

# Bio Terror Bible

## EXPOSING THE COMING BIO-TERROR PANDEMIC

**BIOTERRORBIBLE.COM:** In the aftermath of man-made bio-terror generated pandemic, the government and media will be feeding the public any number of different scapegoats allegedly responsible for the pandemic that will likely kill millions.

While some scapegoats (see below) are indeed plausible, it is much more likely that the live pathogens or agents responsible for the pandemic will likely be dispersed via A) [chemtrails](#) by government [airplanes or drones](#), B) by the [U.S. Postal Service](#) via [Tide detergent samples](#), C) by the government and medical establishment via [tainted vaccines](#) or by D) the portable petri dish commonly known as the [Trojan condom](#).

Aside from the propaganda linking Africa to bio-terror (see below), the [Africa Anthrax attacks](#) occurred roughly one month after the [9/11 Anthrax Attacks](#) in America. The 2001 attacks set-up Africa as a future bio-terror scapegoat and exhibited the earmarks of a false-flag/state sponsored terror operation.

**Bio-Terror Scapegoats:** [Africa](#), [Agriculture \(Food & Animals\)](#), [Airports & Air Travel](#), [Al Qaeda](#), [Bio Labs](#), [Bio-Terrorism Is Easy](#), [Bio-Terrorists \(Bio-Hackers\)](#), [Black Market](#), [Bugs & Insects](#), [Censorship / Lack Thereof](#), [Domestic Terrorists](#), [Exotic Animals \(Zoonosis\)](#), [Government Ineptitude](#), [Mail-Order DNA](#), [Mexico](#), [Missile Shield Failure](#), [Mutation](#), [Natural Disaster](#), [No Clinical Trials \(Vaccines\)](#), and [The Monkeys](#).

**Title:** [Outbreak \(Film\)](#)

**Date:** [March 10, 1995](#)

**Source:** [Wikipedia](#)

**Abstract:** [Outbreak](#) is a 1995 American [disaster film](#) starring [Dustin Hoffman](#), [Rene Russo](#), [Morgan Freeman](#), and [Donald Sutherland](#). The film was directed by [Wolfgang Petersen](#). In addition, [Outbreak](#) features [Cuba Gooding, Jr.](#), [Kevin Spacey](#), and [Patrick Dempsey](#).

The film focuses on an outbreak of a fictional [Ebola](#)-like virus called Motaba in [Zaire](#) and later in a small town in the United States. Its primary settings are government disease control centers [USAMRIID](#) and the [CDC](#), and the fictional town of Cedar Creek, California. [Outbreak](#) shows how far the military and civilian agencies might go to contain the spread of a deadly contagion.

The film was released on March 10, 1995 and proved a solid [box office](#) success. The film was nominated for various awards but failed to garner any major award nominations. It also raised various "what-if" scenarios: media outlets began to question what the government would really do in a similar situation and if the CDC has plans in case an outbreak ever does occur. A real-life outbreak of the Ebola virus occurred in Zaire only a few months after the film was released ([Wikipedia, 2012](#)).

**Title:** Governments Brace for Bioterrorist Attacks

**Date:** November 9, 2001

**Source:** [High Beam](#)

**Abstract:** Following the confirmation of one anthrax case and several suspected others in Nairobi last week, the governments of the three East African states are pulling all stops to pre-empt bioterrorist attacks.

Kenya and Tanzania are still smarting from the 1998 bomb attacks on the American embassies in Nairobi and Dar es Salaam, which left over 250 people dead and about 5,000 others injured.

The action by the three countries follows the suicide hijack attacks in New York and Washington, in which over 6,000 people, including 25 Africans, are believed to have perished ([High Beam, 2001](#)).

**Title:** SUDAN: US Criticised Over Biological Weapons Alert

**Date:** December 11, 2001

**Source:** [IRIN](#) (Integrated Regional Information Networks)

**Abstract:** The London-based advocacy group European-Sudanese Public Affairs Council on Monday expressed deep concern at what it called "unsustainable and deeply irresponsible" allegations by the US government that Sudan is involved in developing a biological weapons programme.

The United States was particularly worried about existing or planned "offensive biological weapons programmes" or non-compliance with obligations under the Biological Weapons Convention in six named states, including Sudan, the US Under Secretary of State for Arms Control and International Security, John R Bolton, told an international arms control meeting in Geneva, Switzerland, on 19 November.

"We are concerned about the growing interest of Sudan [a non-party to the Biological Weapons Convention] in developing a biological weapons programme," he stated. See <http://www.state.gov/t>

ESPAC said in a statement on Monday that Bolton's claim was "unsubstantiated, deeply irresponsible and... very much in keeping with the previous Clinton Administration's failed attempts to isolate Sudan from the international community by making similarly unsubstantiated claims."

The Council, [www.espac.org](http://www.espac.org), describes itself as a privately-funded organisation which runs advocacy, education and media projects designed to work towards a better understanding of the complexities of the Sudanese situation, and to encourage peace and reconciliation in the country.

It also challenges what it considers "inaccurate and questionable coverage of Sudan and Sudanese affairs," and has openly criticised leading international media - including the BBC and respected American and British newspapers - for what it has variously described as inaccurate, irresponsible or prejudiced reporting.

Bolton's comment on behalf of the US Arms Control and Disarmament Agency was putting US political policy and expediency before science with regard to Sudan, just as it had in making "inaccurate and misleading claims" which led to the 1998 US attack on the al-Shifa medical factory in Khartoum in 1998 in connection with its alleged manufacture of chemical weapons, according to ESPAC.

Bolton's unsubstantiated claims were not just unreliable little more than propaganda dressed up as "intelligence", it said in Monday's statement.

"For its own credibility on this serious issue, the Bush administration cannot allow its reputation with regard to arms control and non-proliferation to be sullied for the sake of cheap propaganda attacks on Sudan," it added.

At the 19 November meeting, Bolton argued for a stronger international regime for biological weapons control, saying that Sudan, Iraq, North Korea, Iran, Syria and Libya were among those states which had not been dissuaded from an interest in biological weapons by the existing Biological Weapons Convention.

Prior to 11 September, Bolton said, he would have avoided the approach of naming states in public, but the world had changed since then and so must the "business-as-usual approach" to arms control given "the potential use of biological weapons by terrorist groups, and states that support them."

The US envoy said legislators needed to look beyond traditional arms control measures to deal with the complex and dangerous threats posed by biological weapons. He proposed stricter measures to assure compliance of prohibitions on the development, production, acquisition, stockpiling or retention of biological weapons, and their delivery systems.

Countering those threats would require a full range of measures: tightened export controls, an intensified non-proliferation dialogue, increased domestic preparedness and controls, enhanced biodefense and counter-bioterrorism capabilities, he said.

The measures proposed by the US on 19 November, would, if adopted, contribute significantly to control access to dangerous pathogens [disease-causing agents], deter their misuse, punish those who misuse them, and alert states to their risks, according to Bolton ([IRIN, 2001](#)).

**Title:** Planes to Be Sprayed Before Departure

**Date:** February 14, 2002

**Source:** [All Africa](#)

**Abstract:** Deadly insects such as mosquito will no longer fluke flights into or out of Uganda.

All planes passing through Uganda or other tropical countries are to be sprayed with insecticides, a health ministry official has said ([All Africa, 2002](#)).

**Title:** Death Sought for Animals In Monkeypox Case

**Date:** July 3, 2003

**Source:** [New York Times](#)

**Abstract:** Moving to prevent monkeypox from reaching wild animals in the United States, the Centers for Disease Control and Prevention recommended yesterday that all 850 animals from a contaminated shipment of exotic pets from Africa in April be destroyed, along with all prairie dogs that might have been exposed to them.

The agency warned pet owners not to release any sick or potentially exposed animals into the wild.

Other mammals in homes or pet shops that might have been exposed should be killed or should be quarantined for six weeks and watched for symptoms — fever or cough, cloudy or crusty eyes, swollen lymph nodes or rash, the agency said. Bodies should be burned, not buried or thrown out, and the premises disinfected, it added.

An outbreak of monkeypox tentatively traced to a Gambian giant pouched rat in the shipment has caused 81 confirmed or suspected cases in humans, mostly in the Midwest. Its spread seems to have stopped, and no cases of human-to-human transmission were found. But the disease spreads easily to rodents.

A spokesman for the agency acknowledged that the authorities did not know the whereabouts of many of the estimated 850 animals in an April 9 shipment from Ghana to Texas, nor do they know if any were released.

"That's one of the things we're really worried about," said David Daigle, a spokesman for the agency. "Tracking them all down is darn near impossible."

Nonetheless, a "very aggressive" effort is on now, said Dr. Martin Cetron, the agency's deputy director for quarantine. But many were sold at informal pet swaps, he said, "and then things end without a good paper trail."

Monkeypox — so called because it was first diagnosed in monkeys — is a less virulent cousin of smallpox, and vaccination against smallpox appears to protect against it. There were no deaths in the June outbreak, but in West Africa, up to 10 percent of cases are fatal.

At the beginning of the outbreak, the centers and the Food and Drug Administration banned importing of all African rodents and the sale or distribution of six species from the April shipment: tree squirrels, rope squirrels, dormice, Gambian giant pouched rats, brush-tailed porcupines and striped mice. They also banned the transport, sale or release of prairie dogs.

Yesterday's directive was ambiguous about what constituted contact with an infected animal, and it confused some pet shop owners. Details of the directive are at [cdc.gov/ncidod/monkeypox/quarantineremoval.htm](http://cdc.gov/ncidod/monkeypox/quarantineremoval.htm).

Eileen Whitmarsh, an owner of Rainbow Pets in Shorewood, Wis., who caught monkeypox from a prairie dog in her store, mistakenly thought the order meant she had to kill the 60 apparently healthy hamsters, rats and gerbils she now has quarantined.

"Our animals are checked by the Health Department daily, and they are having babies," Ms. Whitmarsh said. "Sick animals do not have babies."

David Crawford of Boulder, Colo., acting director of the Prairie Dog Coalition, which defends wild prairie dog habitats and opposes keeping the animals as pets, called the euthanasia suggestion "a classic case of blaming the victim."

"This problem was caused by human beings, and it's easy for us to take the 'kill them all' approach," he said. "But if this was a human population, we'd be aghast at an order to kill. This calls for quarantine and testing, not euthanasia."

Two weeks ago, at a meeting of the Advisory Committee on Immunization Practices at the centers, Dr. Gregory A. Poland, a committee member and the chief of vaccine research at the Mayo Clinic in Minnesota, asked why the agency had not already ordered all possibly exposed animals killed.

An official of the centers replied that people became attached to their pets.

"So what?" Dr. Poland said. "I know what we'd do if this was an outbreak of mad cow disease. We'd kill the whole herd" ([New York Times, 2003](#)).

**Title:** U.S. Disease Researchers Begin Ebola Vaccine Trial

**Date:** November 24, 2003

**Source:** [Scoop News](#)

**Abstract:** Trial begins as new disease outbreak occurs in Republic of the Congo

A trial of the first experimental vaccine to prevent infection from the deadly Ebola virus began November 18 at the National Institute for Allergies and Infectious Diseases (NIAID) in Bethesda, Maryland.

The vaccine contains no infectious material from the Ebola virus, but was synthesized using modified, inactivated genes from the pathogen. According to a NIAID press release, 27 volunteers will be participating in the one-year trial in which researchers will seek to ascertain the safety of the vaccine.

The vaccine trial begins as the World Health Organization reported the occurrence of 11 cases of Ebola appearing in the Republic of the Congo November 17. Previous outbreaks in Africa have killed up to 90 percent of those infected. Considered one of the most deadly diseases known to medical science, Ebola' symptoms are a sudden onset of fever, weakness, muscle pain, headache and sore throat. This is followed by vomiting, diarrhea, rash, limited kidney and liver functions, and both internal and external bleeding.

"An effective Ebola vaccine not only would provide a life-saving advance in countries where the disease occurs naturally, it also would provide a medical tool to discourage the use of Ebola virus as an agent of bioterrorism," said NIAID Director Anthony S. Fauci, M.D.

**Following is the text of the NIAID press release:**

(begin text)

National Institute of Allergy and Infectious Diseases  
National Institutes of Health

Nov. 18, 2003

**NIAID EBOLA VACCINE ENTERS HUMAN TRIAL**

The first human trial of a vaccine designed to prevent Ebola infection opened today. Scientists from the Vaccine Research Center (VRC) at the National Institute of Allergy and Infectious Diseases (NIAID), one of the National Institutes of Health (NIH), designed the vaccine, which was administered to a volunteer at the NIH Clinical Center in Bethesda. The vaccine does not contain any infectious material from the Ebola virus.

Just three years ago, VRC Director Gary Nabel, M.D., Ph.D., together with a team of scientists from the VRC and the Centers for Disease Control and Prevention, described an experimental Ebola vaccine that fully protected monkeys from lethal infection by the virus. One component of that vaccine will now be assessed for safety in human volunteers. The trial vaccine, a type called a DNA vaccine, is similar to other investigational vaccines that hold promise for controlling such diseases as AIDS, influenza, malaria and hepatitis.

"This trial is further evidence of the ability of the VRC to rapidly translate basic research into tangible products," notes NIAID Director Anthony S. Fauci, M.D. "Our accelerated effort to understand and combat Ebola infection is part of the NIAID commitment to its biodefense mission. An effective Ebola vaccine not only would provide a life-saving advance in countries where the disease occurs naturally, it also would provide a medical tool to discourage the use of Ebola virus as an agent of bioterrorism."

Outbreaks of Ebola in Africa kill up to 90 percent of those infected. No effective treatment exists for this highly infectious disease, which causes extensive internal bleeding and rapid death. According to experts, vaccination is the best strategy for preventing or containing this deadly infection.

A gap of two decades separated the first Ebola epidemic of 1976 and the next, which arose in 1995. In recent years, for reasons unknown, outbreaks of Ebola are occurring with increasing frequency.

On November 17, 2003, the World Health Organization reported 11 cases of Ebola hemorrhagic fever in the Republic of the Congo. Dr. Nabel notes, "The current Ebola outbreak in the Congo provides a stark reminder of the need to rapidly develop vaccines against such perilous infections. A few years ago, we did not imagine that our vaccine would enter human trials so quickly, but the re-emergence of such viruses makes it all the more important to respond quickly. Individuals who volunteer for these vaccine trials can help us understand if our new vaccines ultimately will be effective."

Twenty-seven volunteers between the ages of 18 and 44 will participate in the study. Six people will receive a placebo injection and 21 will receive the investigational vaccine, manufactured by Vical Inc., a San Diego biotechnology company working in collaboration with the VRC. Vical has also secured a nonexclusive license from NIH to proprietary gene sequences used in the DNA Ebola vaccine. In the new trial, volunteers will receive three injections over two months and will be followed for one year. Volunteers will not be exposed to Ebola virus. Individuals interested in enrolling in the trial may visit <http://www.clinicaltrials.gov> or call the VRC toll-free at 1-866-833-LIFE (5433).

The candidate vaccine is synthesized using modified, inactivated genes from Ebola virus. This gives the immune system information about viral structures so that it can mount a rapid defense should the real virus ever be encountered. There is no infectious material in the vaccine, and the virus was not present during any stage of the manufacturing process, notes Barney Graham, M.D., Ph.D., director of the clinical trials unit of the VRC. "It is impossible for the vaccine to cause infection," he adds, "because it employs new technology known to safely stimulate broad immune responses."

Besides assessing the vaccine's safety, researchers will also examine the volunteers' blood to look for signs of immune system reaction to the vaccine. Ultimately, the scientists envision this vaccine as the first in a two-stage vaccination strategy called prime-boost: after "priming" with the DNA vaccine, the immune system response is "boosted," or augmented, by a second inoculation with modified, non-disease-causing cold viruses that make selected Ebola proteins. The booster essentially sets the immune system on alert against future infection by Ebola virus.

In August, Dr. Nabel and his colleagues reported using the booster shot to quickly and completely protect monkeys against Ebola. A fast-acting vaccine would be of great use during an outbreak of Ebola. The full prime-boost strategy, which uses the DNA vaccine being tested in this study, elicits a stronger immune response and is important to pursue for individuals at high risk, such as health care workers. Dr. Nabel says that expanded human trials of Ebola vaccines using the prime-boost strategy could begin by 2005.

NIAID is a component of the National Institutes of Health (NIH), which is an agency of the Department of Health and Human Services. NIAID supports basic and applied research to prevent, diagnose and treat infectious and immune-mediated illnesses, including HIV/AIDS and other sexually transmitted diseases, illness from potential agents of bioterrorism, tuberculosis, malaria, autoimmune disorders, asthma and allergies ([Scoop News, 2003](#)).

**Title:** African Science Policy 'Must Address Bioterror Threat'

**Date:** October 13, 2005

**Source:** [SciDev](#)

**Abstract:** The threat posed by biological weapons must be considered in policies relating to the development of science in Africa, according to delegates at an international meeting in Kampala, Uganda this month.

The meeting, which ended on 1 October, focused on the policy implications of using science to eradicate diseases while simultaneously controlling access to disease-causing organisms to prevent 'bioterrorism'.

Delegates called for strict measures to be formulated to guard against the misuse of biology, and warned that failure to address concerns over biological weapons could undermine efforts to develop and instill confidence in science.

"Confidence in modern science is giving way to a period of fear, doubt and uncertainty," said Patrick Mazimhaka, deputy chair of the Ethiopia-based African Union Commission.

In a joint statement released at the meeting, delegates said: "Addressing all of these concerns in harmony is mandatory for human security in Africa and throughout the world."

Scientists, lawyers, government officials and law enforcers attended the meeting, which was organised by the Kampala-based International Law Institute (ILI) and the US-based International Consortium for Law and Strategic Security (ICLSS).

Swithin Munyantwali, ILI's executive director told SciDev.Net that the meeting was intended to kick-start greater cooperation on the threat of bio-weapons throughout East Africa.

The region has experienced a number of terrorist incidents in recent years, including the bombings of US embassies in Kenya and Tanzania in 1999 and a rocket attack on a hotel in Mombassa, Kenya in 2002.

Munyantwali said Africa is highly vulnerable to bioterrorism as it lacks the institutions, technology and expertise needed to detect potential threats.

"Bio-weapons are an optimal way of causing mass casualties, are safe for the perpetrator to develop and transport across borders, and pose incomparable potential for mass panic," he said. "No other weapon offers similar capabilities to spread itself."

Potential bio-weapons include the anthrax bacterium, which the US Department of Defense calls "the preferred biological warfare agent because it is highly lethal [and] contains 100 million lethal doses per gram (100,000 times deadlier than the deadliest chemical warfare agent)".

Uganda's Queen Elizabeth National Park recently recovered from an outbreak of anthrax among wildlife there (see [Uganda battles deadly anthrax outbreak](#)).

Justin Ecaat, a senior official at Uganda's National Environment Management Authority, says such outbreaks show that African countries should be alert and have systems in place to monitor and control the movement of biological agents ([SciDev, 2005](#)).

**Title:** Biological Terrorism A Lethal Possibility

**Date:** October 25, 2005

**Source:** [All Africa](#)

**Abstract:** The East African region has experienced a number of terrorist incidents in recent years, including the bombings of US embassies in Kenya and Tanzania in 1998 and the rocket attack on Paradise Hotel at Kikambala in 2002.

However, few people or organisations have paused to consider the possibility and implications of a bio-terrorism attack in the region ([All Africa, 2005](#)).

**Title:** Selebi Opens International Conference On Bioterrorism

**Date:** November 21, 2005

**Source:** [Bua News](#)

**Abstract:** As part of its programme against bioterrorism, Interpol opened its first bioterrorism workshop in Cape Town today, with national police Commissioner Jackie Selebi calling for multi-agency co-operation to combat this threat to global security.

"We as policemen cannot effectively face the problem of bioterrorism or the proliferation of biological weapons without building strong partnerships with scientists, educators and public health practitioners," Mr Selebi told more than 90 delegates from Africa and around the world.

Combating bioterrorism said Commissioner Selebi, who is also president of the international police organisation, "requires communities unaccustomed to working with one another to learn a common language, and a common way of thinking."

The workshop is the first of three regional workshops that Interpol is holding to improve capacity among its members to prevent, prepare for and deal with the possibility of a bioterrorist attack.

Another workshop is planned for the Asia region and will be held in Singapore next year. The third will be held in Chile for the Americas region, also next year.

Interpol's programme to combat bioterrorism was launched at its headquarters in Lyon, France, last year. In March this year it staged the largest-ever gathering of police and security officials when it hosted the Global Congress on preventing Bioterrorism.

This gathering was attended by more than 500 delegates from 155 countries. The current regional workshop being held at the International Convention Centre in Cape Town has drawn delegates from 41 African countries as well as security and health experts from around the world.

"No country can regard itself as immune [from a bioterrorist attack] and all countries need to be prepared," said Interpol chairperson John Abbott.

An announcement of a "train the trainer" project for the National Central Bureaus in Interpol's 184 member countries was made.

Commissioner Selebi said the emphasis at the Africa regional workshop was on "training, training, training".

"What we pick up here we are going to use," the commissioner told journalists.

He added that the African regional workshop aimed to strengthen regional co-operation and enable all agencies to "immediately identify and work closely with the right partners at the right time, to establish a common response against biological weapons, and to resolve the consequences of bio-attacks."

Ronald Noble, Interpol's secretary-general, said: "Defence measures against biological attack are neither well known nor easily implemented, so there is a natural tendency for law enforcement services to put them aside in favour of 'more urgent' problems that they are comfortable dealing with."

"Political support and funding for security programmes tends to be orientated towards the traditional areas of crime which affect citizens on a daily basis," Mr Noble said.

However, he said Interpol strongly believed that the risks of bioterrorism were "so momentous that the police and the public health communities must break down the barriers preventing close collaboration, locally, nationally and internationally" ([Bua News, 2005](#)).

**Title:** Experimental Vaccine Protects Nonhuman Primates When Given After Exposure To Marburg Virus

**Date:** April 27, 2006

**Source:** [Science Daily](#)

**Abstract:** A team of U.S. and Canadian scientists has demonstrated the effectiveness of a vaccine in preventing the development of hemorrhagic fever in an animal model after exposure to the deadly Marburg virus. Their findings, published in the April 27 online edition of the British medical journal *The Lancet*, could have implications for human use.

Marburg virus was first detected in 1967 and was the cause of a large outbreak in Angola in 2004-2005 that resulted in several hundred deaths with case fatality rates of about 90 percent. Like the Ebola virus, Marburg is a filovirus that causes internal bleeding at multiple sites with patients usually dying as a result of multiple organ failure. Both viruses are considered to be potential agents of bioterrorism. Currently, no effective vaccines or drugs against Marburg virus exist, and treatment of the disease is limited to supportive care.

Investigators from the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID) and the National Microbiology Laboratory at the Public Health Agency of Canada (PHAC) created the vaccine against Marburg virus by replacing a gene from a harmless virus--known as vesicular stomatitis virus, or VSV--with a gene encoding a Marburg virus surface protein.

The team infected five rhesus monkeys with the Marburg virus and then injected them with the vaccine (known as recombinant VSV, or rVSV) 20 to 30 minutes later.

Another three monkeys infected with Marburg virus acted as controls and received a vaccine without the Marburg protein.

All of the monkeys treated with rVSV following exposure to the Marburg virus survived for at least 80 days, while the controls succumbed to the disease by day 12.

In a study published in June 2005, the research team reported that the rVSV vaccine could prevent Marburg hemorrhagic fever from developing when administered before infection. The new results suggest that the vaccine could also be an effective post-exposure treatment for the disease.

"These results are very encouraging, as this is the first demonstration of complete post-exposure protection of nonhuman primates against a filovirus," said Thomas W. Geisbert, one of the USAMRIID investigators.

Colonel George W. Korch, Jr., commander of the Institute, added, "This outstanding collaboration has been instrumental in producing novel breakthroughs, such as this, for discovery of medical approaches for difficult public health and biodefense problems."

PHAC's National Microbiology Laboratory is Canada's only Containment Level 4 laboratory, where pathogens such as Ebola and Marburg can be worked with safely. The Winnipeg-based laboratory has been at the forefront of research into SARS, West Nile virus, anthrax and other dangerous pathogens.

USAMRIID, located at Fort Detrick, Maryland, is the lead medical research laboratory for the U.S. Biological Defense Research Program, and plays a key role in national defense and in infectious disease research. The Institute's mission is to conduct basic and applied research on biological threats resulting in medical solutions (such as vaccines, drugs and diagnostics) to protect the warfighter. USAMRIID is a subordinate laboratory of the U.S. Army Medical Research and Materiel Command ([Science Daily, 2006](#)).

**Title:** Africa Must Commit To Biosecurity Measures

**Date:** August 16, 2007

**Source:** [SciDev](#)

**Abstract:** The threat of biotechnology misuse has implications for the development of science and technology in Africa, argue Chandre Gould and colleagues.

Recent African Union summits have identified science and technology as key future drivers for development, and increased investment is being welcomed by African leaders — particularly in areas such as biotechnology.

But the growth of the biotechnology industry internationally has raised some important concerns about biological safety issues (see [Agri-biotech in Africa: Safety first?](#)).

'Biosecurity' policies are therefore being actively pursued in some countries to mitigate the deliberate destructive use of biological agents, knowledge and techniques.

Today, this sense of biosecurity extends beyond conditions in research laboratories to cover the potential dual use — for good and bad — of applications arising from the new knowledge and techniques emerging from research.

### **International Supervision**

It is crucial to assess the security implications of scientific innovations, but this is not a straightforward matter.

One reason is that Western governments, most notably the United States, are deeply concerned with the bioterror threat. Although there have been only a handful of bioterrorism attacks in recent decades, the capability to inflict them is proliferating.

This focus on bioterrorism in international discussions has arguably come at the expense of tightening constraints on the development of state programmes. There is no guarantee that states, particularly those that are isolated and existentially threatened, may not see biological weapons as a valuable item in their arsenal.

The biological defence programme in the United States has shown that the risk of accidental escape of potential biological warfare agents goes up as the number of facilities working with them increases. Indeed, it could be argued that state biodefence programmes should be subject to a great deal more international supervision.

Biosecurity has gained importance in many countries in Europe, North America and elsewhere, and networks, funders and suppliers from these areas are fundamental to the growth of the African biotechnology industry. African research partners and recipients of funds will therefore have to demonstrate their commitment to biosecurity by implementing measures for the secure handling of biological agents.

### **Public Dialogue**

But policy responses adopted elsewhere are likely to be inappropriate for many situations in Africa, not least because of the difference in the quality of public infrastructure.

In this mix of concerns, one thing is clear: engagement by scientific communities is a prerequisite for a productive response. For Africans to engage effectively in biosecurity debates at a national and

international level, it is important to raise awareness about dual use research and biosecurity among African scientists, ethicists, social scientists, policy makers, the media and the public.

That way, Africa can develop its own biosecurity agenda and policies aligned with its own concerns. The cue should not come from Europe or the United States.

With this in mind, we ran seven biosecurity workshops in Kenya and Uganda in May–June 2007. The two countries are emerging biotech nations that are not yet properly engaged in international biosecurity policy deliberations.

The aim was to inform African stakeholders about the general biosecurity debate and the communication, supervision, review and funding of dual use research findings.

Many participants agreed that scientists should initiate a public dialogue about these issues and that such research should be supervised.

### **Stronger African Voice**

Although some African states, most notably South Africa, have been active contributors to the Biological and Toxins Weapons Convention (BTWC), a stronger and more coherent African position on regulatory issues is needed.

Not only would this provide an African voice on biosecurity issues, but it would strengthen the negotiating position of those states wishing to place sharing of development, knowledge and technology firmly on the agenda.

A critical mass of African stakeholders who can effectively represent the continent at the BTWC and other international forums must be developed, together with policy responses.

Whether or not African states are threatened by bioterrorism (or state biological weapons programmes) is immaterial: cutting out biotech misuse is in the interests of all Africans and is a responsibility of the African scientific community.

The development of biosecurity mechanisms that neither compromise research nor pose an unbearable financial burden on those responsible for their implementation is crucial.

This strategy would reduce the risk of misuse and mitigate the damage to African scientific development that could result if products, technology or knowledge were to be used for destructive purposes ([SciDev, 2007](#)).

**Title:** [Uganda To Conduct Marburg Vaccine Trials](#)

**Date:** October 8, 2009

**Source:** [All Africa](#)

**Abstract:** UGANDA could hold the key to the Ebola and Marburg vaccines as the country has been selected for a high profile second stage safety trial in humans. Dr. Hannah Kibuuka, the director clinical programmes at the Makerere University Walter Reed project, who is conducting the experiments, said the trial comes after a smaller one in the US ([All Africa, 2009](#)).

**Title:** Weak Laws Put Continent At Risk of Bioterrorism, Say Experts

**Date:** March 22, 2010

**Source:** [All Africa](#)

**Abstract:** As more African countries adopt biotechnology in a bid to increase agricultural production, weak biosafety laws threaten to erode the gains made in the sector.

Concerns are emerging that unscrupulous scientists could sabotage the initiative in what has come to be known as bioterrorism - by producing harmful weapons that destroy food, cause environmental degradation or even death.

"These weapons could deprive crops of water or nutrients resulting in poor yields and eventually down play efforts aimed at marketing the products globally," said John Opuda-Asibo, the first deputy vice chancellor of Kyambogo University in Uganda.

Biological weapons can infiltrate a country through various means including imports, food aid, medicines or planting materials.

Countries in sub-Saharan Africa face the biggest risk due to weak plant and animal epidemiological infrastructure besides the lack of biosafety laws.

"We need to combat the use of biotechnology as a weapon. That calls for bioterrorism preparedness," warned Prof Opuda-Asibo.

## **Climate Change**

According to the New Partnership for Africa's Development, Planning and Co-ordination Agency, 33 per cent of land in sub-saharan Africa is under moderate drought, 25 per cent under severe drought while only 4 per cent is under irrigation.

Climate change could exacerbate the problem.

"We are not getting any extra land yet we need to increase food production by up to 300 per cent by 2050. We can only do this through the use of biotechnology," said Diran Makinde, the director of Nepad Planning and Co-ordination Agency.

Currently the region records a 2.5 per cent annual increase in food production against a 3.4 per cent annual population increase.

He however, warned that African countries need to enact biosafety laws in order to prevent any eventualities.

Only 12 African countries have the national biosafety laws in place, a few have biosafety policies while 30 do not have anything at all.

The East African Community has a biosafety group.

Scientists are now calling on the African Union to come up with a law for the region.

"We should have a legal framework for government to intervene if bioterrorism occurs. It is important that we close the gaps in scientific discoveries," Prof Opuda-Asibo ([All Africa, 2010](#)).

**Title:** Animal Health - Beware of Animal Diseases In Bioterrorism

**Date:** July 1, 2010

**Source:** [All Africa](#)

**Abstract:** The suspected outbreak of anthrax in hippos in Western Uganda in the past weeks has yet again reminded us of some of the ignored facts about animal diseases. I overheard someone on the streets of Kampala inform a colleague ignorantly that anthrax was a disease of those who live with or stay near animals in the villages. This totally shocked me and I felt like going over to him and giving a lecture of a lifetime.

I, however, restrained myself and just thought about how they didn't know that the same disease could be brought right at their footsteps in their so-called city. They were possibly unaware of what we call bioterrorism.

It is possible for unscrupulous people to use known lethal animal disease agents as weapons of mass destruction. This is known as bioterrorism. Anthrax is indeed one of the microorganisms that can be used as biological weapons of mass destruction. The other significant animal diseases in that group include; Botulism, Plague, Tularaemia, Ebola and Marburg diseases. These diseases are of great public health importance because:

The host animals or carriers that are sources of infection often show little or no sign of disease at all.

The disease agents have mechanisms of propagation that allow infection to move from one individual to another.

Their effects result in high mortality rates and have the potential for a major impact on the public.

They can cause public panic and social disruption.

They require special action when they occur and also need public health preparedness in order to limit their progress.

Anthrax is clearly documented as one of the diseases whose agents have been used in the past for bioterrorism. This can be alternatively spread through spraying in the air, mailed packages and release in the ventilation systems of public buildings.

In the wake of the September 11th, attacks on the USA, some people were reported to have been exposed to anthrax in powder form that had been sent to them as mail in envelopes. This incident, a classic example of how an animal disease can find you in the comfort of your office, sparked off a major public health awareness campaign on bioterrorism that got many US citizens and others around the world to be alert about such diseases.

As for Ugandans, even though we are far from the USA, and that we probably have far less enemies, we should not ignore the likelihood of such events happening ([All Africa, 2011](#)).

**Title:** Swine Flu Vaccines Dumped in Africa

**Date:** September 15, 2010

**Source:** [Natural News](#)

**Abstract:** It was recently announced that as much as 43% of the U.S. swine flu vaccine supply would ultimately go unused and be destroyed. Apparently, the stance then taken by the major drug companies and the World Health Organization was to incinerate quantities of the vaccine and/or dump as much of the H1N1 vaccine supply as they possibly could in Africa.

According to *Associated Press*, in July 2010 about 40 million doses of the total supply produced by the US to cope with the swine flu outbreak had already expired and would be incinerated by public health authorities. This loss represents millions of US dollars. In the face of such losses, selling/dumping the excess to developing countries was apparently a tempting option. After all, the people of Africa don't need to know that the timing is off by a year and, in any case, they should be grateful to get "valuable" swine flu vaccines at a cheaper rate, even if they don't need them.

### **No Swine Flu Pandemic in Africa**

According to the *Swine Flu Watch*, at the height of the "pandemic" in 2009, very few cases of swine flu was recorded in sub-Saharan African countries. For example, Botswana reported 20 cases; Zimbabwe confirmed 40 cases, Mozambique 55 and Angola 35. Similarly, low figures were reported for swine flu in other African countries, with the exception of South Africa, where 12500 cases were reported over the same period.

### **Global Swine Flu "Pandemic" Winds Down - Except in Africa**

Sometime towards the end of 2009 and the beginning of 2010, the World Health Organization realized that there was going to be a problem with getting rid of the "soon to expire" H1N1 vaccines. After all, the "pandemic" was winding down. What to do with all those vaccines? At this point, it is interesting to note that *Wellness Blogs* links three of the scientists who advised the international health body on swine flu protocol with ties to the pharmaceutical companies that manufactured the vaccines.

And so it was that in March 2010 The World Health Organization announced that it would deliver millions of H1N1 vaccine doses to about a dozen countries in Africa in the weeks to come. This was despite their own website reporting very low occurrences of swine flu in Africa. In fact, the WHO regional office for Africa reported only 157 cases of Swine Flu by the end of July 2009, compared to the 87000 cases reported by their American office.

The World Health Organization (WHO) declared that the pandemic ended on 10 August 2010. However, just a few weeks earlier, various African governments started making H1N1 vaccinations available to their citizens. It would seem that while the rest of the world was announcing the end of the swine flu epidemic, Africa started gearing up for mass inoculations of her people. The Botswana government, for example, embarked on their mass vaccination campaign between 21st June 2010 and the end of August 2010 ([Natural News, 2010](#)).

**Title:** Bio Terror Threat From Germ Labs Worries U.S.

**Date:** November 8, 2010

**Source:** [All Africa](#)

**Abstract:** Concerned about the threat of biological terrorism, a powerful US senator will lead a team of high-level Pentagon officials on an inspection tour of Kenyan germ laboratories next week.

Richard Lugar, the top Republican on the Senate Foreign Relations Committee, will be accompanied by the director of the US Defence Department's Threat Reduction Agency as well as by the heads of units focused on biological defence and global strategy.

The labs to be inspected are designed for the study of infectious diseases. Work to develop treatments and to help prevent outbreaks also takes place at these facilities. But Pentagon officials warn that the Kenyan labs have not been sufficiently secured against terrorism threats.

"Deadly diseases like Ebola, Marburg and anthrax are prevalent in Africa," Senator Lugar said in a statement announcing a trip that will take him to Uganda and Burundi as well as to Kenya.

"Al-Qa'ida and other terrorist groups are active in Africa, and it is imperative that deadly pathogens stored in labs there are secure.

"These pathogens can be made into horrible weapons aimed at our troops, our friends and allies, and even the American public," the senator added. "This is a threat we cannot ignore."

Mr Lugar said he has been told by Pentagon chief Robert Gates that the inspection tour will help ensure that the governments of Kenya and Uganda work closely with the United States to secure the labs. The US delegation is scheduled to arrive in Kenya on November 16. A list of the sites the Americans will visit has not been released ([All Africa, 2010](#)).

**Title:** Kemri 'Shocked' By U.S. Bioterror Concerns

**Date:** December 13, 2010

**Source:** [All Africa](#)

**Abstract:** American claims that biosafety conditions at the Kenya Medical Research Institute were "lacking" have been strongly refuted by Dr Willy Tonui, a principal researcher and biosafety officer at the Institute.

Andrew Weber, the US assistant defence secretary for nuclear, chemical and biological programmes, told of seeing "orange bags with bio-hazardous waste sort of sitting around" at the Kenya Medical Research Institute (Kemri) in Nairobi.

The wastes had not been destroyed because Kemri's incinerator had "limited capacity," Mr Weber said. "While we were there," he continued, "a stray cat went into one of the bags, had lunch and hopped over the wall into one of the largest slums in Africa." Mr Weber's account drew gasps and nervous laughter from his listeners at the University of Pittsburgh's Centre for Biosecurity.

The official also raised concerns regarding waste management capabilities at Kemri, and is quoted to have said that "the wastes had not been destroyed because Kemri's incinerator had limited capacity." He added that "terror in that part of the world is not a hypothetical situation."

Dr Tonui describes these claims as unfounded, shocking, and not based on informed observation. "In Kemri, we have the best waste management practices in the country," says Dr Tonui.

"We have two functioning incinerators at this research centre. We regard security of bio-hazardous materials as a serious matter; there are two guards stationed at the incinerators at all times," he added.

Dr Tonui adds that infectious materials are sterilised before incineration, and that the most dangerous materials in laboratory waste are needles, which are sealed in a sturdy plastic container before being incinerated.

He acknowledges that there may be stray cats in Kemri, owing to its proximity to the Kibera slum. Nonetheless, the biohazard bags are sealed, and there is little chance of an animal getting into the bags. "Furthermore," he adds, "biological materials such as blood and tissue are not disposed of directly into the biohazard bags."

The allegation that bio-hazardous materials could be used by terrorists is described as "shocking" by Dr Tonui. "A bioterrorist is an intelligent person, with a working knowledge of infectious agents and their effective doses," he says. "Infectious agents do not find their way into our waste without being sterilised. To claim that there is a bioterrorism risk is grossly misleading."

## Bio-Safety

Dr Tonui says that Kemri is on the frontline in promoting biosafety practices and prudent waste management practices on the continent. "We have helped the National Environment Management Authority to develop the relevant standards. Many laboratories around the country bring their waste for disposal at Kemri. The major challenge we face toward this end is proper segregation of waste."

Mr Weber accompanied a senior US senator, Richard Lugar, on the visit earlier this month to laboratories in Uganda and Burundi as well as Kenya ([All Africa, 2010](#)).

**Title:** A Bug's Life: How Safe Are Health Laboratories In Developing Countries?

**Date:** January 6, 2011

**Source:** [The Economist](#)

**Abstract:** Africa is home to the world's nastiest diseases, such as the Ebola and Marburg viruses, and to laboratories that study them. Could that be a tempting target for terrorists? Late last year Senator Richard Lugar and a team of Pentagon arms-control experts visited Burundi, Uganda and Kenya. What they found prompted alarm, and calls for big spending on lab security.

For example, a Kenyan research lab housing anthrax, Ebola and Marburg backs onto a slum and has low, easily scaled cement walls. African technicians have to use large samples of the dangerous viruses for their research because their equipment is antiquated. Better safety could be part of the long-standing initiative Mr Lugar and his fellow senator Sam Nunn developed in 1991 to secure and destroy former Soviet nuclear, chemical and biological stockpiles.

Scott Dowell of the Centres for Disease Control and Prevention in Atlanta agrees that Ugandan and Kenyan labs need more money for security. But so too do many research facilities in other poor countries. Richard Lennane of the Biological Weapons Convention adds that boosting security is not just about fences and guards. Where do workers come from? Who asks questions if a lone colleague starts regularly working late?

Sceptics say Mr Lugar is scaremongering abroad for political gain at home. He may be right, as he complained in Kenya, that pathogens are easier to package than nuclear materials. But "weaponising" them is still difficult. Many organisms mooted as terror agents are tricky to handle and hard to make into weapons. It is unlikely that Somalia's al-Shabab, the most threatening terrorist group in east Africa, or organised criminals, have the technical ability to do that.

A better reason to spend more on laboratory security may be to stop not wrongdoers but accidents. A British foot-and-mouth outbreak in 2007 probably stemmed from laboratory sloppiness. Moreover, the things that enhance a laboratory's security will also improve its ability to diagnose and handle outbreaks of natural diseases. Asian scientists played a big role in monitoring outbreaks of SARS and bird flu. Strengthening their African counterparts adds a vital link in the chain.

A planned new outfit, the Global Biological Resource Centre Network, would calm Mr Lugar's fears and benefit Africa too. But the rich world also needs to avoid complacency. Those anthrax attacks in America in 2001 were 100% home-grown ([The Economist, 2011](#)).

**Title:** 'Bio Terror' Threat Man Arrested In South Africa After Threatening To Attack Britain And U.S.

**Date:** February 13, 2011

**Source:** [Daily Telegraph](#)

**Abstract:** A businessman was arrested in South Africa on terrorism charges yesterday after allegedly threatening to attack Britain and America with biological weapons.

The arrest came after a six-month investigation by British, US and South African security services. The 64-year-old man, who is a South African citizen, is said to have repeatedly sent threatening emails to a Whitehall department in an attempt to extort £2.5 million.

He is then understood to have sent similar threats to institutions in the US, at which point the FBI was called in.

Yesterday morning several containers were left in a storage facility near the suspect's home in South Africa's North-West Province.

They are thought to have held money and, when the man went to collect it, he was arrested by South African special forces.

The South African authorities said they had taken the threat seriously, though they had found no evidence that the man was capable of launching a biological attack. The suspect, who has not been named, is due to appear in a Johannesburg court.

Last night his home was among the sites searched. A Scotland Yard spokesman said: 'Our counter-terrorism officers co-operated with the South African police in terms of fact-finding for the investigation' ([Daily Mail, 2011](#)).

**Title:** Pentagon Looks To Africa For Next Bio Threat

**Date:** February 23, 2011

**Source:** [Wired](#)

**Abstract:** No, it's not a deleted scene from *Outbreak*. The Pentagon agency charged with protecting the United States from weapons of mass destruction is looking to the insecure storage of pathogens at clinics in Africa as the next flashing red light for a potential biological outbreak.

Kenneth Myers, the director of the Defense Threat Reduction Agency, joined his old boss, Sen. Richard Lugar, on a trip to Burundi, Kenya and Uganda last fall to check out the security of disease samples at local clinics. What they found disturbed them: strains of deadly viruses like foot-and-mouth disease and anthrax, available at numerous clinics in areas in or near conflict zones, potentially ripe for the terrorist taking.

"It's important to remember that these countries have no intention of being threats to the United States," Myers tells Danger Room. Indeed, the clinics have a very good reason for housing the pathogen samples: Their doctors need to be able to match patients with known diseases in the event of an outbreak. But Myers and Lugar left their trip worried about how many clinics possess the pathogens, as 20 years' worth of lessons from checking the spread of loose nukes raised fears of inadvertent bio-proliferation.

So the Defense Threat Reduction Agency is looking to expand a program that's grown out of [Lugar's eponymous anti-nuclear proliferation effort](#) into Africa to see if the U.S. can help partner with these countries to minimize the threat. The first goal of the Chemical Biological Engagement Program is to build those relationships, Myers told a group of reporters Wednesday morning, so they can "consolidate the number of facilities with dangerous pathogens."

That's not all. Myers wants to collaborate with government officials, all the way down to the clinic level, to make sure the pathogens in residual facilities are stored safely, and offer help on "disease surveillance [and] epidemiological training."

It's an early effort — "about to be able to get started," Myers put it — that's part of the \$1.5 billion worth of "layered" defenses against chemical and biological threats that the Pentagon is asking Congress to fund

in the next fiscal year. Myers conceded that developing defenses against those threats is “very, very difficult.” [Expensive efforts to create vaccines for consequence management have stalled](#). But that’s why he believes in “interdicting” WMD threats at their source to stop proliferation, having better surveillance of known and suspected sites, and responding capably if an attack should occur.

Despite years of fears, it’s an open question whether terrorists are actually planning chemical or biological attacks. Last month, the [public threat assessment from U.S. intelligence officials warned of “smaller-scale” terrorism](#), involving homemade bombs like [SUVs rigged to detonate](#) or [explosives packed in printer cartridges](#). Those cheap, low-yield terror attempts have been on display for the last several years. U.S. intelligence generally sees chemical, biological or even nuclear attacks as being mostly aspirational for terror groups — something they’d like to pull off, sure, but aren’t so realistic.

Myers declined Danger Room’s efforts to press him on whether the terrorist chem-bio threat was in fact receding. From his perspective, the ounce of prevention afforded by trying to lock down facilities where pathogens reside is more than worth the effort. “Is it not in the U.S. national security interest to create more barriers between the threat and [U.S. citizens]? The answer obviously is yes,” Myers says ([Wired, 2011](#)).

**Title:** Kenya Put On High Alert Over Bio-Terrorism Attack

**Date:** December 22, 2011

**Source:** [Hiiraan News](#)

**Abstract:** The Kenya Medical Research Institute (KEMRI) has put the country on high alert over the possibility of a bio-terrorism attack.

With the ongoing fight against Al Shabaab, the research institute admitted that bio-terrorism posed the biggest threat to the country.

According to KEMRI director Dr Solomon Mpoke, if not well handled the attack could be used as a weapon of mass destruction.

To this effect, Mpoke said that they had heightened security to make sure that the deadly pathogens in their facility did not land in the wrong hands.

"We have secured our fence and heightened security and in conjunction with our collaborators designed alert systems incase of a mysterious disease outbreak,"

The director at the same time said that they were working on the reduction of TB treatment period from the current six to four months.

Despite facing various challenges the institute according to the director had managed to protect 55 percent of the minors from contracting Malaria.

On his part, KEMRI chairman Dr Edwin Muingia expressed his concern that the body was losing its best scientists to other countries due to low wages.

This he attributed to the funding as out of the Sh9B annual budget, the government contributed a partial 1B with donors chipping in.

"The government is supposed to allocated two percent of its budget to research but that is not the case and this is costing the country dearly,"

And with the coming in of the devolved government, Muingia said that plans were underway to make sure the institute was represented in every County.

Dr Elizabeth Bukusi the deputy director in charge of research and training said that they had made significant strides in the fight against HIV Aids.

Bukusi said that a study conducted on discordant couples indicated that early treatment for HIV Aids reduced chances of spreading the disease to partners by 96 percent.

"We are currently working on the male to male transmission of HIV Aids mainly in the Coast and it's a serious problem due to phobia and stigma attached to the issue" ([Hiiraan News, 2011](#)).