

15 July 2009

## **Chem-Bio News**

**1. TOXIN DETECTION AS CLOSE AS AN INKJET PRINTER:** *"In a paper published in the July issue of Analytical Chemistry, John Brennan and his research team at McMaster University, working with the Sentinel Bioactive Paper Network, describe a method for printing a toxin-detecting biosensor on paper using a FujiFilm Dimatix Materials Printer."*

**2. RENTOKIL GETS EXTERMINATION CONTRACT IN LIBYA:** *"The former pariah state turned to Rentokil over fears that infestations in the country's major cities could expose the population to diseases such as salmonella typharium, eosinophilic meningitis and rat bite fever."*

**3. CDC TIGHTENS CONTROLS ON LABS THAT POSSESS SARS VIRUS:** *"The U.S. Centers for Disease Control and Prevention (CDC) is proposing to add SARS-associated coronavirus, or SARS-CoV, to the list of toxins and "select agents" maintained by the Department of Health and Human Services, which would require any individual or organization possessing SARS-CoV to register with the federal government."*

**4. THE U.S. ARMY'S NEW BIOMEDICAL REGULATIONS:** *"In order to address shortfalls in the Select Agent Rule, the U.S. Army has proactively implemented changes to its safety and security programs--first by issuing guidelines on responsibility and oversight of dangerous biological agents in July 2008 and then, in May, effecting major revisions to Department of the Army Pamphlet 385-69: Safety Standards for Microbiological and Biomedical Laboratories."*

**5. ARMY FINDS WWI MORTAR AT SCHOFIELD BARRACKS:** *"World War I-era munitions found during excavation on training grounds at Schofield Barracks appears to carry chemical weapons, officials said."*

**6. NEW ORAL AGENTS MAY PREVENT INJURY AFTER RADIATION EXPOSURE:** *"Researchers from Boston University School of Medicine (BUSM) and collaborators have discovered and analyzed several new compounds, collectively called the "EUK-400 series," which could someday be used to prevent radiation-induced injuries to kidneys, lungs, skin, intestinal tract and brains of radiological terrorism victims."*

**7. U.K. PLANS MASSIVE SWINE-FLU VACCINATION:** *"The medical establishment in Britain, the nation hardest hit by swine flu outside North America, is scrambling to roll out a large-scale vaccination program in an effort to protect its population against a virus that threatens to spread rapidly here in coming weeks."*

**8. PENTAGON DRILL HELPS LOCAL AGENCIES PREPARE FOR POSSIBLE ATTACK:** *"The drill kicked off early Saturday morning with a slow moving pickup truck spraying a harmless powder in the South Parking Lot of the Pentagon."*

## **Chem-Demil News**

**1. PUEBLO CHEMICAL DEPOT CHANGE OF COMMAND SET FOR JULY 21:** *"Lt. Col. Christopher Chesney will relinquish command of the U. S. Army Pueblo Chemical Depot (PCD) to Lt. Col. Rob Wittig in a July 21 change of command ceremony at the depot beginning at 9 a.m."*

## CB Daily Report

### ***Chem-Bio News***

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#### **TOXIN DETECTION AS CLOSE AS AN INKJET PRINTER**

Physorg.com  
July 13, 2009

"In a paper published in the July issue of Analytical Chemistry, John Brennan and his research team at McMaster University, working with the Sentinel Bioactive Paper Network, describe a method for printing a toxin-detecting biosensor on paper using a FujiFilm Dimatix Materials Printer.

The researchers demonstrated the concept on the detection of acetylcholinesterase (AChE) inhibitors such as paraoxon and aflatoxin B1 on paper using a "lateral flow" sensing approach similar to that used in a home pregnancy test strip.

The process involves formulating an ink like the one found in computer printer cartridges but with special additives to make the ink biocompatible. An ink comprised of biocompatible silica nanoparticles is first deposited on paper, followed by a second ink containing the enzyme, and the resulting bio-ink forms a thin film of enzyme that is entrapped in the silica on paper. When the enzyme is exposed to a toxin, reporter molecules in the ink change colour in a manner that is dependent on the concentration of the toxin in the sample."

The full article can be found at: <http://www.physorg.com/news166703176.html>

[Return to Top](#)

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#### **RENTOKIL GETS EXTERMINATION CONTRACT IN LIBYA**

By Kelly Macnamara  
The Independent (UK)  
July 13, 2009

"Pest control firm Rentokil Initial said today that it had won a £24 million rat extermination contract from Libyan leader Colonel Muammar Gaddafi.

The former pariah state turned to Rentokil over fears that infestations in the country's major cities could expose the population to diseases such as salmonella typharium, eosinophilic meningitis and rat bite fever.

A team of 32 specialists have already been deployed to Libya as part of the three-year deal and Rentokil said their early involvement had been met with enthusiasm from local people, eager to rid their cities of pests."

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"Rentokil is also hoping to eliminate the sand fly-transmitted leishmaniasis - a devastating disease prevalent in North Africa and the Middle East which can cause skin ulcers and, in its worst form, death."

The full article can be found at: <http://www.independent.co.uk/news/world/africa/rentokil-gets-extermination-contract-in-libya-1744369.html>

[Return to Top](#)

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## **CDC TIGHTENS CONTROLS ON LABS THAT POSSESS SARS VIRUS**

By Jacob Goodwin

Government Security News

July 13, 2009

"The U.S. Centers for Disease Control and Prevention (CDC) is proposing to add SARS-associated coronavirus, or SARS-CoV, to the list of toxins and "select agents" maintained by the Department of Health and Human Services, which would require any individual or organization possessing SARS-CoV to register with the federal government.

The CDC is making this recommendation because it has concluded that SARS-CoV can cause significant mortality, especially in the elderly, that the virus can be transferred from human-to-human, that there is currently no vaccine or antiviral approved for the prevention or treatment of SARS-CoV infection, and that the virus may persist in the environment."

The full article can be found at: <http://www.gsnmagazine.com/cms/features/news-analysis/2322.html>

[Return to Top](#)

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## **THE U.S. ARMY'S NEW BIOMEDICAL REGULATIONS**

By Ben Perman

Bulletin of the Atomic Scientists

July 13, 2009

"The Select Agent Rule represents a critical step in addressing domestic accountability for the possession and transfer of certain dangerous pathogens; however, it falls short of being the comprehensive security regulation that many organizations and advocates have called for. In order to address shortfalls in the Select Agent Rule, the U.S. Army has proactively implemented changes to its safety and security programs--first by issuing guidelines on

responsibility and oversight of dangerous biological agents in July 2008 and then, in May, effecting major revisions to Department of the Army Pamphlet 385-69: Safety Standards for Microbiological and Biomedical Laboratories PDF. Pamphlet 385-69 establishes army safety guidelines for the U.S. biological defense program and implements several changes to army biosafety policies in an effort to enhance pathogen accountability and containment.

The most significant aspect of Pamphlet 385-69 is that it makes the published Centers for Disease Control and Prevention biosafety guidelines, "Biosafety in Microbiological and Biomedical Laboratories" (BMBL), mandatory across army clinical diagnostic, biomedical, and veterinary research programs. The BMBL often is regarded internationally as a compendium of global best practices and is emulated, with some local modifications, by several countries with active biomedical research agendas (e.g., the former Soviet republics, Pakistan, India, and Singapore). However, the BMBL isn't a prescriptive regulation; rather, it's a set of continuously evolving guidelines that are meant to be flexible and that adapt to the discovery of new or emerging infectious diseases with complex or unknown causes. Because the BMBL is a flexible and nuanced document, it often leaves certain details to the discretion of a competent biosafety officer and institutional biosafety committee. Thus, Pamphlet 385-69 seeks to remove some of the ambiguity in how the BMBL should be implemented within the U.S. Army."

The full article can be found at: <http://www.thebulletin.org/web-edition/features/the-us-army%E2%80%99s-new-biomedical-regulations>

[Return to Top](#)

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## **ARMY FINDS WWI MORTAR AT SCHOFIELD BARRACKS**

KITV.com

July 10, 2009

"World War I-era munitions found during excavation on training grounds at Schofield Barracks appears to carry chemical weapons, officials said.

Teams found the liquid-filled 4-inch mortar on June 27. Schofield's Explosive Ordnance Disposal team was called in to investigate."

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"A team of specialists from Aberdeen Proving Ground, Md., used specialized equipment on Tuesday to determine the mortar's contents. Tests indicated the mortar contained phosgene, a chemical that was used as a choking agent in chemical warfare, officials said."

The full article can be found at: <http://www.kitv.com/news/20021626/detail.html>

[Return to Top](#)

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## **NEW ORAL AGENTS MAY PREVENT INJURY AFTER RADIATION EXPOSURE**

The Hindu

July 12, 2009

"Researchers from Boston University School of Medicine (BUSM) and collaborators have discovered and analyzed several new compounds, collectively called the "EUK-400 series," which could someday be used to prevent radiation-induced injuries to kidneys, lungs, skin, intestinal tract and brains of radiological terrorism victims.

The findings, which appear in the June issue of the Journal of Biological Inorganic Chemistry, describe new agents which can be given orally in pill form, which would more expedient in an emergency situation.

According to a press release by EurekAlert, these agents are novel synthetic "antioxidants" that protect tissues against the kind of damage caused by agents such as "free radicals." Free radicals, and similar toxic byproducts formed in the body, are implicated in many different types of tissue injury, including those caused by radiation exposure. Often, this kind of injury occurs months to years after radiation exposure. The BUSM researchers and their colleagues are developing agents that prevent injury even when given after the radiation exposure."

The full article can be found at: <http://www.hindu.com/thehindu/holnus/099200907121040.htm>

[Return to Top](#)

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## **U.K. PLANS MASSIVE SWINE-FLU VACCINATION**

By Jeanne Whalen

The Wall Street Journal

July 15, 2009

"The medical establishment in Britain, the nation hardest hit by swine flu outside North America, is scrambling to roll out a large-scale vaccination program in an effort to protect its population against a virus that threatens to spread rapidly here in coming weeks.

The state-run health system is deciding whether to hire private contractors to help doctors carry out the massive vaccination job, said Peter Holden, a general practitioner who represents the British Medical Association in pandemic-flu planning with the government. Doctors would rather handle the shots themselves, he said, but as phone calls and office visits related to swine flu have jumped, they are concerned the extra work will overwhelm them unless they suspend some other routine care."

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"The country has ordered enough vaccine to cover all 60 million of its residents. The government plans to offer everyone free shots as soon as they become available, a Department of Health spokeswoman said on Tuesday. It won't require people to get the

shots, but will make vaccine available to everyone, she said.

The health department expects the first doses to arrive in the fall, and will start vaccinating certain groups first, including health-care workers, children and pregnant women. The U.K. expects enough vaccine for 30 million people, or about half the population, to be available by the end of the year, the health department spokeswoman said."

The full article can be found at: <http://online.wsj.com/article/SB124760962007441591.html>

[Return to Top](#)

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## **PENTAGON DRILL HELPS LOCAL AGENCIES PREPARE FOR POSSIBLE ATTACK**

By Rahul Bali  
WTOP News  
July 11, 2009

"Emergency crews from across the area, military helicopters, and nearly 100 volunteers were part of a drill testing the response to a possible biological attack.

The drill kicked off early Saturday morning with a slow moving pickup truck spraying a harmless powder in the South Parking Lot of the Pentagon.

Volunteers walked around the parking lot as the spray powder misted through the sky.

Many volunteers who were involved in the 2007 drill tell WTOP that Saturday's drill went smoother than two years ago. Some volunteers say that the emergency response personnel were clear on their responsibilities and that made a big difference.

Local officials tested whether decontamination on volunteers could be achieved by using a high pressure spray from a fire truck hose or if a scrubbing was necessary. Officials say the answers will come in the weeks ahead and that's what they need since there is not enough research on what to do in case an attack occurs."

The full article can be found at: <http://www.wtop.com/?nid=25&sid=1715782>

[Return to Top](#)

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## ***Chem-Demil News***

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### **PUEBLO CHEMICAL DEPOT CHANGE OF COMMAND SET FOR JULY 21**

US Army Chemical Materials Agency News Release  
July 13, 2009

"Lt. Col. Christopher Chesney will relinquish command of the U. S. Army Pueblo Chemical Depot (PCD) to Lt. Col. Rob Wittig in a July 21 change of command ceremony at the depot beginning at 9 a.m.

Invited guests, depot employees and media representatives will attend the Tuesday morning ceremony.

Wittig, 42, will be the 32nd commander in the depot's 67-year history. As commander, he'll be responsible for the safe and secure storage of the depot's chemical weapons stockpile as well as oversight of all other CMA operations during his two-year tenure.

PCD is scheduled for closure after the Pueblo Chemical Agent-Destruction Pilot Plant, now under construction, completes destruction of the stockpile, which is scheduled late in 2017.

Conrad Whyne, director of the U.S. Army Chemical Materials Agency (CMA) headquartered in Aberdeen, Md., will lead the change of command ceremony. CMA is the parent command of PCD.

Lt. Col. Chesney is being assigned as chief of staff to the U.S. Army Chemical School at Fort Leonard Wood, Missouri.

Born in Pennsylvania, Lt. Col. Wittig graduated from New York Excelsior College with a Bachelor's Degree in History and subsequently received his Master of Arts Degree in Military Science from the American Military University, Manassas Park, Virginia in 2002.

Lt. Col. Wittig has served in numerous staff and leadership positions throughout his career, most recently as headquarters commander, Multi-National Security Transition Command-Iraq, Bagdad, Iraq."

The full article can be found at: <http://www.cma.army.mil/include/docrendition.asp?DocID=003681042>

[Return to Top](#)

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