the National Veterinary Services Laboratory in Ames.
When the Army biologist and a colleague published a paper in 1986 about the vaccine tests, they referred to the "Ames strain" – one of the most virulent of 89 known anthrax varieties.
"I wondered how in the world it ended up at Fort Detrick," Dr. Vickers said.

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Economist
February 2-8, 2002
Weapons proliferation

Know Thine Enemy

Who's who in the mass-destruction business

"An axis of evil, arming to threaten the peace of the world." Thus President George Bush, this week, in his state-of-the-union address to Congress, describing America's expanded view of its enemies. Over recent weeks, the global war on terrorism has broadened to become a war on both terrorism and weapons of mass destruction. The objective, Mr Bush explained, is to "prevent regimes that sponsor terror from threatening America, or our friends and allies" with nuclear, chemical and biological weapons.
The president has made this point before. "Rogue states", he told the United Nations General Assembly in December, are also "the most likely sources of chemical and biological and nuclear weapons for terrorists." This week, by picking out three of the worst offenders against global anti-proliferation norms, North Korea, Iran and Iraq, he seemed to signal that some sort of action—whether diplomatic, economic or military—was soon to come. "I will not wait on events while dangers gather," he said. "I will not stand by as peril draws closer and closer."
Just a ruse to justify settling old scores with Iraq, which has long defied United Nations efforts to strip it of its illicit weapons of mass destruction? Or a ploy to help justify Mr Bush's decision to scrap the Anti-Ballistic Missile Treaty with Russia and build new missile defences? To many a seasoned anti-proliferation warrior, the president was simply stating the obvious: in a world of terrorism without constraint, tackling the proliferation of nuclear, chemical and biological weapons is just as urgent as ripping up the terrorist networks that might seek to make use of them.
As in any war, it helps to know the enemy. There are more than three of them. In a report published just before the Bush administration came into office, America's then secretary of defence, William Cohen, picked out "at least 25"

countries that either possess, or are trying to develop, weapons of mass destruction or the means to deliver them. Since chemical and biological weapons are outlawed, and the Nuclear Non-Proliferation Treaty (NPT) allows for only five official nuclear powers—the United States, Russia, China, Britain and France—plenty of governments are clearly up to no good.

Particularly troubling, however, are the seven countries long fingered by the State Department as sponsors of international terrorism: Iran, Iraq, Syria, Libya, Cuba, North Korea and Sudan. All but Iraq publicly condemned last September's assault on America. But as Mr Cohen's successor, Donald Rumsfeld, has argued, "It doesn't take a leap of imagination" to see the dangers in a list of regimes both so fundamentally unfriendly, and so keen to have the worst kind of weapons.

Concealing the stocks

Whether or not it finds itself an American target—for now, at least, the emphasis is on diplomacy—Iraq tops everyone's proliferation worry league. One reason is the sheer scale of its past clandestine weapons programmes; another is its determination to hang on to remaining secrets, particularly biological ones, despite years of sanctions and lost oil revenues.

After the 1991 Gulf war it was discovered that Iraq's president, Saddam Hussein, had spent perhaps $10 billion over a decade pursuing different ways of producing weapons-grade fissile material. Despite solemn NPT promises, Iraq had been only months away from producing a fission bomb, and had already tested a radiological device—a "dirty bomb" designed to spread contamination over a wide area by packing radioactive material around conventional explosives. Although International Atomic Energy Agency (IAEA) inspectors tracked down the key parts of this nuclear programme, the pool of trained scientists remains and Iraq has continued to try to procure weapons-related nuclear equipment on the black market. Left to its own devices, it would need only a few years to produce enough weapons-grade material for a fission bomb, and even less time if it found a willing supplier.

By now Iraq has had time, too, to rebuild the vast chemical-weapon stocks that the inspectors destroyed. When they left, three years ago, the inspectors were convinced that Iraq was still concealing the true scale of its production and weaponisation of VX, a potent nerve gas. It has also hung on to key elements of its biological programme, failing to account for a whopping 17 tonnes of biological growth medium. In the past it has produced a whole range of potent biological agents and toxins, including anthrax (using strains originally ordered from American germ banks) and botulinum toxin. Some of these it loaded into warheads and bombs before the Gulf war. It has experimented with the camelpox virus and it may also have the smallpox virus, a formidable killer.

A recent Iraqi defector, a civil engineer, described how he worked on nuclear, chemical and biological facilities concealed underground, sometimes under private houses and hospitals. He claims that equipment bought with UN approval has sometimes been turned over to the secret weapons programme, though that is hard to verify. Iraqi technicians are also thought to have continued working secretly on, and trying to buy parts for, longer-range missiles than are allowed under UN resolutions.

Although Iran signed the Chemical Weapons Convention (CWC) in 1997, it has declared no weapon stocks or production facilities. It is believed to have had both since at least the 1980s, when it was at war with Iraq. According to the Monterey Centre for Nonproliferation Studies, these include cyanogen chloride, phosgene and mustard gas, and some nerve agents. In November, at an acrimonious review of the Biological Weapons Convention (BWC), America publicly accused Iran (alongside Iraq and North Korea) of having illegally produced biological agents and turned them into weapons.

The greatest concern is over Iran's nuclear and missile ambitions. With Russian help, it is building civilian nuclear-power reactors that western intelligence officials fear could mask a clandestine weapons programme. Iran barely disguises its nuclear ambitions, and has shown a keen interest in the uranium-enrichment technology required for weapons-making.

Iran's declared nuclear facilities are all under IAEA safeguards, as required by the NPT. But like many countries, it has yet to submit to new checks that can pick up clandestine activity more effectively. The more Iran learns from its Russian helpers, the greater the danger that it could some day attempt a sudden break-out from the NPT, which requires only three months' notice of withdrawal.

Some Russian missile specialists helping Iran are sniffy about its technological prowess. Opinions in America's intelligence community are also divided, but a recent CIA-sponsored national intelligence assessment again predicted (over State Department dissent, it was said) that before 2015, Iran, along with North Korea and possibly Iraq, could have missiles capable of hitting the United States.

So far Iran has the 1,300km Shahab-3 medium-range missile, a liquid-fuelled rocket which relies extensively on outside help from Russian firms for guidance technology and from North Korea for rocket engines. Work has begun, this time with Chinese help on a different guidance mechanism, on a solid-fuelled version with a slightly longer range. It is not yet clear whether Iran has decided to move into the intercontinental-range missile business. If Russia

and China were to clamp down on firms providing technology and equipment, as promised, the missile programme would slow considerably. But Iran itself may be offering missile help to others, notably Syria and Libya.

Salesman to the world

Third, but by no means least, of this most troublesome trio, North Korea was caught out by the IAEA in 1992 producing more plutonium, from which nuclear weapons can be made, than it had owned up to. After a face-off, the regime in 1994 signed a framework agreement with the United States that froze (and should eventually dismantle) its plutonium production in return for a promise of two western-designed, less proliferation-prone reactors and interim supplies of heavy fuel oil. The first reactor was meant to start working next year, but North Korea's threatening behaviour, and the difficulties of talking to a hermit regime, have delayed the project by at least five years. Further delay is inevitable unless North Korea starts to honour its obligation to let inspectors delve into its past plutonium dabbling. Periodically, North Korea threatens to abandon the 1994 deal. It may already have enough material for at least a couple of bombs.

North Korea has not signed the CWC and, according to both American and Russian estimates, possesses large stocks of chemical weapons and their precursors, as well as nerve agents such as sarin and VX. It joined the BWC in 1987, but Russia's Foreign Intelligence Service has reported that it has a well-developed biological weapons research programme and has experimented with anthrax, cholera, plague and smallpox. America's Defence Department thinks some of these horrors may have been made into usable weapons.

North Korea's missile programme has literally come a long way. It now deploys and sells the 1,300km Nodong missile. And it alarmed the world in August 1998 by firing off a three-stage longer-range Taepodong-1 rocket, which it claimed was a satellite launcher but which America concluded was a ballistic missile. Although it has declared a moratorium on testing until 2003, it is also working on a Taepodong-2 which, it is feared, may be able to reach parts of the United States with a nuclear-sized warhead.

Desperate for hard currency to prop up its sickly regime, North Korea has demanded $1 billion a year from America to end its destabilising missile sales to countries such as Iran, Syria, Libya, Egypt and Pakistan. That demand was reportedly knocked down by the Clinton administration to a series of satellite launches and some food aid, but the potential deal still lacked a key component—how to verify that North Korea was honouring the bargain—when the Clinton team ran out of time. So missile sales still flourish. And while North Korea may have held off further flight tests, there are worries that Pakistan, Iran, Egypt and others working with it on missile development may be chipping in valuable data (and in Pakistan's case, possibly even nuclear tips too?).

Of the other miscreants on the State Department's list, Cuba remains outside the NPT, Libya and Syria are among the few states that have not signed the CWC (though Egypt is another, and Libya has said it will do so soon), and Sudan remains outside the BWC. Libya and, less energetically, Syria have both flirted with nuclear research; these two, plus Sudan, have biological research programmes; all are thought to have chemical weapons. Libya especially shows ever keener interest in developing ballistic missiles (in co-operation with North Korea, after previously working with Serbia and Iraq) with ranges that could threaten Israel and also parts of Europe.

Officially, more friendly regimes can pose a proliferation problem too. Egypt has stockpiled chemical weapons, may be developing biological weapons and has shown an interest in nuclear research that could be useful in a weapons programme. Its recent co-operation with North Korea on missile development follows previous work on a joint programme with Argentina and Iraq.

In the 1980s Saudi Arabia bought a number of medium-range missiles from China. It makes no sense to invest in expensive and far-flying rockets, unless they pack a big punch. The Saudis may have acquired chemical warheads, but senior officials have also visited Pakistan's missile and nuclear facilities.

For its part, Israel remains outside the NPT (although it has signed the Comprehensive Test-Ban Treaty), and is thought to have a stockpile of perhaps 200 or so nuclear weapons. It has signed the CWC, but not the BWC, and like many others would have the capability to produce both chemical and biological weapons. It holds such secrets close, but has been less tight with its missile know-how: ironically, the accuracy of the missiles China sold to Saudi Arabia in the 1980s, which can threaten Israel, had earlier been improved with Israeli help.

Both India and Pakistan publicly blasted their way across the nuclear threshold in 1998 but are more coy about the warheads they possess. Recent estimates by the Institute for Science and International Security are that India could have built up to 95 and Pakistan over 50, though both may well have fewer.

Pakistan is the greater proliferation concern, partly because its export controls are far more primitive than India's and partly because of suspicions that, one way or another, it could be helping possible bomb-seekers, such as the Saudis and North Koreans. There are concerns too about the loyalties of some of its scientists: two retired nuclear scientists have admitted to supposedly "academic" discussions with Osama bin Laden about nuclear, chemical and biological weapons. Pakistan's instability means that its nuclear stockpile may not be physically secure.

Having long denied that it had chemical weapon stocks, India reversed itself on joining the CWC in 1996, and is now obliged to destroy them. Pakistan is also a member, but has declared no such weapons. Both countries have signed the BWC, though both are thought to have military research programmes. They may also be tempted to hawk their military expertise about for profit. Both have new medium-range missiles. India's 2,000km Agni is said to be nearly ready for deployment, and its space-launch programme could be adapted to build intercontinental-range missiles; Pakistan has the 1,300km Ghauri, and is working on an Agni-matching Shaheen-2. India has had plenty of help over the years from Russia; Pakistan has had help from China and, now, North Korea.

The proliferation threat itself is changing in troubling ways. Smaller countries that yearned to be nuclear, such as Iran, Pakistan, North Korea and Libya, once depended entirely on help from a big-power sponsor, such as Russia or China, or a blind eye from America. Now they are increasingly developing technology ties to each other and pooling expertise. Such secondary supplier-chains make tracking, let alone blocking, proliferation much more difficult.

Careless friends

Meanwhile, export controls need tightening up all round. Although companies in Russia, China and North Korea have long been armourers-in-chief to some of the world's dodgier regimes, over the years America's friends have contributed to the danger. Plenty of European dual-use goods, as well as American ones, have ended up in clandestine military programmes overseas. Indeed, the black market for weapons technology, materials and know-how, like Mr bin Laden's terrorist network, has gone global—a fact that both he, and those governments anxious to get their hands on forbidden materials and technologies, have long sought to exploit.

Most attention over the past decade has focused on stemming the potential leakage of materials and disgruntled scientists from the former Soviet Union's sprawling weapons complexes. America now spends about $1 billion a year to that end. But the problem goes much wider. One of the original sponsors of the threat-reduction programme for Russia, Senator Richard Lugar, now calls for similar action on a global scale. "Every nation that has weapons and materials of mass destruction must account for what it has," he argues. Then, he says, it must safely secure it, and pledge that "no other nation, cell or cause" will be allowed to get near it.

As yet, there is no evidence that any state on America's list was deliberately feeding al-Qaeda's weapons habit. Yet whatever Mr bin Laden had been secretly working on, he needed to filch materials and expertise from government-run weapons laboratories around the world. Not all such leaks can be plugged. Testimony from the trial in New York of four bin Laden operatives convicted for the 1998 bombing of America's embassies in Kenya and Tanzania included the admission that al-Qaeda had been shopping around for uranium, in this case from South Africa. Mr bin Laden may eventually have succeeded in his quest: reports and documents from Afghanistan suggest he may have acquired enough material, possibly via associates in the radical Islamic Movement of Uzbekistan, to make a radiological device.

Clearly, the wider such nuclear, chemical and biological know-how spreads, the greater the danger that such weapons will one day be brandished by someone. All the non-proliferation treaties, bar the one for biological weapons, have compliance mechanisms. The Bush team has signalled that it will make greater use of these to investigate suspicious activity.

And then? Military force will not always be the ideal weapon for the anti-proliferation battleground. Iraq's nuclear and unconventional-weapons programmes were set back a bit by bombing in 1981 and 1998 respectively, but it is still in both businesses. When it comes to curbing such weapons, prevention—through patient diplomacy, export controls and painstaking intelligence work—is more cost-effective than a cure.

In some cases it has worked. Plenty of countries that are capable of building nuclear, chemical and biological weapons have not done so, or else have abandoned past programmes. Yet others have no intention of doing so. Defeating proliferation will be no easier than defeating terrorism. In this war, too, no end is in sight.

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Mai-Mai Accuse Kigali of Using Chemical Weapons

The Monitor (Kampala)
January 30, 2002
Posted to the web January 30, 2002

Traditional Mai-Mai warriors in the east of the Democratic Republic of Congo (DRC) on Monday accused Rwanda of using incendiary bombs containing napalm against them.

"We denounce the use of chemical weapons of mass destruction called napalm by Rwanda against the peaceful people of the east of the DRC," a brigade commander of the pro-government militia, Joseph Padiri Bulenda, said in a communiqué.
"These bombardments by helicopter took place... on December 15," the communiqué said.
A Mai-Mai spokesman in Kinshasa, Anselme Enerunga, said the accusation was slow in coming because of communication difficulties from the remote South Kivu Province, which is under the control of rebels backed by neighbouring Rwanda.
The Mai-Mai commander, Padiri Bulenda, called on the UN mission in the DRC and international organisations to come to the zone to observe the alleged damage caused.
A military observer said that only the Rwandan army had helicopters in the region.
UN envoy Amos Namanga Ngongi told AFP on Monday that the claim would be investigated.
"If this report is confirmed, it wouldn't be a ceasefire violation (among warring parties who signed a peace accord in 1999) but a serious violation of human rights," Ngongi said
http://allafrica.com/stories/200201300123.html

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New York Times
February 4, 2002
Pg. 1

Bush To Request Big Spending Push On Bioterrorism

By Judith Miller
Spurred by the spate of anthrax- filled letters that followed the Sept. 11 terrorist attacks, the Bush administration has decided to seek $11 billion over two years to protect the nation against biological terrorism, a far larger amount than even bio defense experts had expected.
Senior administration officials said President Bush's budget for fiscal 2003, which begins in October, would propose $5.9 billion to finance improvements in the nation's public health system that would help defend against the deliberate use of disease as a weapon. This request comes on top of $1.4 billion that Congress approved in the last fiscal year and a $3.7 billion supplemental request for countering bioterrorism that has also been approved.
The anthrax-tainted letters, which killed 5 people, infected 18 and put 30,000 Americans on antibiotics, were the first significant biological attack in the United States. Officials said they laid bare serious vulnerabilities, particularly in public health.
The new budget request reflects an effort to address those weaknesses. It also reflects the growing influence of the Office of Homeland Security, headed by Tom Ridge.
The budget increase, to $5.9 billion from $1.4 billion, is more than four times what the administration spent before the Sept. 11 attacks to counter the threat of bioterrorism.
"The anthrax letters showed us that even a relatively unsophisticated, small-scale attack can cause enormous disruption since our toolbox for countering such strikes is fairly bare," said a senior administration official. "And compared to the full destructive potential of biological warfare, the anthrax letters were a slingshot."
A breakdown of the bioterrorism budget request shows that President Bush wants to pump not only $1.8 billion into federal agencies involved in biodefense but also $1.6 billion into state and local health care systems that have suffered from years of low budgets and federal neglect.
The proposed budget provides $650 million to expand the national stockpile of vaccines and antibiotics that can be rushed to the scene of a disease outbreak, as well as billions of dollars to finance the construction of high-level containment laboratories and to conduct basic and applied research into new drugs, biodetectors and improvements in communications and other systems that link local, state and federal emergency preparedness authorities.
Dr. Anthony S. Fauci, the director of the National Institute of Allergy and Infectious Diseases at the National Institutes of Health, said the huge infusion of federal aid for basic and applied research was likely to be "transforming."
"The $1.75 billion request for the National Institutes of Health alone is the biggest single-year request for any discipline or institute in the history of the N.I.H.," Dr. Fauci said. "This is the first time that an extraordinary amount of money is being increased expressly for bioterrorism rather than for the general enhancement of capabilities." But, he added, because of this investment "we may all be healthier."

Dr. Fauci is expected to travel with President Bush to Pittsburgh on Tuesday to announce details of the administration's biodefense plans. The budget figures themselves will be formally announced on Monday.
Spending to protect the United States against germ weapons began increasing under President Bill Clinton, who said he considered a biological attack to be one of the gravest threats confronting the nation. While his administration began increasing budgets to counter the threat, many of Mr. Clinton's requests were cut by his own Office of Management and Budget or the Congress, which remained skeptical.
After the Sept. 11 strikes and the anthrax-laden letters in October, Mr. Ridge selected biodefense as one of the four crucial areas in domestic security that would receive huge budget increases, in addition to airport security. Large spending increases are expected for each of the other three areas: money for emergency response personnel and activities will rise from $291 million to $3.5 billion and spending on border security from $8.7 billion to $10.6 billion, while spending on information technology and security is expected to increase by some $700 million. In total, officials said, the domestic security budget for 2003 would increase from $19.15 billion to $37.7 billion.
Dr. Fauci said he was putting the final touches on a strategic plan for spending the new money at his institute, which is scheduled to receive a 61 percent increase. He said he would spend about $441 million of the $1.75 billion budget on basic research, some $592 million on drug and vaccine discovery and development, $194 million on trials of new drugs, and $522 million on new research laboratories at federal, university and industry facilities.
"You need appropriate facilities to work on dangerous microbes that can be used for weapons," Dr. Fauci said. "And we must jump-start our efforts to get new facilities and expertise into existing centers of biological excellence." He noted that there are now only four of the highest containment facilities, which require scientists to wear protective suits and respirators, in the United States.
The budget also calls for increasing the national supply of "push packs" — the preassembled packages containing life-saving antidotes, drugs and other medical supplies that can be sent to the sites of terrorist attacks or mysterious infectious outbreaks. In the last fiscal year, the national supply of push packs — each of which provides enough for two million people — rose from 8 to 12.
Some $600 million will go to the Pentagon, of which about $420 million will be used to speed efforts to develop better devices and systems to detect and identify the release of dangerous germs in the atmosphere or water. The rest will be spent on biodefense research and development, much of it at the United States Army laboratory at Fort Detrick, Md., which conducted biological weapons research before such weapons were banned in 1969, and now develops antidotes to and defenses against such pathogens. The laboratory has been heavily involved in trying to analyze the origins and source of the anthrax letters sent to the Senate and to media outlets in New York and Florida.
The budget also devotes $10 million to creating a team of epidemiological scientists at the Centers for Disease Control and Prevention in Atlanta who will work with their foreign counterparts to provide better information about mysterious disease outbreaks and share news about promising new drugs and antidotes. It earmarks another $20 million for the centers' Epidemiological Intelligence Service, established in 1951 as an early-warning system against biological warfare.

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Newsweek
February 11, 2002
Pg. 26

Analyzing The ‘Axis Of Evil’

Could rogue nations give doomsday arms to terrorists? Here’s how they stack up

By John Barry and Russell Watson

Rhetoric aside, "axis of evil" doesn’t mean much. Iraq and Iran are bitter enemies—they fought each other in the bloodiest war of the 1980s—and North Korea has little in common with either of them. Though all three "rogue nations" are thought to be developing weapons of mass destruction, no U.S. attack is imminent against any of them; good military options are as scarce as allies for such an undertaking. Instead, Washington faces challenges, and a few opportunities, from three very different countries:

Iraq

THREAT: Saddam Hussein’s minions are known to be working on nuclear, chemical and biological weapons. Iraq is trying to rebuild its missile industry, and United Nations arms inspectors still have not been allowed back into the

country. Although a few broken-down Palestinian groups are based in Baghdad, Iraq seems to have backed away from supporting terrorism.
OPTIONS: Washington is pressing for the return of the U.N. inspectors. It is also beginning to examine the possibilities for unilateral military action. "Think Osirak," says a Defense source, referring to the daring Israeli air raid that crippled an Iraqi reactor in 1981. An even more popular buzzword in the administration these days is "regime change." But internal opposition is weak, and if Saddam is to be overthrown, a massive military operation would be required.
PITFALLS: Pentagon planners think a drive on Baghdad would need well over 100,000 U.S. troops—and perhaps twice that many. So far, no allied soldiers or bases in the region are on offer. Even limited airstrikes on weapons-development facilities may not be feasible, since targets haven't been located. And if Saddam accepts the return of U.N. arms inspectors, regime change in Iraq presumably would have to be postponed.

Iran

THREAT: Tehran supports active terrorist groups, such as Hamas. And it is working on nuclear, chemical and biological weapons and missile technology. Such efforts may be mainly defensive, driven by fear of a resurgent Iraq.
OPTIONS: The Clinton administration tried to improve relations with Iran's relatively moderate head of government, President Mohammed Khatami. The results were mixed at best. The religious leaders who still have the final say over Iranian policy continue to regard America as the Great Satan. For its part, the Bush administration is generally more skeptical than Clinton was about the prospects for diplomatic fence-mending. But Bush's State of the Union address was harder on Iran's unelected mullahs than on Khatami's elected government. Bush has offered Iran a choice between cooperation and confrontation, hoping to strengthen the reformers. Since most of the ruling theocrats are elderly, time would seem to be on the side of the moderates, who are strongly supported by the country's restless youth. At the Pentagon, meanwhile, there appears to have been no serious exploration of U.S. military options against Iran.
PITFALLS: The only solid connection among the three nations in Bush's "axis of evil" is that Iran has been buying missile technology from North Korea. Now it is trying to build on that base and develop its own missile industry. If the developers are left undisturbed, Iran could have a prototype long-range ballistic missile by 2015, or perhaps even sooner, according to U.S. intelligence estimates.

North Korea

THREAT: The CIA believes North Korea has enough material to make one or two nuclear weapons. Pyongyang also menaces South Korea with an Army of nearly 1 million men, backed by thousands of tanks and warplanes. The North is thought to have about 50 missiles capable of carrying nerve gas to Seoul, the South's capital. So far, North Korea's intransigent leader, Kim Jong Il, has stalled the conciliatory "sunshine policy" of South Korean President Kim Dae Jung.
Proliferation is another Pyongyang specialty. Missiles and other weapons are about the only hard-currency exports in famine-ridden North Korea. Pakistan is a major buyer of North Korean missiles.
OPTIONS: During the past decade, Washington and Seoul have had some success in moderating Pyongyang's behavior through negotiation. North Korea agreed to suspend its nuclear program in 1994 and its missile tests in 1999. In 2000 it formally promised to join in the fight against terrorism. The price for this improved behavior included the promise of a dialogue with the United States and a relaxation of economic sanctions. No headway has been made in the dialogue since Bush took office. If Washington opts for preemptive action against the North, it can draw on invasion plans that have been refined over the past 50 years—and dramatically updated, U.S. sources say, over the last five to seven years.
PITFALLS: The plans all assume that North Korea starts a war by invading the South and more or less obliterating Seoul; then, with heavy support from the United States (which already has 37,000 troops stationed on the peninsula), the defenders throw back the attackers and sweep all the way to Pyongyang. A first-strike American attack could be aimed at changing the regime in North Korea. But the prospects for a pre-emptive U.S. move against the North are not good, given the likelihood that Seoul would oppose any such effort. U.S. forces would need air bases in the South—which would almost certainly be denied to them.
Bottom line: cornering a rat can be dangerous. A U.S. military assault on North Korea—as on Iraq or Iran—could end up provoking precisely the kind of catastrophe that Washington wants to avoid. Going forward won't be easy.
With George Wehrfritz in Tokyo and Gregory Beals in Seoul

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Birmingham (AL) News
February 2, 2002

Governor Vows He'll Sue To Stop Army Incinerator

By Katherine Bouma, News staff writer

Gov. Don Siegelman will file suit next week to stop the Army from firing up its chemical weapons incinerator before the federal government releases $40.5 million for community safety, he promised Friday.

"I want to make it perfectly clear to the federal government that they are not going to even so much as strike a match within the borders of Alabama until they meet their obligation under this agreement," Siegelman said at a news conference in Brother Bryan Park.

The Army plans to start destroying 2,254 tons of World War II-era chemical agents at its Anniston incinerator in July. The $1 billion incinerator is completed and test burns have begun, an Army spokesman said.

The obsolete but still deadly weapons stored at the depot include mustard, sarin and VX gases, which must be destroyed under terms of an international chemical weapons treaty. Anniston is one of eight sites in the United States where the nation's aging supply of the gases is stored.

The Pentagon had committed to spending $40.5 million for equipment and other safety measures, but the Federal Emergency Management Agency has refused to provide the money, arguing in particular against buying protective hoods for the incinerator's nearest neighbors.

Friday, the agency announced it was releasing $25 million for planning, public education, response plans and equipment. A statement from FEMA said the other $15.5 million is expected as soon as it can "ensure the entire allocation will be used for proven protective measures in the state."

A spokesman said FEMA is not releasing money for the hoods because their use has led to civilian deaths in tests in Israel.

"FEMA's job is to ensure the money is spent for the health and safety of the community, and there is some question about a portion of this money and how it will be used," said spokesman John Czwartacki.

Siegelman said FEMA was involved with the talks between federal and state officials that included the agreed-upon hoods and the total funding.

"FEMA apparently disagrees with some of the items that the Department of Defense agreed to," said Ted Hosp, legal adviser to the governor. "How they work that out is not the governor's concern."

Hosp said he plans to file suit in federal court but would not say on what grounds or what agencies he will target.

Siegelman said he also has notified the Alabama Department of Environmental Management that he wants to slow the permitting process so that the incinerator cannot begin until safety measures are in place.

An ADEM spokesman said that before burning begins in July, the Army must modify its permit.

"I'm not sure how the governor's authority may impact it," said Clark Bruner, department spokesman. "We feel that the permits we've issued within our authority are protective of human health and the environment."

Army spokesman Mike Abrams said incinerator engineers have been working carefully to meet all state requirements and expect to continue to receive permit changes as needed.

"We are working to be sure that we are responsible members of the community," he said. "We are doing our level best to be sure our facility is fully prepared to begin the safe disposal of chemical weapons late this summer."

Now, the Army is conducting test burns with weapons that contain no explosives and use such chemicals as dry-cleaning solution to simulate nerve gas.

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Baltimore Sun
February 1, 2002

Hopkins Dean Rues Smallpox Research

Sommer criticizes Army monkey tests

By Scott Shane, Sun Staff

The dean of the Johns Hopkins Bloomberg School of Public Health has denounced research being conducted by Army scientists to infect monkeys with smallpox, saying that it "morally undermines" the war against terrorism and sets a dangerous example for other countries.

Dr. Alfred Sommer, who helped battle a smallpox epidemic in Bangladesh three decades ago, has contacted other academic leaders in public health and urged them to call on the government to halt the research and lead a campaign to destroy all remaining stocks of the virus. He fears proliferating smallpox research could reverse the eradication of smallpox as a disease in the late 1970s, considered one of the triumphs of public health.

"We don't need this virus, which has caused so much horror and suffering for centuries," Sommer said in a telephone interview from Bangkok, Thailand, where he is attending a meeting. "It's one thing having the virus locked in a box - that's scary enough. Giving it to monkeys is another. It's just a terrible idea. ... If we don't lead a charge to get rid of smallpox, every country's going to scurry to build up its stocks."

Another public health dean, Dr. Allan Rosenfield of Columbia University's Mailman School of Public Health, took a similar view.

"I think the fact that the military is working with smallpox, no matter what we say, will raise the specter that it could be used as a weapon," Rosenfield said. "If we're doing research, other countries will say, 'Why can't everyone else?'"

In experiments during the past two years led by Peter B. Jahrling of the Army's biodefense center at Fort Detrick, scientists for the first time fatally infected monkeys with smallpox. The work was conducted at the federal Centers for Disease Control and Prevention in Atlanta, where one of only two known stocks of smallpox is stored; the other is in Russia.

Supporters of the work by Jahrling, a virologist who has worked at the U.S. Army Medical Research Institute of Infectious Disease in Frederick for 29 years, say it is an important breakthrough because it creates the first animal model for smallpox, which in nature causes serious illness only in humans. They say animal experiments are crucial for the development of tools for early diagnosis, safer vaccines and new antiviral drugs.

Informed yesterday of the criticism, Jahrling strongly defended the research, which involves CDC as well as Army scientists and has been approved by the World Health Organization.

"I think the U.S. government has made the decision that defense against smallpox as a bioterrorist weapon is a national priority," Jahrling said. "I think it's our moral obligation to bring our best scientific resources to bear on the problem."

He noted that the existing vaccine could be fatal for people with weakened immune systems, including people with AIDS or those taking post-transplant medication. As for the moral arguments for eliminating virus stocks, he said: "The guys who fly airplanes into buildings don't listen to moral arguments."

The fierce disagreement ignited by the monkey research is the latest phase of a battle fought in scientific and government circles since the 1970s.

"It's almost a theological debate," said Jonathan B. Tucker, a bioterrorism expert at the Monterey Institute of International Studies and author of Scourge: The Once and Future Threat of Smallpox.

On one side are the "retentionists," he said, who believe the United States must keep its smallpox samples for limited research to improve medical defenses, especially because some countries or terrorist groups may be keeping secret smallpox stocks. On the other are "destructionists," who argue that the world should make the attempt to eliminate smallpox from the Earth once and for all.

Until recently, the pre-eminent destructionist was Dr. Donald A. Henderson, Sommer's predecessor as public health dean, who led the World Health Organization's campaign to eradicate smallpox. But Henderson has had to mute his views since joining the Department of Health and Human Services as the top bioterrorism official last fall, shortly before the Bush administration announced that it would preserve the CDC's smallpox stock indefinitely for research.

Contacted yesterday, Henderson said he is "in a difficult position" but is obligated to support the decision for retention. He noted, however, that the last two cases of smallpox, one of them fatal, occurred in 1978 as a result of a leak from a research laboratory in Birmingham, England.

"There is a risk of virus escaping from a lab," he said. "Is it small? We hope it's zero, but it never is."

Henderson said there are serious questions about the usefulness of Jahrling's animal research. Because the experiments involved injecting monkeys with a large dose of smallpox virus, rather than inhaling virus particles as occurs in human transmission, the cases may not be appropriate for testing drugs and vaccines, he said.

Smallpox, which kills about one in three people infected and leaves survivors blind or disfigured with facial scars, was one of the great killers in human history. For at least 3,000 years, epidemics swept relentlessly through human settlements, causing particular devastation when European explorers brought the virus to the New World.

Sommer, who has written a letter to the editor that has not yet been published criticizing the monkey research, recalls witnessing "a classic epidemic" in Bangladesh in 1972. What he saw shapes his position today.

"The difference is seeing tens of thousands of people suffering, knowing there's not a thing you can do for them and knowing a third are going to die," he said. Now, he added, "We have the genie quite literally in a bottle."

Others aren't so sure. Dr. Frank M. Calia, an infectious disease specialist and vice dean of the University of Maryland School of Medicine, said the anthrax attacks of last fall have changed his view.

"Before October, I would have said, 'Get it off the planet,'" said Calia, who once worked in the Army's biological defense program at Fort Detrick. "But the anthrax experience has made me circumspect. ... Based on the current climate, and the fact that we're basically at war, I think we owe it to the American people to learn as much as possible about this virus."

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