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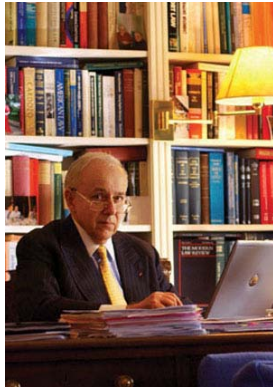
Τεύχος 35 Volume

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«Η διεθνής τρομοκρατία θα τελειώσει μόνον όταν αποκτήσουμε το θάρρος να καθίσουμε και να μιλήσουμε με τον μουσουλμανικό κόσμο, αντί να προκαλούμε νέες κρίσεις ή να αρχίζουμε νέους πολέμους»

Sir Βασίλειος Μαρκεζίνης*
Καθηγητής Δικαίου (UK)

* Ο Sir Βασίλειος Μαρκεζίνης διετέλεσε Καθηγητής στο Κέμπριτζ, την Οξφόρδη και το Λονδίνο, κατείχε δε, επίσης έδρα στο Λάηντεν (Ολλανδία) και στο Ώστιν του Τέξας (ΗΠΑ). Επιπλέον, έχει διδάξει σε είκοσι πέντε Πανεπιστήμια ανά τον κόσμο, έχει συγγράψει τριάντα τρία βιβλία και πάνω από εκατόν τριάντα νομικά άρθρα, τα οποία έχουν δημοσιευθεί σε νομικά περιοδικά σε ολόκληρο τον κόσμο. Τα έργα του έχουν μεταφραστεί στα γερμανικά, γαλλικά, ιταλικά, πορτογαλικά και κινεζικά. Είναι Μέλος της Βρετανικής Ακαδημίας, Αντεπιστέλλον Μέλος της Γαλλικής Ακαδημίας και της Ακαδημίας Αθηνών, Ξένος Εταίρος της Βελγικής, της Ολλανδικής και της Ιταλικής (Academia dei Lincei) Ακαδημίας, όπως επίσης και του Αμερικανικού Ινστιτούτου Δικαίου. Από το 1997 φέρει τον τίτλο του Επίτιμου Συμβούλου της Βασίλισσας της Αγγλίας (Queen's Counsel), ενώ από το 2000 είναι Ειδικός Επιστημονικός Σύμβουλος του Πρώτου Προέδρου του Γαλλικού Ακυρωτικού (Cour de Cassation). Το 2005 έλαβε τον τίτλο του Ιππότη από τη Βασίλισσα Ελισάβετ II για τις εξαιρετες υπηρεσίες που έχει προσφέρει στις διεθνείς νομικές σχέσεις. Επιπλέον, έχει λάβει εξαιρετικά υψηλές τιμές από τους



Προέδρους Μιτεράν και Σιράκ (της Γαλλίας), Σκάλαρο και Τσιάμπι (της Ιταλίας) και φον Βάιτσκερ και Χέρτσοκ (της Γερμανίας). Τέλος, από το 2007 είναι Μέλος του Διοικητικού Συμβουλίου του Κοινοφελούς Ιδρύματος «Αλέξανδρος Σ. Ωνάσης».

M ΒΡΕΤΑΝΙΑ

Εκλογή πρώτου μουσουλμάνου υπουργού

Ο μουσουλμάνος Shahid Malik εξελέγη πρόσφατα Υπουργός Δικαιοσύνης στη Μ Βρετανία – προφανώς στα πλαίσια της ειρηνικής συνεχιζόμενης μουσουλμανοποίησης της Ευρώπης την οποία ακόμη οι περισσότεροι από εμάς δεν έχουμε συνειδητοποιήσει.

UK: First Muslim minister of state

Britain's first Muslim minister, Shahid Malik, has been promoted to the department of justice as part of Gordon Brown's cabinet reshuffle. The Dewsbury MP, who is currently a minister for international development, said he hoped to make Britain "a more just society" in his new role as a minister in the department for justice. "While I have truly loved my international role working to deliver justice for the poorest around the world, I'm now relishing the opportunity to make Britain an even fairer and more just society for all its citizens," he said. As an MP, Malik gained experience of violent youth crime in Britain when a teenager was murdered by a gang of young people in his constituency in May this year. After the killing, the MP, who lives just a few minutes walk from the scene of the attack, called for "a change in society", warning that too many young people were adopting a culture where violence was an accepted part of life.

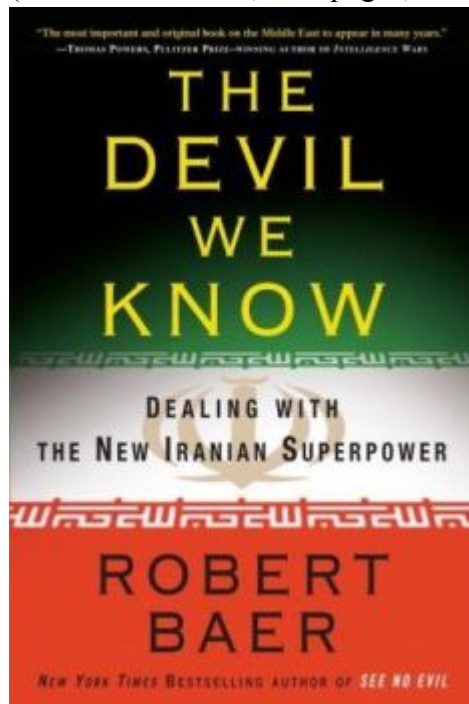
Ο ΔΙΑΒΟΛΟΣ ΠΟΥ ΓΝΩΡΙΖΟΥΜΕ

Άλλο ένα ενδιαφέρον βιβλίο και από πλευράς περιεχομένου και από πλευράς ιστορικού του συγγραφέως που αναφέρεται στα γεγονότα που διαδραματίζονται στην Εγγύς και τη Μέση Ανατολή με επικέντρωση στο Ιράν. Ο συγγραφέας κάνει λόγο για επικείμενη επικράτηση των σιτών, για την ήττα του Ισραήλ από τη Hizbullah το

καλοκαίρι του 2006, για την κατασκευή της συιτικής βόμβας ως αντίπαλο δέος της σουνιτικής βόμβας του Πακιστάν, για την παρασηκηνιακή ομάδα που κυβερνάει το Ιράν και για τις ενδεχόμενες λύσεις στη διαμάχη του Ιράν με τη διεθνή κοινότητα.

BOOK REVIEW: Robert Baer's 'The Devil We Know' Reveals Some Inconvenient Truths About Iran and the Conflict Between Shia and Sunni Islam

The conventional wisdom in the Middle East is that Iran is a rogue state run by religious fanatics who want to wipe Israel off the face of the earth and drive the U.S. and other Western powers out of the region. The reality, according to Robert Baer in his new book "The Devil We Know: Dealing with the New Iranian Superpower" (Crown Publishers, 288 pages, \$25.95) is much more complicated and subtle -- and



dangerous. He says we must deal with reality -- with "The Devil We Know" -- or find our access to Persian Gulf oil eliminated. The Shia regime in Iran is halfway to winning its undeclared 30-year war with the U.S. which began with the overthrow of the Shah in 1979 by using proxies such as Hezbollah and the Kurds, forging alliances with Russia and China and exploiting the Muslim divide of Shia and Sunni factions, Baer says. He's a former CIA operative whose character was played by George Clooney in the movie "Syriana," based on Baer's book "See No Evil." He has extensive contacts throughout the Middle East, including Israel, which he says is pursuing a realistic approach to Iran since its defeat by Hezbollah in the 34-day 2006 war in Lebanon. Baer quotes -- on Page 109 -- an assessment from the Winograd Commission Report, the official Israeli investigation into the 2006 war: "A semi-military organization of a few

thousand men resisted for a few weeks, the strongest army in the Middle East, which enjoyed full air superiority and size and technological advantages." Baer -- now a free-lance journalist and author of four books who contributes to Time.com, Vanity Fair, the Washington Post and the Wall Street Journal, among other publications -- says there is still time to counteract the Russia-China axis and forge relations with what is in effect a superpower. In their own peculiar way, the majority of Iranians like Americans and America, something I noticed while living in Los Angeles and interacting with the large Iranian exile community there. What about the looney-toon president of Iran, Mahmoud Ahmadinejad? Baer argues that he's a figurehead, that the country is run by a secretive, calculating, rational shadow government that has succeeded in controlling the Shia areas of Iraq and has gained credence with the Palestinians, Jordanians and many in Egypt and the Gulf States because it has done what Sunni Muslims have never done -- defeat the mighty Israelis. Iran's interest in its neighbor Iraq is "considerably stronger and more enduring than America's," Baer says on Page 93. "...its will is stronger, and it never will overcome the temptation to meddle, to undermine us in Iraq. Iran also cannot afford to allow Shia Islam's historical center of learning in Iraq, Najaf, to return to being a moderate rival to the Iranian learning center, Qum. Iran will not abandon its quest for control over Shia

Islam, nor allow a quietest form of Shia Islam to challenge the legitimacy of Iran's mullahs." Iran, Baer says, thinks in terms of the long haul: "Iran is calculating that the United States will get tired of Iraq, pull out, and let fall the first domino in a Persian reconquest of the Gulf." (Page 104). "The Iranians understand perfectly that the only reason we care about that miserable body of water called the Persian Gulf is that 55 percent of the world's reserves lie beneath its shores and 17 million barrels of crude oil pass daily through the Strait of Hormuz." Iran is little interested in becoming a nuclear power, for now, Baer argues in a startling turnabout of conventional wisdom: "Right now, at least, the Iranians don't need a nuclear bomb [Page 110]. If a war is to be fought in the Gulf, Iraq, or Lebanon, Iran will almost certainly fall back on its asymmetrical tactics and weapons. There are also innumerable drawbacks to rushing the development of a nuclear weapon in today's global atmosphere --and few benefits." Baer's says one reason the U.S. is obsessed with Iran's supposed nuclear ambitions is that "we're once again fighting the last war rather than this one [Page 110]. We remember it was Saddam Hussein's chemical weapons that stopped Iran from taking Basra. We're worried that the Syrians intend to put chemical warheads on their Scud missiles and fire them at Tel Aviv. We're blinded by the worst-case scenario, which happens not to be Tehran's preferred scenario." Not that Baer rules out Tehran's developing nuclear weapons; he argues that Iran wants to counter Pakistan's "Sunni Bomb" with its own "Shia Bomb." Too, Iran "wanted to be taken seriously as a major power, in the same way it wanted to control Hormuz and the world's oil [Page 111]." Among Iran's proxies are the Kurds, who inhabit a strategic region encompassing major parts of Turkey, Iraq and Iran, Baer says. It's only a matter of time, he says, before the artificial state of Iraq -- developed out of the 1916 Sykes-Picot secret pact by the British and French in their dividing up of the Middle East into spheres of influence -- is split up into Kurdish, Sunni and Shia elements. Iraq's civil war has just started, Baer says: The Shia intend to fight until their former masters, the Sunni, are expelled from Baghdad and central Iraq. The Shia already control Basra and southern Iraq. Summing up, Baer says the longer we ignore Iran, the more dangerous this sophisticated country with a history dating back thousands of years will succeed in ousting the U.S. from this volatile region. One might argue it's too bad we don't have Baer as Secretary of State! But that would make too much sense, and we're not especially noted for common sense in the Middle East. If you're looking for a clear-headed, rational look at the Middle East, read "The Devil We Know." It turns conventional "wisdom" on its head. Of the three options Baer outlines for dealing with Iran -- Staying in Iraq forever; provoking a "Mad Max" Shia-Sunni civil war; or sit down at the negotiating table with Iran, "treat it like the power it has become, and see what it has to offer" the latter is the only sensible course of action, he says.

Διανομή αντιβιοτικών μέσω ταχυδρόμων

Ίσως αποτελεί τη λύση για την ταχύτερη διανομή των απαραίτητων αντιβιοτικών σε περίπτωση βιοτρομοκρατικής επίθεσης με άνθρακα σε αστικό περιβάλλον. Σε πειραματική εφαρμογή της πρότασης στη Φιλαδέλφεια των ΗΠΑ, πενήντα ταχυδρόμοι με συνοδεία αστυνομικού επισκέφθηκαν 55.000 νοικοκυριά σε χρόνο μικρότερο των 8 ωρών. Μια πρόταση που θα μπορούσε να εξεταστεί σοβαρά από κάθε κρατική υπηρεσία σε όλες τις χώρες.

If Bioterrorists Strike, Letter Carriers Might Deliver Antibiotics

"Neither snow, nor rain, nor heat, nor gloom of night, nor bioterrorism attack stays these couriers from the swift completion of their appointed rounds -- especially if they are delivering antibiotics to protect people from anthrax." That may someday become the unofficial motto of the U.S. Postal Service. Health and Human Services Secretary Mike Leavitt yesterday proposed a solution to one of the bigger challenges in responding to an anthrax bioterrorism attack -- how to deliver protective antibiotics to tens of thousands of people overnight. The tentative answer: have the mailman (and - woman) do the job. As an incentive to the letter carriers -- who would be volunteers -- the government would issue them in advance an antibiotic supply large enough to treat themselves and their families. They would also be accompanied by police officers on their rounds. "We have found letter carriers to be the federal government's quickest and surest way of getting pills to whole communities," Leavitt said. The strategy has the full support of the Postal Service and its unions, spokesmen said. "Letter carriers are on the street six days a week. They are constantly helping out as just part of their job, and this is taking it one step further," said Drew Von Bergen of the National Association of Letter Carriers. "Anytime this country has any kind of crisis, it is the Postal Service that is out there first," said Postal Service spokeswoman Sue Brennan. Boston, Philadelphia and Seattle held experimental runs of the distribution strategy in 2006 and 2007, said William Raub, Leavitt's science adviser. In Philadelphia, 50 carriers, each accompanied by a city police officer, reached 55,000 households in less than eight hours. Based on those tests, the strategy was deemed practical and will be put in effect on a trial basis next year in Minneapolis and St. Paul, he said. The Postal Service there will solicit about 700 letter carriers, enough to cover 20 Zip codes or about one-quarter of all households. The workers will be medically screened (including questions about family members), fitted with N95 face masks, and issued a supply of the antibiotic doxycycline for their household. If successful, it may be expanded to encompass the entire Twin Cities area, said Jude Plessas, a Postal Service official. Before that pilot project can begin, however, the Food and Drug Administration must approve distribution of the drug for this purpose, which is not currently part of its label, or officially approved list of uses. Leavitt yesterday requested that FDA review, which may take months. Since 2004, the federal government has funded the Cities Readiness Initiative, which is helping 72 urban areas make plans to distribute drugs to a target population within 48 hours of a bioterrorism attack. Any of those cities will now be able to employ the letter carrier distribution strategy. The federal government will not force them to adopt it, as disaster planning is principally a job for state and local governments. The federal government has enough anthrax antibiotics in the Strategic National Stockpile to treat 40 million people for 60 days. The medicine is cached in 12 sites around the country. Sixty days is the maximum amount of time a person exposed to airborne anthrax spores might have to take medicine to prevent the inhalational form of the bacterial infection, which is rapidly fatal if not treated. Letter carriers who volunteer for this duty would not be paid bonuses or given any other incentives, Brennan said. In a bioterrorist attack seven years ago this fall, finely powdered anthrax spores were sent in envelopes to several addresses on the East Coast. Four workers at a mail processing center in the District, where at least one of the letters was sorted, developed inhalational anthrax, and two died. In all, 8,424 postal employees were offered prophylactic courses of antibiotics. Sixty-six percent started, but about 10 percent of

them stopped taking the offered drugs for various reasons. Nearly all took ciprofloxacin, a medicine that is not being offered as part of the letter carriers' supply under the new plan, in part because of its possible side effects. In another action yesterday, Leavitt issued a declaration that will provide protection against lawsuits for companies that make drugs for mass distribution during an anthrax attack, or who help distribute them.

Ποιος είναι «σημαντικός» σε περίπτωση πανδημίας γρίπης;

Δεν είναι μόνον οι ιατροί, οι νοσηλευτές και οι πυροσβέστες οι πλέον απαραίτητοι σε περίπτωση πανδημίας γρίπης – αλλά και οι οδηγοί φορτηγών και οι διανομείς που θα κληθούν να διαχειριστούν τρόφιμα, νερό και καύσιμα, η έλλειψη των οποίων θα μεγεθύνει το ρήγμα που έχει προκαλέσει σε πρώτο χρόνο η βιο-τρομοκρατική επίθεση.

Rethinking who should be considered 'essential' during a pandemic flu outbreak

Not only are doctors, nurses, and fire-fighters essential during a severe pandemic influenza outbreak. So, too, are truck drivers, communications personnel, and utility workers. That's the conclusion of a Johns Hopkins University article to be published in the journal of *Biosecurity and Bioterrorism*. The report, led by Nancy Kass, Sc.D, Deputy Director of Public Health for the Johns Hopkins Berman Institute of Bioethics, provides ethical guidance for pandemic planning that ensures a skeletal infrastructure remain intact at all times. Dr. Kass says, "when preparing for a severe pandemic flu it is crucial for leaders to recognize that if the public has limited or no access to food, water, sewage systems, fuel and communications, the secondary consequences may cause greater sickness death and social breakdown than the virus itself." The authors represent a wide-range of expertise in several areas of pandemic emergency planning both at the state and federal levels. After examining several accepted public health rationing strategies that give priority to all healthcare workers and those most susceptible to illness, the authors propose a new strategy that gives priority to a more diverse group. "Alongside healthcare workers and first responders, priority should be given to the people who provide the public with basic essentials for good health and well-being, ranging from grocery store employees and communications personnel to truck drivers and utility workers," says Dr. Kass. The report recognizes that given the widespread and sustained nature of a pandemic, federal assistance will be spread thin and local jurisdictions must develop their own preparedness plans to ensure they are capable of sustained self-sufficiency. Encouraging and working with local businesses to develop their own response plans can help reduce the burden on local governments during a pandemic. Similarly, individuals and families who can afford it should do their best to prepare for any disaster. The paper notes, the more initiative the general public exercises in stockpiling several weeks' worth of food, water, paper goods, batteries medicines, and other needed supplies, the less vulnerable they will be to a break in the supply chain. In fact, the report emphasizes, it is important for leaders to communicate to the middle class and the wealthy that it is their responsibility to prepare for self-sufficiency in order to free up scarce supplies and allow first responders to direct their attention towards those too poor or vulnerable to prepare themselves. The article lays out a set of ethics rules and principles to help guide and frame a pandemic response strategy that is evidence-based, transparent, fair, and recognizes the burdens the public may face. Dr. Kass points out the "consideration of ethics are critical not only in having

respectful and inclusive discussion and engaging with the public fairly, but it also improves the likelihood of public health and medical success through increased cooperation and understanding of government plans."

Νέες προμήθειες εμβολίων κατά του άνθρακα

Οι ΗΠΑ προχώρησαν σε νέα προμήθεια 14.5 εκατομμυρίων δόσεων εμβολίων BioThrax™ κατά του άνθρακα συνολικής αξίας 364-404 εκατομμυρίων δολαρίων. Τα νέα εμβόλια θα παραδοθούν κατά το τρίτο τετράμηνο του 2009.

U.S. Government to Purchase Additional 14.5 Million Doses of BioThrax under New Contract Valued at up to \$404 Million

Emergent BioSolutions Inc. (NYSE:EBS) announced today that it has signed a new, multi-year, firm fixed price contract with the U.S. Department of Health and Human Services (HHS) to supply an additional 14.5 million doses of BioThrax® (Anthrax Vaccine Adsorbed), its FDA licensed anthrax vaccine, for inclusion in the Strategic National Stockpile (SNS). The total value of this follow-on contract is between \$364 million and \$404 million, with the higher amount tied to the delivery of product having four-year expiry dating. First deliveries of BioThrax under this new contract are scheduled to begin in 3Q 2009, immediately following the scheduled completion of deliveries under the company's current \$448 million contract to supply 18.75 million doses of BioThrax to the SNS. Final product deliveries under this new contract are anticipated in 3Q 2011. "This follow-on contract with HHS is continuing evidence of the government's steadfast commitment to procure critical countermeasures to protect against the threat of bioterrorism in our country," said Fuad El-Hibri, chairman and chief executive officer of Emergent BioSolutions. "We are encouraged that we were able to secure this new procurement for an additional 14.5 million doses with HHS, because it represents a seamless transition from our current contract for the shipment of 18.75 million doses of BioThrax into the SNS. This clearly demonstrates the U.S. government's commitment to maintaining a strong, domestic industrial base for biodefense medical countermeasures."

Νέα επέκταση σε εργοστάσιο καταστροφής χημικών όπλων στη Ρωσία

Στο εργοστάσιο καταστροφής χημικών όπλων Maradykovskiy μια νέα πτέρυγα αναμένεται να τεθεί σε λειτουργία εντός του Μαρτίου 2009. Στις νέες εγκαταστάσεις θα γίνεται καταστροφή πυρομαχικών με γεμίσματα sarin και soman.

Russia: Chemical Weapons Disposal Site to Be Launched in March 2009 - Agency

A regional commission for scrapping chemical weapons in Kirov Region has examined the readiness of the Maradykovskiy chemical weapons disposal site to launch its second phase in March 2009, the press centre of the regional government said on 30 September. The second stage facilities are equipped to scrap ammunition filled with the toxic substances sarin and soman. The remaining ammunition filled with VX gas is being scrapped at Maradykovskiy, the press centre said. At the same time, equipment is being assembled at all facilities that will be used to scrap sarin and soman. Testing and commissioning work will begin on 1 December 2008 and will be completed by March 2009. A permit is being drafted in order to make the facility's

control system ready for scrapping sarin and soman, and personnel are being trained to use the new equipment. Staff at the facility's central laboratory are also being trained to learn new methods to detect sarin and soman in the environment.

Εποχόμενη ανίχνευση ραδιενέργειας

Το RadTrack είναι ένα νέο όχημα που διαθέτει σύγχρονο εξοπλισμό ανίχνευσης ραδιενέργειας με δυνατότητα ασύρματης διασύνδεσης με κεντρική μονάδα ελέγχου. Ο εξοπλισμός που διαθέτουν μπορεί να ανιχνεύσει ραδιενέργεια που εκλύεται από έναν κόκκο άμμου που απέχει λίγα μέτρα από τον ανιχνευτή του αυτοκινήτου που κινείται με ταχύτητα 70 χλμ/ω ενώ υπάρχει η δυνατότητα διάκρισης διαφορετικών «υπογραφών» ραδιενεργών στοιχείων όπως είναι το κέσιο-137 ή το κάλιο σε φορτίο μπανανών.

Mobile, Networked Radiation Detectors Help the Law Find Dirty Bombs

What do you get when you cross California nuclear chemists with New Jersey policemen? A mobile, and wirelessly networked, radiation detector jammed into the trunk of a Chevy Suburban called the RadTruck. Lawrence Livermore National Laboratory scientists and their business partners, Textron Defense Systems, demoed the \$250,000 trucks yesterday to reporters and revealed they'd been patrolling the streets and sensitive infrastructure of Jersey for the past year. RadTrucks are able to identify radioactive sources as small as a grain of sand within a dozen feet of its side-mounted detectors while traveling at 45 miles per hour, which makes it particularly useful for monitoring highways. "It's a spectroscopic system," said Howard Hall, a Livermore nuclear chemist who helped develop the radiation detector. "Most current systems say there's radiation and how much of it there is. This tells you that there's radiation, how much of it and what it is." Another (intentionally) unidentified western state has deployed more than a dozen RadTrucks on its highways as well. While scientists have been able to easily detect radioactive sources for decades (think: the Geiger Counter), Livermore's adaptable radiation area monitor allows your average cop to tell the difference between Cesium 137, a dangerous possible component of a "dirty bomb," and pedestrian radioactive sources like the potassium in your bananas or kitty litter. Each radioactive element has a specific energy signature that scientists can use to tell scary sources of radiation — like plutonium, used to build nuclear bombs — from the mundane sources used in medical procedures and regular products. "Now, cargo containers of toilets can set off alarms," Hall said. The radiation detector in the RadTrucks can use a large crystal of sodium iodide to detect gamma rays and a tube of a special helium gas isotope to detect neutrons. Monitoring radioactive sources at high speeds requires fast data processing, and indeed, Dave Trombino, a nuclear engineer at LLNL, described the real technological breakthrough of the system as lying more in its code than its chemistry. "The technological breakthrough of this system is buried in the software, which controls the data collection and analysis," said Trombino, in a release to reporters. The company that's licensed the LLNL system is attempting to turn the radiation detector into a node on the law enforcement network. The detectors in the RadTrucks can be configured to send text messages to police officers and can communicate via any wireless network from standard WiFi to military channels to cell phone networks. "Give me a USB cable, laptop and detector and I can set this up anywhere," said Brian Adlawan,

program director for detection systems at Textron Defense Systems. Questioned about security for the networked system, Adlawan said that standard precautions were taken and that there are decided cost advantages to using commercial technologies instead of military or proprietary protocols. "You've got to secure your network," he said. "But taking advantage of that TCP network lets you do it for a fraction of the cost."

Νέο οπτικό υλικό laser

Ένα νέο υλικό για οπτικές ίνες (CsZrPSe6) θα επιτρέψει στις συσκευές που χρησιμοποιούν laser να λειτουργούν σε πολλαπλές συχνότητες ενώ σήμερα περιορίζονται σε μόνον έξι συχνότητες. Υπεύθυνος του εν λόγω προγράμματος του Argonne National Laboratory είναι ο Έλληνας Μερκούριος Κανατζίδης ο οποίος μελετά το νέο υλικό με τη βοήθεια της Advanced Photon Source (APS) σε μια προσπάθεια δημιουργίας οπτικών ινών μήκους ενός μέτρου.

Optical material could enable universal laser

A new optical fiber material could enable laser-based devices to be built operating at multiple frequencies. The new material--cesium zirconium phosphorus selenium (CsZrPSe6)--can add, subtract and double laser beam wavelengths, enabling devices with two laser sources to produce many usable wavelengths. "Lasers today are basically limited to six frequencies, but our new material will double any frequency in the far visible and the near-infrared and infrared," claimed Argonne National Laboratory scientist Mercouri Kanatzidis. "It not only doubles frequencies, but when you use two lasers to put in two frequencies, you also get out their sum and difference. So with two lasers you could generate all the frequencies." Argonne researchers claim the new technology could be used in sensors that detect biological and chemical weapons. After combining zirconium, phosphorus and selenium they found that the new material acquired the optical doubling, adding and subtracting abilities with the addition of either potassium, rubidium or cesium. Although the four-element compounds all had similar properties, the most successful of these compounds was CsZrPSe6. "This compound is made with heavy elements--selenium, zirconium and cesium--elements that couple to light much more effectively, causing their harmonics to be much more intense, so the efficiency with which this material produces second harmonics is much, much higher than anything we have seen before," said Kanatzidis. The new compound produced frequency-doubled beams 15 times more intense than those produced by the best commercial materials today, according to Kanatzidis. The laboratory studied the structure of the new material using its Advanced Photon Source (APS), a synchrotron X-ray research facility funded by the U.S. Energy Department. They found that the new material naturally grows in long individual fibers. The growth rate for the fiber's lengthwise dimension is very rapid, but growth in diameter is much slower--the perfect combination for growing optical fibers. "What we found with the APS is that the compounds crystals are one-dimensional, and extend forever with very thin molecular dimensions," said Kanatzidis. Next the researchers plan to grow longer fibers--up to a meter compared to the centimeter-sized prototypes that they have built so far. Using the APS and other analytic tools they plan to perform a full characterization of CsZrPSe6. Funding was provided by the National Science Foundation and DoE's Office of Basic Energy Sciences.

Ουκ εν τω πολλώ το ευ

Λιγότερες δόσεις (3) εμβολίου άνθρακα προστατεύουν εξίσου αποτελεσματικά από τις τέσσερις προβλεπόμενες δόσεις. Στην ίδια μελέτη του CDC σε 1.005 ενήλικες αμερικανούς, διαπιστώθηκε ότι η ενδομυϊκή στον βραχίονα αντί για υποδόρια ένεση του εμβολίου επιφέρει λιγότερες ανεπιθύμητες αντιδράσεις.

Fewer doses of anthrax vaccine protect just as well

Giving fewer doses of the anthrax vaccine protects a person just as well from the bacteria that causes the disease, which could extend limited supplies of the shots, researchers said on Tuesday. Because anthrax can be used as a biological weapon, members of the U.S. military are among those getting the vaccine made by Maryland-based Emergent BioSolutions. Conrad Quinn of the U.S. Centers for Disease Control and Prevention and colleagues studied 1,005 U.S. adults given the vaccine. Those who received three doses over six months mustered a comparable immune response to those given the usual four doses over the same time. The findings are part of the largest and most comprehensive study of this vaccine ever done, Quinn said. The study is ongoing, and the researchers are now looking to see if four shots given over a period of 3-1/2 years protect as well as eight shots over the same time period. "Depending on the data at the end of the study, we have the potential to halve the doses that a person needs to get," Quinn, whose findings appear in the Journal of the American Medical Association, said in a telephone interview. "If you have a certain amount of vaccine and now you don't have to give all of that to complete one series, you have more vaccine," Quinn added. The study also found that injecting the vaccine into the muscle of the upper arm rather than under the skin reduced side effects. Anthrax is a sometimes-fatal infection caused by Bacillus anthracis bacteria. Its spores can be used as a biological weapon and are most deadly when inhaled. Attacks involving anthrax-laced letters in the United States in 2001 killed five people. Emergent is the government's only supplier of anthrax vaccine. But it involves many injections to work, and some who have received the shots complain about side effects. Emergent and another Maryland company PharmAthene Inc said last week they received contracts from the U.S. government to develop a new anthrax vaccine. PharmAthene gets up to \$83.9 million. Emergent gets \$29.7 million. Two years ago, the government ended an \$877.5 million deal with VaxGen Inc to provide millions of doses of anthrax vaccine because regulators refused to approve new tests of the experimental product.

Φωτογραφική μηχανή-θησαυρός στο διαδίκτυο

Βρετανός αγόρασε μέσω της διαδικτυακής ιστοσελίδας αγοραπωλησιών eBay μια ψηφιακή ηλεκτρονική μηχανή Nixon CoolPix έναντι 17 λιρών. Προς μεγάλη του έκπληξη διαπίστωσε ότι στην κάρτα μνήμης της μηχανής υπήρχαν φωτογραφίες υπόπτων για τρομοκρατία, ονόματα, δακτυλικά αποτυπώματα και εικόνες εκτοξευτών και πυραύλων. Η κάμερα παραδόθηκε στην MI6 που διενεργεί ανακρίσεις καθώς το υλικό φαίνεται να έχει σχέση με τον Abdul al-Hadi al-Iraqi που είχε συλληφθεί από τη CIA το 2007.

Ebay camera contains 'secret' MI6 terrorist images

Police are investigating the sale of a digital camera containing MI6 images of terror suspects on eBay, the Foreign Office has confirmed. A 28-year-old man from Hertfordshire bought the Nixon Cool Pix camera for £17 on the online auction

website before going on holiday to the US. When the new owner, a delivery driver from Hemel Hempstead, went to download his holiday pictures he found photos of terror suspects, along with their names, fingerprints and images of launchers and missiles. Hertfordshire police said today that the sale was being investigated. "We can confirm we seized a camera after a member of the public reported it," a statement said. "Intelligence officers are investigating." According to reports in the Sun this morning, a document marked "top secret" which gave details of the encrypted computer system used by MI6's agents was also found among the images. When the owner informed the local police about what he had found, Special Branch officers came to his home to take the camera. According to reports, the officers made five visits to his home to interview him about what he had found. Some of the material found on the camera was said to relate to Abdul al-Hadi al-Iraqi, 46, an al-Qaida officer, who was captured by the CIA in 2007. Neil Doyle, author of Terror Base UK, said: "These are MI6 documents relating to an operation against al-Qaida insurgents in Iraq. It's jaw-dropping that they got into the public domain. "Not only do they divulge secrets about operations, operating systems and previously unheard-of MI6 departments, but they could put lives at risk."

Οι επτά συνήθειες των αναποτελεσματικών τρομοκρατών

Ο Max Abrahms του *Stanford University's Center for International Security and Cooperation* καταγράφει τις επτά συνήθειες που καθιστούν αναποτελεσματικούς τους τρομοκράτες. Οι τρομοκράτες (1) επιτίθενται κατά πολιτών, πολιτική που έχει αποδειχθεί αναποτελεσματική, (2) θεωρούν την τρομοκρατία ως το πρώτο μέσο ενώ δεν αδυνατούν να υιοθετήσουν εναλλακτικές μη βίαιες λύσεις όπως οι εκλογές, (3) δεν συμβιβάζονται με την χώρα-στόχο ακόμη και όταν οι συμβιβασμοί πολιτικά είναι προς όφελος τους, (4) έχουν ευμετάβλητες πολιτικές πλατφόρμες που αλλάζουν τακτικά και ορισμένες φορές ριζοσπαστικά, (5) συχνά εμπλέκονται σε ανώνυμες επιθέσεις που εμποδίζουν τις χώρες-στόχους να προχωρήσουν σε πολιτικές παραδοχές προς αυτούς, (6) συχνά επιτίθενται κατά άλλων τρομοκρατικών ομάδων με παρόμοιες πολιτικές πλατφόρμες και (7) αρνούνται να διαλυθούν, ακόμη κι όταν έχουν αποτύχει στις πολιτικές τους επιδιώξεις ή όταν οι δηλωθέντες πολιτικοί σκοποί έχουν επιτευχθεί.

The Seven Habits of Highly Ineffective Terrorists

Most counterterrorism policies fail, not because of tactical problems, but because of a fundamental misunderstanding of what motivates terrorists in the first place. If we're ever going to defeat terrorism, we need to understand what drives people to become terrorists in the first place. Conventional wisdom holds that terrorism is inherently political, and that people become terrorists for political reasons. This is the "strategic" model of terrorism, and it's basically an economic model. It posits that people resort to terrorism when they believe -- rightly or wrongly -- that terrorism is worth it; that is, when they believe the political gains of terrorism minus the political costs are greater than if they engaged in some other, more peaceful form of protest. It's assumed, for example, that people join Hamas to achieve a Palestinian state; that people join the PKK to attain a Kurdish national homeland; and that people join al-Qaida to, among other things, get the United States out of the Persian Gulf. If you believe this model, the way to fight terrorism is to change that equation, and that's what most experts advocate. Governments tend to minimize the political gains of terrorism through a no-concessions policy; the international community tends to

recommend reducing the political grievances of terrorists via appeasement, in hopes of getting them to renounce violence. Both advocate policies to provide effective nonviolent alternatives, like free elections. Historically, none of these solutions has worked with any regularity. Max Abrahms, a predoctoral fellow at Stanford University's Center for International Security and Cooperation, has studied dozens of terrorist groups from all over the world. He argues that the model is wrong. In a paper (.pdf) published this year in *International Security* that -- sadly -- doesn't have the title "Seven Habits of Highly Ineffective Terrorists," he discusses, well, seven habits of highly ineffective terrorists. These seven tendencies are seen in terrorist organizations all over the world, and they directly contradict the theory that terrorists are political maximizers:

Terrorists, he writes, (1) attack civilians, a policy that has a lousy track record of convincing those civilians to give the terrorists what they want; (2) treat terrorism as a first resort, not a last resort, failing to embrace nonviolent alternatives like elections; (3) don't compromise with their target country, even when those compromises are in their best interest politically; (4) have protean political platforms, which regularly, and sometimes radically, change; (5) often engage in anonymous attacks, which precludes the target countries making political concessions to them; (6) regularly attack other terrorist groups with the same political platform; and (7) resist disbanding, even when they consistently fail to achieve their political objectives or when their stated political objectives have been achieved.

Abrahms has an alternative model to explain all this: People turn to terrorism for social solidarity. He theorizes that people join terrorist organizations worldwide in order to be part of a community, much like the reason inner-city youths join gangs in the United States. The evidence supports this. Individual terrorists often have no prior involvement with a group's political agenda, and often join multiple terrorist groups with incompatible platforms. Individuals who join terrorist groups are frequently not oppressed in any way, and often can't describe the political goals of their organizations. People who join terrorist groups most often have friends or relatives who are members of the group, and the great majority of terrorists are socially isolated: unmarried young men or widowed women who weren't working prior to joining. These things are true for members of terrorist groups as diverse as the IRA and al-Qaida. For example, several of the 9/11 hijackers planned to fight in Chechnya, but they didn't have the right paperwork so they attacked America instead. The mujahedeen had no idea whom they would attack after the Soviets withdrew from Afghanistan, so they sat around until they came up with a new enemy: America. Pakistani terrorists regularly defect to another terrorist group with a totally different political platform. Many new al-Qaida members say, unconvincingly, that they decided to become a jihadist after reading an extreme, anti-American blog, or after converting to Islam, sometimes just a few weeks before. These people know little about politics or Islam, and they frankly don't even seem to care much about learning more. The blogs they turn to don't have a lot of substance in these areas, even though more informative blogs do exist. All of this explains the seven habits. It's not that they're ineffective; it's that they have a different goal. They might not be effective politically, but they are effective socially: They all help preserve the group's existence and cohesion. This kind of analysis isn't just theoretical; it has practical implications for counterterrorism. Not only can we now better understand who is likely to become a terrorist, we can engage in strategies specifically designed to weaken the social

bonds within terrorist organizations. Driving a wedge between group members -- commuting prison sentences in exchange for actionable intelligence, planting more double agents within terrorist groups -- will go a long way to weakening the social bonds within those groups. We also need to pay more attention to the socially marginalized than to the politically downtrodden, like unassimilated communities in Western countries. We need to support vibrant, benign communities and organizations as alternative ways for potential terrorists to get the social cohesion they need. And finally, we need to minimize collateral damage in our counterterrorism operations, as well as clamping down on bigotry and hate crimes, which just creates more dislocation and social isolation, and the inevitable calls for revenge.

Αντι-τρομοκρατικές προτεραιότητες για τους Ολυμπιακούς του 2010

Στις κορυφαίες προτεραιότητες των ειδικών δυνάμεων του Καναδά συμπεριλαμβάνεται η ασφάλεια των Ολυμπιακών Αγώνων του 2010 και η βελτίωση των δυνατοτήτων τους στην αντιμετώπιση τρομοκρατικών επιθέσεων στο εσωτερικό της χώρας. Οι αποφάσεις ελήφθησαν τον Αύγουστο 2008 από την CANSOFCOM και δρομολογούν με σαφήνεια την εμπλοκή των ενόπλων δυνάμεων της χώρας στο αγώνα κατά της τρομοκρατίας και της αντιμετώπισης επιθέσεων με ΧΒΠΠ όπλα.

Domestic terror attack, 2010 Olympics top priorities for special forces

Canada's special forces have identified their top two priorities as improving their ability to deal with a terrorist attack at home as well as preparing to provide security for the 2010 Olympics, according to a new publication being circulated among the military's senior leadership. The third and fourth priorities, respectively, are the contribution to international operations and the growth over the longer term of the special forces command, the organization that includes the Ottawa-based Joint Task Force 2 counter-terrorism unit and a special operations regiment in Petawawa. The overview of the Canadian Special Operations Forces Command (CANSOFCOM) was produced in August and has made the rounds of the senior military leadership in the last several weeks. It is seen as a primer to explain what the command does and the direction it is headed. The command's continued development of domestic counter-terrorism skills includes the capability to deal with nuclear, biological, chemical or radiological attacks as well as to quickly provide a special operations task force to support law enforcement agencies. In the case of a terrorism incident in Canada, civilian law enforcement organizations would be the first to respond. Units such as JTF2 would be called in as a last resort. For the 2010 Olympics in Vancouver, the command notes that its ongoing preparation "includes completing the requisite planning, training, growth and integration required to provide the necessary (special operations forces) capability to assist with other government efforts to ensure the security of the Games." The command is expected to play a major security role at the Olympics and it is likely that much of JTF2's force will be stationed in B.C. for the Games. Commander Col. Michael Day points out in the publication that while special forces rely on intelligence and tight operational security, "Just as critical, they are dependent on enlightened and educated support by our conventional forces, allies and coalition partners as well as strong informed leadership with the CF." "The requirement for leaders of today and the future to have a full and in-depth understanding of who and what CANSOFCOM is, and most importantly, how to leverage the incredible capability our men and women represent, is critical to their success," Col. Day writes. In an interview earlier this year, Col. Day said the

education about special forces within the Canadian military and government is continuing. "That education piece is our responsibility," he said. "If there's ignorance, that's our problem to solve." According to the publication, the command sees its contribution to international missions as including not only support to Canadian military operations, but also providing assistance to other government departments. In addition, that would include helping "select nations and allies to develop capacities and skills sets so that they can provide for their own internal security and defence," the overview points out. That is an indication that Canadian special operations could undertake training missions overseas, such as U.S. Green Berets. The publication emphasizes that special forces must be used properly and such units are not a substitute for conventional forces. "In most cases, SOF are neither trained, nor equipped to conduct sustained conventional combat operations, and should not be substituted for conventional units," it adds.

Νέο Ινστιτούτο Πυρηνικής Ασφάλειας

Εγκαινιάστηκε το νέο παγκόσμιο ινστιτούτο πυρηνικής ασφάλειας (WINS) με έδρα τη Βιέννη και χρηματοδότηση από τις Ηνωμένες Πολιτείες και τον οργανισμό Nuclear Threat Initiative. Βασικός στόχος του νέου ιδρύματος είναι ο έλεγχος της παράνομης διακίνησης ραδιενεργών υλικών (περίπου 200 περιπτώσεις ετησίως), σε συνεργασία με την IAEA.

Nuclear security institute in Vienna launched with US funding

An international institute to work on the improvement of global nuclear security practices was launched in Vienna Monday, funded by the United States and the Nuclear Threat Initiative organization. The World Institute for Nuclear Security will provide a forum for experts, industry and government officials to discuss standards for protecting nuclear materials from criminals or terrorists. "The world can't afford to wait for a security Chernobyl before we act," said former US Senator Sam Nunn, who chairs the Washington-based Nuclear Threat Initiative together with CNN founder Ted Turner. Around 200 cases of illicit trafficking of radioactive sources are reported to the International Atomic Energy Agency (IAEA) per year, but many more are estimated to go unreported. "Among all the threats we are facing in the world, the prospect of nuclear terrorism is the biggest danger we are facing in the near future", IAEA Director General Mohamed ElBaradei said. The institute was launched on the sidelines of the IAEA general conference that is convening in Vienna this week.

Φόβος για την τρομοκρατία προκαλεί ψυχοσωματική επιδημία

Σύμφωνα με αμερικανικές κυβερνητικές πηγές, ο φόβος των αμερικανών έναντι της τρομοκρατίας θα μπορούσε να προκαλέσει μαζική έξαρση ψυχοσωματικών παθήσεων που θα οδηγήσει σε ψευδο-επιδημία που θα κατακλύσει τα νοσοκομεία τη στιγμή που θα προσπαθούν να αντιμετωπίσουν τα πραγματικά θύματα. Παραδείγματα: η επίθεση στην Τσετσενία, στο θέατρο της Μόσχας και στο μετρό του Τόκιο – οδήγησαν εκατοντάδες ή χιλιάδες ανησυχούντες υγιείς στα νοσοκομεία.

Terrorism Fear Could Create Psychosomatic Epidemic, Feds Warn

Americans' fear of a terrorism could create a mass outbreak of a psychosomatic illness - even in the absence of any real attack - creating a fake epidemic that could overwhelm hospitals attempting to treat real victims. Adding to the confusion, the

symptoms of a mass psychogenic illness look much like symptoms of an anthrax attack, avian flu outbreak or chemical attack. At least that's what the feds warned hospitals in a nonpublic 2006 communique recently published by the government sunshine site Wikileaks. Call it a contagious psychosomatic illness -- though the feds preferred to label the phenomenon "psychogenic illness," defining that as: A phenomenon in which social trauma or anxiety combines with a suspicious event to produce psychosomatic symptoms, such as nausea, difficulty breathing, and paralysis. If many individuals come to believe that the psychosomatic outbreak is connected to the cause of the trauma or anxiety, these symptoms can spread rapidly throughout a population. In fact, the feds suggest that there's already been a totally terrorism-fear-created illness in California where no one was actually sick from an attack. In that case, a man walked into a California bank in October 2003, sprayed an aerosol can into the air and then left. Employees and customers became ill, though investigators found there were no biological or chemical agents in the air. (Note proof of this incident is attributed to a November 2003 FBI report that is also considered too sensitive for the public's eyes.) A similar fear-based illness began in Chechnya -- when 13 kids fell ill with headaches, fevers and numbness, according to the report. Many believed that the kids had been poisoned by a Russian chemical attack and the symptoms quickly spread. Some 87 people, mostly kids, were hospitalized, though there was no evidence of any chemical attack. Officials attributed the illness to anxiety over Russian military activities in the area. And perhaps most seriously, after the deadly sarin gas attacks in Tokyo in 1995, some 5,000 people went the hospital -- claiming to have symptoms, despite the attack's rather small radius. Twelve people were killed by the gas and 54 others sustained serious injuries. The analysis recommended that the government and health system educate people about chemical and biological attacks so they can recognize real symptoms, as well as quickly isolating both real and psychosomatic victims in the case of an attack or perceived attack. The July 5, 2006, analysis entitled Fear of Terrorist Attack Could Trigger Mass Psychogenic Illness from the the Homeland Infrastructure Threat and Risk Analysis Center is not classified. Instead it is labeled For Official Use Only (FOUO) - - a designation that allows the data to be shared with people without clearances, but away from the public eye. Such material is usually not available through government sunshine requests.

Επίθεση hackers κατά της al Qaeda

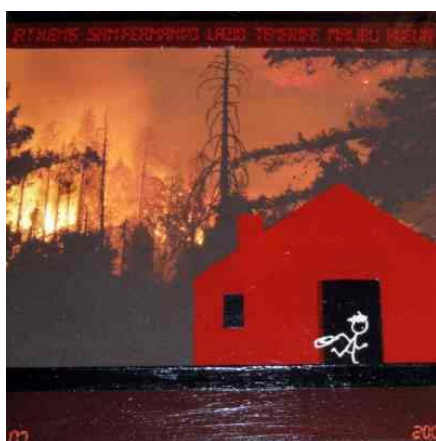
Hackers απέτρεψαν την ανάρτηση νέου video της al Qaeda επ' ευκαιρία της έβδομης επετείου της επίθεσης της 11^{ης} Σεπτεμβρίου 2001. Υπάρχουν ενδείξεις ότι υπεύθυνοι για το μπλοκάρισμα των ιστοσελίδων της al Qaeda είναι οι Aaron Weisburd του Internet Haganah και ο Rusty Shackelford από την ομάδα web My Pet Jawa.



Hackers block Qaeda's 9/11 terror on tape

Hackers prevented Al Qaeda from releasing a videotape to mark the seventh anniversary of 9/11. Al Qaeda has traditionally issued a video or audiotape by either Osama bin Laden or Ayman al Zawahiri, the terror network's two leaders, to mark

their massive terrorist attack on the US. As-Sahab, Al Qaeda's media unit, had indicated earlier this week that it would post such a videotape on September 11. As-Sahab had banner images on the internet showing a silhouetted head with a question mark and the words, "Wait 11 September". The US-based intelligence group IntelCenter had speculated the video would be a message from Osama or Zawahiri with a recording of the last will and testament of Mohammed Atta, one of the leaders of the 9/11 attackers. Sources close to US intelligence said, "Hackers knocked out Al Qaeda's online means of communication, thus preventing them from posting anything to commemorate the anniversary." Western intelligence suspects two hackers who have targeted Islamicist sites before were responsible: Aaron Weisburd from Internet Haganah and Rusty Shackelford from the web group My Pet Jawa. Both have been active in ongoing Internet battle between Islamicist hackers and their opponents. Terrorism expert B Raman says, "I received word two days ago that it was possible the tape would not be released because of hackers." He noted: "As Sahab is having problems. (Al Qaeda spokesperson) Adam Gadani, in charge of the website, has not been heard of for six months. There are reports he may have been killed in Pakistan." He expects the tape to be issued three or four days from now. "Or they will send it to Al Jazeera." This is not the first time hackers have dented the plans of the world's deadliest terror network. In 2004, a hacker group called TeAmZ USA had knocked out the websites of Abu Musal al-Zarqawi, late head of the Al Qaeda in Iraq, for showing tapes of Westerners being beheaded. The hackers left the image of a gun-toting penguin on the website. Last year's Al Qaeda anniversary videotape included a eulogy by Bin Laden to 9/11 attacker Waleed al Shehri and his video will — a recording made by suicide bombers before they carry out their missions. Al Qaeda failed to issue an anniversary tape in 2004 as well, leading to speculation Bin Laden had died. Last year, Washington released the anniversary tape two days before Al Qaeda did. Says Raman, "This was probably to deliberately show the US had hacked the password to Al Qaeda's website."



ΤΡΟΜΟΚΡΑΤΙΑ ΚΑΙ ΤΕΧΝΗ

Η Άννα Μανέτα άνοιξε στην γκαλερί a.antonopoulou.art (στου Ψυρρή), την νέα εικαστική περίοδο την Τετάρτη 24 Σεπτεμβρίου (και μέχρι τις 25 Οκτ 2008), με την καινούργια της δουλειά, με τίτλο "TERRARISM". Ο όρος "TERRARISM" -από τις λέξεις terra (γη) και terrorism (τρομοκρατία)- αναφέρεται στην αίσθηση φόβου και ανασφάλειας, που προκαλείται από την αλλαγή των μέχρι τώρα δεδομένων κλιματολογικών συνθηκών και τις

επερχόμενες συνέπειές τους.

Νέος ανιχνευτής προσομοιάζει την μύτη του σκύλου

Είναι γνωστές οι φανταστικές οσφρητικές ικανότητες του σκύλου που υπερβαίνουν κατά πολύ εκείνες των πλέων σύγχρονων χημικών ανιχνευτών. Στην Defense Advanced Research Projects Agency (DARPA) προσπαθούν να εκμεταλλευτούν στοιχεία από τον τρόπο που ο σκύλος διακρίνει τις διάφορες οσμές προκειμένου να

υλοποιήσουν το πρόγραμμα RealNose που θα βασίζεται στους οσφρητικούς υποδοχείς του σκύλου.

Pentagon's latest probe: Fido's nose

That's what Pentagon researchers are counting on as they work to expand their repertoire of bomb detection devices to help protect U.S. forces in war zones. Even with the variety of technology available to detect biological and chemical weapons, nothing fares better than a canine's sense of smell. The Defense Advanced Research Projects Agency, or DARPA, is now looking to model the real thing with its RealNose program. The goal is to see if technology can match, or even top, the sniffer of man's best friend. Thousands of research hours and millions of government dollars have been spent as scientists have sought to re-create a canine's nose, but few have come close. Instead, trained canines and their handlers have been deployed to screen at the nation's airports, sniff out potential bomb threats and even detect roadside bombs in Iraq. RealNose is similar to past DARPA projects like the so-called Dog's Nose program that the agency worked on in the late 1990s for mine detection. The latest effort is expected to develop a better chemical detection tool by closely examining how a canine's sense of smell works, and then attempting to replicate it. Because dogs' noses have the unique ability to detect thousands of chemicals with high selectivity and specificity, DARPA wants to re-create Fido's olfactory receptors. By using the receptors, researchers will broaden their ability in detecting various odors, said Brian Cook, a team leader at Massachusetts Institute of Technology's RealNose project. MIT, which is part of DARPA's project, has spent the past few years developing olfactory receptors and testing whether they can detect odors. Defense contractor Science Applications International Corp. last week became the latest to receive a grant worth up to nearly \$18 million to help design and develop DARPA's novel nose. A representative from San Diego-based SAIC was not available to comment. Canine researchers said even small technological advancements could yield big dividends for the military. "The intricacies of trying to emulate that system is so complicated," said Paul Waggoner, interim director of the Canine and Detection Research Institute at Auburn University. "They will just be able to achieve small pieces of it. Small, but extraordinarily significant." Engineers have backed away from previous claims that technology would quickly surpass the use of live canines for detection, he said. Now they suggest technology may be available in another decade or so that could potentially emulate some of a dog's smelling capabilities. "There's always been an inclination to look for what is considered a high-tech solution, but that opinion has changed somewhat in terms of their appreciation of the capabilities of dogs," Waggoner said. Even with advancements in technology, some remain skeptical. Using such detection devices outside of "pristine aromatic environments" like airports is a real challenge, said John Pike, a defense analyst and director of GlobalSecurity.org. "The street stinks a lot more ... and just how close are you going to have to get for it to be effective," Pike said. Still, military researchers remain hopeful a breakthrough is possible within about two years, maybe even around the holidays. SAIC's contract is expected to be complete by Dec. 25, 2010.

Διδάσκοντας τα βακτήρια

Ενδιαφέρουσα μελέτη που δημοσιεύθηκε στο Journal of the Royal Society Interface δείχνει ότι είναι εφικτή η εκπαίδευση βακτηρίων να μεταφέρουν και να απελευθερώνουν φάρμακα προς όφελος του ξενιστή. Ήδη οι πρώτες μελέτες

στοχεύουν προς την κατεύθυνση του AIDS και την ελεγχόμενη απελευθέρωση αντικών φαρμάκων από βακτήρια που έχουν μάθει να αντιδρούν με συγκεκριμένο τρόπο σε ανάλογα ερεθίσματα.

Teaching Bacteria to Behave

A century after Pavlov's dog first salivated at the sound of a bell, researchers are saying that single-celled organisms such as bacteria can be "trained" to react in a similar way. Rather than use complex networks of nerve cells, or neurons, bacteria can "learn" to associate one stimulus with another by employing molecular circuits, according to a multidisciplinary team from Germany, Holland, and the United Kingdom. This raises the possibility that bioengineers could teach old bacteria new tricks by having them act as sentinels for the human body, ready to spot and respond to signs of danger, the team says in the October issue of *Journal of the Royal Society Interface*. The basis for the claim is that single-celled organisms are able to associate stimuli that are applied simultaneously, according to the theoretical model produced by Chrisantha Fernando at the U.K.'s National Institute for Medical Research, in London, and his collaborators. As with Pavlov's dog and all other examples of associative learning, the bacteria in the model learn to build stronger associations between the two stimuli the more they occur together. The Canadian neuropsychologist Donald Hebb established an underlying explanation back in 1945. Now called Hebbian learning, it's often expressed as a situation in which "neurons that fire together wire together." In the hungry dog's case, nerve cells triggered by the smell of food started to make physical links with the nerve cells simultaneously triggered by the sound of a bell. According to Hebb's theory, the more often the two stimuli are applied at the same time, the greater the link or "synaptic weight" between them. Bacteria, of course, don't have synapses or nerve cells. Nonetheless, there are indications that single-celled organisms can learn. In the 1970s, Todd Hennessey claimed that paramecia, the single-celled pond dweller, could be conditioned in the lab. He electrocuted them and associated this with a buzzer. Following the simultaneous exposure to the buzzer and to electric currents, he claimed that the paramecia swam away from the buzzer when they had not done so before. The finding was never properly reproduced, but it raised the intriguing possibility that some sort of associated learning was possible for single-cell life forms. Now Fernando's team has proposed a model for how bacteria might be trained. He has designed a cellular circuit that consists of several genes and their promoters, which produce proteins (transcription factors) that act to switch each other on and off like a digital electric circuit. The researchers' theoretical circuit consists of three fictional genes. Two of these genes, A and B, produce proteins pA and pB, which react with other transcription factors, iA and iB, to switch on the third gene, C. The gene products pA and pB would persist in the cell and therefore act as a memory that lasts for a long time once they have been produced. Their concentrations are the equivalents of the synaptic weights in the Pavlovian-dog model. Only in conjunction with these molecules can iA and iB (the analogs of the smell and the bell) have their effects. By the researchers pairing the iA and iB, the bacteria is able to respond to iB, whereas before it only responded to iA. This means that the bacterium has been "trained" to respond to iB, says Fernando. Eva Jablonka, a theoretical biologist at Tel-Aviv University and a leading researcher in the field, agrees. "This is conceptually a bit difficult," she says, "but if you look at the definition of learning--because of something happening, you have some kind of physical traces, and this changes the

threshold of the response in the future--then this is what you have here." She adds, "I think that it is a good and potentially very useful paper, and I think they do demonstrate associative learning." The model is based on the assumption that such a chemical-genetic circuit could be created and planted into a bacterium such as *E. coli*. "It seems to me quite possible at the theoretical level, and I don't see great obvious hurdles for the construction of the suggested vectors," says Jablonka, who published a paper on conditioning in single-celled organisms this month. Significantly, Fernando estimates that the changes induced in the bacteria could easily persist for the 30-minute life cycle of an *E. coli* bacterium. This would make the changes, or "learning," heritable. This is an especially important point when it comes to medical applications for trained bacterium. "After all, diseases or drug doses are going to last longer than 30 minutes," notes Jablonka. The trick would be to train bacteria to recognize chemical processes in the body that are associated with danger. This might be an adverse and dangerous reaction to a drug, or to the presence of tumor cells, indicating that a medicine in the system needs to be activated in certain tissues. Research on genetically engineering remote-controlled bacteria to release drugs is already under way. In 2005, for example, a team from the National Institutes of Health proposed genetically engineering naturally occurring bacteria to release antiviral treatments for HIV. The realization that such bacteria might be trained to do this work more effectively could bring a whole new dimension to the field.

Νοσήματα και κλιματολογικές μεταβολές

Ειδικοί της Wildlife Conservation Society έδωσαν στη δημοσιότητα κατάλογο με 12 παθογόνους οργανισμούς (The Deadly Dozen), που θα μπορούσαν να εξαπλωθούν σε νέες περιοχές εξ αιτίας των αλλαγών του κλίματος. Στις εν λόγω παθήσεις περιλαμβάνονται: η γρίπη των πτηνών, η μπαμπεσίωση, η χολέρα, ο ιός Ebola, η πανώλης, η νόσος Lyme, η φυματίωση, οι παθήσεις του ύπνου, ο κίτρινος πυρετός κ.ά.

Deadly dozen' reports diseases worsened by climate change

Health experts from the Wildlife Conservation Society today released a report that lists 12 pathogens that could spread into new regions as a result of climate change, with potential impacts to both human and wildlife health and global economies. Called The Deadly Dozen: Wildlife Diseases in the Age of Climate Change, the new report provides examples of diseases that could spread as a result of changes in temperatures and precipitation levels. The best defense, according to the report's authors, is a good offence in the form of wildlife monitoring to detect how these diseases are moving so health professionals can learn and prepare to mitigate their impact. The report was released at the IUCN World Conservation Congress, held in Barcelona, Spain. The following list includes those pathogens that may spread as a result of changing temperatures and precipitation levels. Monitoring efforts for these diseases need to be examined in tandem with meteorological data to uncover climate-related trends. The list is not a comprehensive one, and subsequent studies may eliminate pathogens from the list of those enabled by climatic factors.

- Avian influenza: Like human influenza, avian influenza viruses occur naturally in wild birds, though often with no dire consequences. The virus is shed by infected birds via secretions and feces. Poultry may contract the virus from other domestic birds or wild birds. A highly pathogenic strain of the

disease—H5N1—is currently a major concern for the world's governments and health organizations, specifically because it has proven deadly to domestic and wild birds, as well as humans, and has the potential to evolve into a strain that can spread from human to human. Current data indicate that the movement of H5N1 from region to region is largely driven by the trade in poultry, but changes in climate such as severe winter storms and droughts can disrupt normal movements of wild birds and can bring both wild and domestic bird populations into greater contact at remaining water sources.

- **Babesiosis:** Babesia species are examples of tick-borne diseases that affect domestic animals and wildlife, and Babesiosis is an emerging disease in humans. In some instances, Babesia may not always cause severe problems by themselves but when infections are severe due to large numbers of ticks, the host becomes more susceptible to other infectious diseases. This has been seen in large die-offs of lions in East Africa due to canine distemper. Climate factors fostered heavy infestations of ticks on wild buffalo and subsequent spill-over infection of lions. The lions then became more susceptible to infections with the distemper virus. In Europe and North America, the disease is becoming more common in humans, also linked with tick distributions. Diseases that have previously been thought to have limited impact, such as babesiosis, must be watched closely in a changing climate to assess how environmental conditions may tip the scale and cause more significant impacts on ecosystems, animals, and people.
- **Cholera:** Cholera is a water-borne diarrheal disease affecting humans mainly in the developing world. It is caused by a bacterium, *Vibrio cholerae*, which survives in small organisms in contaminated water sources and may also be present in raw shellfish such as oysters. Once contracted, cholera quickly becomes deadly. It is highly temperature dependent, and increases in water temperature are directly correlated with occurrence of the disease. Rising global temperatures due to climate change are expected to increase incidence of this disease.
- **Ebola:** Ebola hemorrhagic fever virus and its closely related cousin—the Marburg fever virus—easily kill humans, gorillas, and chimpanzees, and there is currently no known cure. Scientists continue to work on finding the source of the disease and to develop vaccines for protection. There is significant evidence that outbreaks of both diseases are related to unusual variations in rainfall/dry season patterns. As climate change disrupts and exaggerates seasonal patterns, we may expect to see outbreaks of these deadly diseases occurring in new locations and with more frequency. WCS's work on Ebola in Central Africa has been supported by the US Fish and Wildlife Service.
- **Intestinal and external parasites:** Parasites are widespread throughout terrestrial and aquatic environments. As temperatures and precipitation levels shift, survival of parasites in the environment will increase in many places, infecting an increasing number of humans and animals. Many species of parasites are zoonotic, spread between wildlife and humans. The nematode, *Baylisascaris procyonis*, is spread by the common raccoon and is deadly to many other species of wildlife and humans. A close relative, *Baylisascaris*

schroederi, causes death in its natural host—the critically endangered giant panda. Monitoring of parasite species and loads in wildlife and livestock help us identify transmission of these infections between domestic and wild animals and humans.

- **Lyme disease:** This disease is caused by a bacterium and is transmitted to humans through tick bites. Tick distributions will shift as a result of climate change, bringing Lyme disease into new regions to infect more animals and people. Although effects of the disease on wildlife have not been documented, human-induced changes in the environment and on population patterns of species such as white-tailed deer that can carry infective ticks greatly affect the distribution of this disease. Monitoring of tick distributions will be necessary to assess the impacts of climate change on this disease.
- **Plague:** Plague, *Yersinia pestis*—one of the oldest infectious diseases known—still causes significant death rates in wildlife, domestic animals, and humans in certain locations. Plague is spread by rodents and their fleas. Alterations in temperatures and rainfall are expected to change the distribution of rodent populations around the globe, which would impact the range of rodent-borne diseases such as plague.
- **"Red tides":** Harmful algal blooms off global coasts create toxins that are deadly to both humans and wildlife. These occurrences—commonly called "red tides"—cause mass fish kills, marine mammal strandings, penguin and seabird mortality, and human illness and death from brevetoxins, domoic acid, and saxitoxins (the cause of "paralytic shellfish poisoning"). Similar events in freshwater are caused by a species of Cyanobacteria and have resulted in animal die-offs in Africa. Altered temperatures or food-web dynamics resulting from climate change will have unpredictable impacts on the occurrences of this worldwide phenomenon. Effects of harmful algal blooms on sea life are often the first indicators that such an event is taking place.
- **Rift Valley Fever:** Rift Valley fever virus (RVFV) is an emerging zoonotic disease of significant public health, food security, and overall economic importance, particularly in Africa and the Middle East. In infected livestock such as cattle, sheep, goats and camels, abortions and high death rates are common. In people (who can get the virus from butchering infected animals), the disease can be fatal. Given the role of mosquitoes in transmission of the virus, changes in climate continue to be associated with concerns over the spread of RVFV.
- **Sleeping sickness:** Also known as trypanosomiasis, this disease affects people and animals. It is caused by the protozoan, *Trypanosoma brucei*, and transmitted by the tsetse fly. The disease is endemic in certain regions of Sub-Saharan Africa, affecting 36 countries, with estimates of 300,000 new cases every year and more than 40,000 human deaths each year in eastern Africa. Domestic cattle are a major source of the disease, but wildlife can be infected and maintain the disease in an area. Direct and indirect effects (such as human land-use patterns) of climate change on tsetse fly distributions could play a role in the distribution of this deadly disease.

- Tuberculosis: As humans have moved cattle around the world, bovine tuberculosis has also spread. It now has a global distribution and is especially problematic in Africa, where it was introduced by European livestock in the 1800s. The disease infects vital wildlife populations, such as buffalo and lions in Kruger National Park in South Africa, where tourism is an integral part of local economies. The disease also infects humans in southern Africa through the consumption of un-pasteurized milk. Human forms of tuberculosis can also infect wild animals. Climate change impacts on water availability due to drought are likely to increase the contact of wildlife and livestock at limited water sources, resulting in increased transmission of the disease between livestock and wildlife and livestock and humans.
- Yellow fever: Found in the tropical regions of Africa and parts of Central and South America, this virus is carried by mosquitoes, which will spread into new areas as changes in temperatures and precipitation levels permit. One type of the virus—jungle yellow fever—can be spread from primates to humans and vice-versa via mosquitoes that feed on both hosts. Recent outbreaks in Brazil and Argentina have had devastating impacts on wild primate populations. In some countries in South America, monitoring of wild primates has resulted in early detection of disease activity and allowed vaccination programs to be rapidly implemented to protect humans.

Αμφισβήτηση τεχνικών ανίχνευσης τρομοκρατών

Ομάδα επιστημόνων θέτει υπό αμφισβήτηση τις δύο τεχνικές που η ομοσπονδιακή κυβέρνηση των ΗΠΑ χρησιμοποιεί για τον εντοπισμό των τρομοκρατών – την εξόρυξη πληροφοριών (data mining) και την ανίχνευση συμπεριφορών (behavior detection), καθώς εκτιμούν ότι παραβιάζουν τα προσωπικά δεδομένα των αμερικανών πολιτών. Καλά όλα αυτά μέχρι την στιγμή που θα συμβεί η τρομοκρατική πράξη και όλοι θα αρχίσουν να αναζητούν τον υπεύθυνο που δεν «μύρισε τα νύχια του» για να προλάβει την καταστροφή. Οπωσδήποτε, μεθοδολογίες που στηρίζονται σε μη χειροπιαστές παραμέτρους (πχ ανίχνευση ιχνών εκρηκτικών) αλλά σε συμπεριφορές και διανοητικές καταστάσεις ενέχουν μεγάλα περιθώρια λάθους πλην όμως δεν είναι δυνατόν κάθε προσπάθεια καταπολέμησης της τρομοκρατικής συμπεριφοράς να προσκρούει σε νομικά τερτίπια που τελικά είναι υπέρ των τρομοκρατών και όχι των μελλοντικών θυμάτων τους.

Scientists question terrorist-hunting techniques



Two methods the federal government wants to use to find terrorists -- "data mining" and "behavior detection" -- are dubious scientifically and have "enormous potential" for infringing on law-abiding Americans' privacy, a consortium of scientists said. Data mining involves searching databases for suspicious and revealing relationships and patterns. But while the technique is useful in commercial settings to detect credit card fraud, it is

questionable whether data mining can detect and pre-empt terrorist attacks, the National Research Council said. Behavior detection, used by the Transportation Security Administration and some police departments to isolate possible criminals from crowds, likewise falls short of meeting scientific standards, the group said. "There is not a consensus within the relevant scientific community" that behavior detection is "ready for use ... given the present state of the science," the group said. The group cautioned that "inappropriate ... responses to the terrorist threat ... can do more damage to the fabric of society than terrorists would be likely to do." The 352-page report by the National Research Council, an arm of the National Academy of Sciences, does not evaluate the TSA or any other specific government program. Instead, it explores issues related to data mining and behavior detection techniques and attempts to advise lawmakers how to appropriately balance security with privacy. The report recommends the government be required to systematically evaluate the effectiveness and lawfulness of data-mining and behavior-detection programs before implementing them, and at regular intervals thereafter. The programs also should be subjected to robust, independent oversight, the group recommends. A TSA spokesman said Tuesday the report "is not any kind of indictment of our program," adding that the TSA's behavior-detection officers do not claim to be adept at finding people with terrorist intent. Instead, spokesman Christopher White said, the officers look for people exhibiting signs of stress, fear or deception, and focus on those people for further investigation. "We are in, maybe not agreement [with the National Research Council], but we are on the same wavelength," White said. He said the TSA employs more than 2,000 behavior-detection officers, who are stationed at all major airports across the country. The council said terrorism is a threat to American society, but "inappropriate or disproportionate responses to the terrorist threat also pose serious dangers to society." "History demonstrates that measures taken in the name of improving national security, especially in response to new threats or crises, have often proven to be both ineffective and offensive to the nation's values and traditions of liberty and justice," the report says. It notes, as an example, the 1942 internment of U.S. citizens of Japanese origin after the Pearl Harbor attack. The TSA has heralded the use of behavior-detection officers at airports nationwide. The officers look for physiological factors to indicate ill intent. The TSA says the vast majority of travelers are observed by the officers, and that the officers have detected numerous travelers with weapons, drugs and forged travel documents. The council's report concludes there is scientific support for the notion that physiological markers such as facial tics can reveal elementary states such as distress, but there is only weak scientific



evidence that it reveals complex states such as deception, and no evidence that it can reveal other complex states such as terrorist intent. Behavioral observation techniques have "enormous potential for violating the reasonable expectations of privacy of individuals," the report says.

Νέος ανιχνευτής ραδιενέργειας για λιμάνια

Ο νέος φιλανδικός ανιχνευτής (Cargotec) υπόσχεται να λύσει το πρόβλημα των λανθασμένων συναγερμών για ραδιενέργεια σε εμπορευματοκιβώτια στα πολυσύχναστα λιμάνια του κόσμου. Για το έτος 2007, αναφέρθηκαν πάνω από 500 λανθασμένοι συναγερμοί ημερησίως μόνον στα λιμάνια Long Island και Long Beach των ΗΠΑ. Ο νέος ανιχνευτής λειτουργεί κατά τη διαδικασία φόρτωσης και εκφόρτωσης των containers χωρίς να απαιτείται επιπλέον χρόνος ανίχνευσης.

Isotopia: New Radiation Scanner Might Keep Longshoremen Happy

A Finnish company has developed a cargo-scanning solution that accurately detects radiation in shipping containers without being sidetracked by false positives. That's good news for longshoremen who will finally be able to use the microwave in the galley without causing an international incident. As realistic as that final scene in *Dr. Strangelove* is, a nuclear bomb headed to earth probably won't be straddled by a crazed Slim Pickens. The best minds in Washington seem to think that the most likely end-of-days scenario involves enough nuclear material to fashion a "dirty bomb" being smuggled in through shipping containers full of Ikea furniture and knockoff handbags. As a result, Congress passed the Security and Accountability for Every Port Act (the SAFE Port Act) which -- in addition to outlawing online gambling -- mandates that 100 percent of cargo arriving at U.S. ports be scanned at its home port and then again when it reaches the United States. While the project is a favourite of Vice President Dick Cheney, it hasn't gained any fans among workers at U.S. ports, who spend their days responding to false alarms that have been triggered by such benign causes as containers full of granite, or truck drivers who have recently undergone radiation therapy. In 2007, the *Los Angeles Times* reported that 500 radiation alarms sounded *each day* at the Los Angeles and Long Beach ports alone. Now, Helsinki-based Cargotec has a solution that has demonstrated 100 percent accuracy in trials. Based on our knowledge of aggravated longshoremen (which comes solely from a midnight viewing of *On the Waterfront*) we really hope it works. In order for all cargo terminals to comply with the SAFE Port Act, radiation monitoring must be in effect by 2012. For that requirement, Cargotec's solution couldn't come at a better time. "Very shortly, terminals will need container security solutions that comply with the U.S. container security initiative, but without disrupting the efficiency of the normal flow of commerce within the terminal," said Troy Thompson, Cargotec's president of port security, in a press release. According to Cargotec, the difference between its system and those currently operating is that monitoring takes place while cargo is being loaded and unloaded. The cargo is isolated and in transit, which eliminates downtime and reduces the chance of false positives. "The spreader-mounted solution from Cargotec Port Security performs gamma and neutron sensitivity scanning during the movement of the container in the normal ship-to-shore load/unload process, so enabling the port to meet its productivity requirements," Thompson said. "And as such it is the right product for this time in the global container handling industry." A field evaluation at Port Charleston has shown the Cargotec system to be 100 percent accurate, which is more than can be said for

Cheney's aim. While we laud Cargotec's achievement, we can't help but worry about the \$6.7 billion allocated to implement the SAFE Port Act. Nuclear material can still be smuggled across borders in private vehicles, by pedestrians with briefcases, and between the legs of rodeo clowns-turned-actors.

Κυβερνητική παρακολούθηση τηλεφωνικών κλίσεων και e-mails

Η βρετανική κυβέρνηση σχεδιάζει να διαθέσει 12 δισεκατομμύρια λιρών για να εγκαταστήσει βάσει δεδομένων με τη βοήθεια της οποίας θα παρακολουθεί και θα αποθηκεύει διαδικτυακές συνήθειες, e-mails και τηλεφωνικές συνομιλίες του συνόλου των βρετανών πολιτών. Κατά το 2007, διακινήθηκαν περίπου 57 δισεκατομμύρια γραπτά μηνύματα μέσω κινητής τηλεφωνίας – περίπου 1.800 ανά δευτερόλεπτο!

Government will spy on every call and e-mail

Ministers are considering spending up to £12 billion on a database to monitor and store the internet browsing habits, e-mail and telephone records of everyone in Britain. GCHQ, the government's eavesdropping centre, has already been given up to £1 billion to finance the first stage of the project. Hundreds of clandestine probes will be installed to monitor customers live on two of the country's biggest internet and mobile phone providers - thought to be BT and Vodafone. BT has nearly 5m internet customers. Ministers are braced for a backlash similar to the one caused by their ID cards programme. Dominic Grieve, the shadow home secretary, said: "Any suggestion of the government using existing powers to intercept communications data without public discussion is going to sound extremely sinister." MI5 currently conducts limited e-mail and website intercepts that are approved under specific warrants by the home secretary. Further details of the new plan will be unveiled next month in the Queen's speech. The Home Office stressed no formal decision had been taken but sources said officials had made clear that ministers had agreed "in principle" to the programme. Officials claim live monitoring is necessary to fight terrorism and crime. However, critics question whether such a vast system can be kept secure. A total of 57 billion text messages were sent in the UK last year - 1,800 every second.

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Left: The YouTube logo.

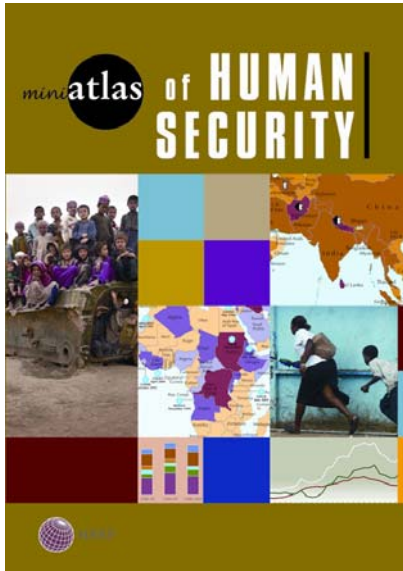
Right: The logo of Hamas's new site, AqsaTube, inspired by YouTube

Μίνι Άτλας ανθρώπινης ασφάλειας

Εξαιρετικό προϊόν συνεργασίας του Human Security Report Project και της World Bank με πλήθος πληροφοριών και στατιστικών σχετικών με τις ένοπλες συγκρούσεις παγκοσμίως από το 1946.

MINI ATLAS OF HUMAN SECURITY

Produced by the Human Security Report Project and the World Bank, this at-a-glance guide to global security issues provides a wealth of information on armed conflicts since 1946. It maps political violence, the links between poverty and conflict, assaults on human rights - including the use of child soldiers - and the causes of war and peace. Extraordinary changes have taken place since the end of the Cold War. Despite the escalating violence in Iraq, and the widening war in Darfur, there has been a decline in armed conflict worldwide. The number of battle-deaths, genocides and refugees has also decreased. Many of these changes can be attributed to international activism - spearheaded by the UN - that seeks to stop ongoing wars, help negotiate peace settlements, support post-conflict reconstruction, and prevent old wars from flaring up again. Specially designed to show detailed information on a small scale, the *miniAtlas of Human Security* is a succinct introduction to today's most pressing security challenges.



Ανίχνευση παθήσεων

Ερευνητές από το University of Georgia σε συνεργασία με το Υπουργείο Άμυνας των ΗΠΑ έχουν κατασκευάσει σταθμό ελέγχου μεγέθους φορητού υπολογιστή με τον οποίο μπορούν εντός 30-60 δευτερολέπτων να ανιχνεύσουν το μοριακό αποτύπωμα ενός ιού ή ενός βακτηρίου με βάση την αλληλουχία αμινοξέων κάθε μικροοργανισμού. Η νέα τεχνολογία είναι τόσο ισχυρή που μπορεί να ανιχνεύσει τον μικροοργανισμό ακόμη και από ένα μικρό τμήμα του.

Detecting diseases

Scientists say during a major disease outbreak or even a bioterrorism attack, one of



the biggest enemies could be time. Using traditional testing, it can take days, even weeks, to confirm a diagnosis and isolate those infected. But now, science may have found a way to speed up the clock. Airports already screen your bags. Now, scientists have a device that could one day screen you -- for disease. Researchers say all the rapid response system needs is a nasal swab and one minute. "We can detect within 30 seconds, 30 to 60 seconds, the molecular fingerprint of a

virus or bacteria based on its nucleic acid sequence," says Viral Immunologist, Dr. Ralph Tripp. The sample is exposed to a laser, which helps identify it. Analytical Chemist, Dr. Jeremy Driskell says these are fingerprints of individual viruses. Chemists say the technique is so powerful, it can detect even a single virus particle. And it can identify countless mutations like flu or rotavirus. They're already developing a laptop-sized testing station for airport screening. "It'll provide you with a red light, green light effect saying yes, this person has or has not the virus that you're looking at," says Dr. Tripp. The Department of Defense and the CDC are working closely with the University of Georgia on the virus detection project. Tests of the system in medical facilities, airports and on the battlefield could begin in the next few years.

Λαθρανάγνωση μέσω πληκτρολογίου

Μέχρι σήμερα ήταν γνωστή η υποκλοπή τηλεφώνων (σταθερών και κινητών), η υποκλοπή από απόσταση και άλλες πλέον προηγμένες μορφές παρακολούθησης. Μεταπτυχιακοί φοιτητές από το Security and Cryptography Laboratory στην Swiss Ecole Polytechnique Federale de Lausanne (EPFL) κατάφεραν με ειδικό λογισμικό να μεταφράσουν τον ήχο των πλήκτρων του πληκτρολογίου ηλεκτρονικών υπολογιστών σε κείμενο καθιστώντας έτσι εφικτή την υποκλοπή μέσω πληκτρολογίου.

Keyboard sniffers to steal data

By analysing the signals produced by keystrokes, Swiss researchers have reproduced what a target typed. The security researchers have developed four attacks that work on a wide variety of computer keyboards. The results led the researchers to declare



The attacks were shown to work at a distance of 20 metres

keyboards were "not safe to transmit sensitive information". The attacks were dreamed up by doctoral students Martin Vuagnoux and Sylvain Pasini from the Security and Cryptography Laboratory at the Swiss Ecole Polytechnique Federale de Lausanne (EPFL). The EPFL students tested 11 different keyboard models that connected to a computer via either a USB or a PS/2 socket. The attacks they developed also worked with keyboards embedded in laptops. Every keyboard tested was vulnerable to at least one of the four attacks the researchers used. One attack was shown to work over a distance of 20 metres. In their work the researchers used a radio

antenna to "fully or partially recover keystrokes" by spotting the electromagnetic radiation emitted when keys were pressed. In a web posting they added: "no doubt that our attacks can be significantly improved, since we used relatively unexpensive equipments [sic]." In videos showing their early work the researchers are seen connecting keyboards to a laptop running on battery power. They avoided using a desktop computer or an LCD display to minimise the chance of picking up signals from other sources. Details of the attacks are scant but the work is expected to be reported in a peer-reviewed journal soon. The research builds on earlier work done by University of Cambridge computer scientist Markus Kuhn who looked at ways to use electromagnetic emanations to eavesdrop and steal useful information.

Διανομή τροφής και κλείσιμο σχολείων σε περίπτωση πανδημίας γρίπης

Ερευνητής από την Georgia Tech's H. Milton Stewart School of Industrial and Systems Engineering (ISyE) στις Ηνωμένες Πολιτείες δημιούργησε μοντέλα πανδημίας γρίπης βάσει των οποίων καθορίζονται στρατηγικές διανομής τροφίμων και διακοπής της λειτουργίας των σχολείων σε ανάλογες περιπτώσεις. Με βάση τρία πιθανά σενάρια: κάλυψη διατροφής νοικοκυριών που έχουν κάποιο μέλος που μολύνθηκε, νοικοκυριών με πάσχοντα ενήλικα και όλων των νοικοκυριών με ασθενούντες όλους τους ενήλικες υπολόγισαν ότι απαιτούνται 2.2 εκατομμύρια, 1.4 εκατομμύρια και 150.000 γεύματα ημερησίως αντιστοίχως κατά τη διάρκεια της κορύφωσης της πανδημίας. Για το σύνολο των ημερών πανδημίας οι αριθμοί των γευμάτων είναι 63, 38 και 3.8 εκατομμύρια γεύματα, αντίστοιχα. Μελετήθηκαν επίσης τα σενάρια της καραντίνας και της διακοπής λειτουργίας των σχολείων σε μια προσπάθεια περιορισμού της επέκτασης της πανδημίας.

Pandemic Flu Models Help Determine Food Distribution And School Closing Strategies

This simulation image shows where active cases of the flu would be located 40 days after the start of a pandemic if the initial infection location was Fulton County, Georgia – the county where the city of Atlanta is located. (Credit: Image courtesy of Pinar Keskinocak)

The 1918 flu pandemic killed more than 40 million people worldwide and affected persons of all age groups. While it is difficult to predict when the next influenza pandemic will occur or how severe it will be, researchers at the Georgia Institute of Technology have developed models to help organizations like the American Red Cross and Georgia Department of Education prepare emergency response plans. "The models are flexible so that multiple scenarios can be investigated to see which options meet a certain goal," said Pinar Keskinocak, an associate professor in Georgia Tech's H. Milton Stewart School of Industrial and Systems Engineering (ISyE). "This goal can be different for various groups, such as serving the most people given the availability of limited resources or minimizing the number of people infected while not negatively affecting businesses." Details of the models, developed with ISyE associate professor Julie Swann and graduate student Ali Ekici, will be presented on October 12 at the Institute for Operations Research and the Management Sciences Annual Meeting. Knowing how many people will need food, how many food distribution facilities will be necessary, where the facilities should be located and how the resources should be allocated among the facilities is very important, according to Marilyn Self, who is the manager of disaster readiness for the Metropolitan Atlanta Chapter of the American Red Cross. Self has been collaborating with Georgia Tech researchers on this project. "These models have provided solid food distribution data that has helped us formulate the questions we have to ask and the decisions that we have to make about food distribution during a pandemic on a local and statewide level," said Self. The Georgia Department of Education is using Georgia Tech's models to investigate whether or not schools should be closed during a pandemic. "Closing schools affects both families and businesses because parents will have to stay home and take care of children," said Garry McGiboney, associate state superintendent at the Georgia Department of Education. "We have to worry about important emergency workers like hospital staff members and law enforcement officers not being able to work because they have to tend to their children because schools are closed." To estimate the number of meals required for a given area or

determine if closing schools would be beneficial, the researchers first needed to determine how many people and/or households would be infected. To do this, they constructed a generic disease spread model, which described how the influenza disease would spread among individuals. The researchers used U.S. Census Bureau tract data – including household statistics, work flow data, classroom sizes and age statistics – to test the model. Crowded areas, including Atlanta and its suburbs, were always affected around the same time regardless of where the disease initiated. However, the time required for the disease to spread to rural areas depended on where the disease started. With this information, the Georgia Tech researchers used the disease spread model as a forecasting tool to calculate the number of meals that would be required in metropolitan Atlanta during a flu pandemic. They tested three major scenarios: feeding every household with an infected individual (someone symptomatic or hospitalized), every household with an infected adult, or every household with all adults infected. The simulations showed that the 15 counties surrounding Atlanta would require approximately 2.2 million, 1.4 million or 150,000 meals per day for the respective scenarios during the peak infection period. For the entire pandemic, the number of meals would reach 62, 38 or 3.8 million for the three scenarios respectively. The researchers also determined the number of meals that would be necessary if only those households that fell below a certain income level were fed. The results showed that 200,000; 120,000 or 14,000 meals per day would be required for the respective scenarios during the peak infection period in that case. Interventions such as voluntary quarantine or school closures could also affect food distribution by changing the number of infected individuals. "Voluntary quarantine means that if an individual is sick in a household, everyone in that household should stay home," explained Keskinocak. "However, we realize that not everyone will follow this rule, so the model assumes that only a certain percentage of infected individuals will stay home." The researchers investigated the effects of voluntary quarantine on disease spread, as well as the best time to begin the quarantine and how long it should last. The results showed that the number of people infected at the peak time and the total number of individuals infected decreased as the length of the quarantine was extended, but there was a diminishing rate of return. The researchers determined that an eight-week quarantine was the most effective in terms of reducing the number of individuals infected during the peak time if it was implemented at the beginning of the fourth week. "These results are important because during a pandemic, communities have limited resources, including food and volunteers to distribute the food," noted Swann. "If fewer people require the resources, especially during the peak time period, organizations like the American Red Cross can meet the needs of more people." The researchers also compared the two interventions – quarantine and school closure. The results showed that closing schools reduced the number of people infected with the virus. However, a four-week voluntary quarantine was found to be at least as effective as a six-week school closure for reducing the percentage of the population infected with the virus and the number of people infected at the peak time. The Georgia Department of Education and the Metropolitan Atlanta Chapter of the American Red Cross have used the models to gain insight into the best ways for their organizations to respond to a flu pandemic. "Running all of these different scenarios has helped us realize that we will have a lot more people to feed in metropolitan Atlanta during a pandemic flu than we imagined. The models have provided us with a realistic idea of where we'll need to locate community food distribution facilities and how many we might need to have given certain assumptions and decisions," said Self. The researchers plan to conduct future work in two areas –

developing models for other states and extending the model to also include vaccine distribution. The model may also be useful for other purposes such as estimating hospital capacity needs, according to Keskinocak. "While we hope that a pandemic never occurs, our models will help Georgia and other states across the United States prepare response plans for the potential," added Keskinocak.

Αμαρτίες γονέων παιδεύουσι τέκνα...

Μητέρα βοήθησε τον 14χρονο γιο της να δημιουργήσει ολόκληρο οπλοστάσιο με το οποίο σκόπευε να αιματοκυλίσει το σχολείο του καθώς είχε ως πρότυπα του τους δολοφόνους που έδρασαν στο Columbine High School που σκότωσαν 12 συμμαθητές τους και ένα δάσκαλο πριν αυτοκτονήσουν (Colorado, 1999).

US mom admits helping son build weapons cache

A woman admitted she helped her troubled, bullied 14-year-old son build a cache of weapons by buying him a rifle and gunpowder, but investigators still don't know if she was aware her son was planning a deadly school attack. Michele Cossey, 46, pleaded guilty Tuesday to one count of child endangerment. She admitted that she bought him a rifle with a laser scope and gunpowder, which investigators said he was using to build grenades. Prosecutors said her son, Dillon, came to idolize the Columbine High School shooters, who killed 12 classmates and a teacher before committing suicide in 1999 in Colorado, and was planning an attack last year on Plymouth Whitemarsh High School, which some former schoolmates attended. Cossey, bullied over his weight, had left public school half way through middle school and was being home-schooled. Over time, violent Internet sites fueled his revenge fantasies, his defense lawyer said after his juvenile court plea. Assistant District Attorney Christopher Parisi said he thought purchasing the weapons was "an attempt to boost his self-esteem, and in some way help the child, as misplaced as those thoughts may have been." Michelle Cossey's sentencing hearing won't happen until after she undergoes a psychiatric evaluation. The maximum possible prison term is 3½ to 7 years, but her defense attorney she could get less than a year — or even just probation — under sentencing guidelines. Authorities did not think the school attack was imminent, but Dillon Cossey did amass an arsenal — knives, swords, BB guns, the rifle and partly assembled homemade grenades — in his bedroom at his home in Plymouth Township, about 20 miles (32 kilometers) northwest of Philadelphia. Police learned of the planned attack when Cossey invited a friend to join him. The friend went to police last fall. Dillon Cossey was sentenced to a juvenile treatment facility.

Νέο λίπασμα που καθιστά δυσχερή την κατασκευή αυτοσχέδιων βομβών

Η εταιρεία Honeywell ανακοίνωσε ότι κατασκεύασε ένα νέο αζωτούχο λίπασμα (Sulf-N 26) που είναι δύσκολο να αναφλεγεί και πολύ περισσότερο να χρησιμοποιηθεί για την κατασκευή αυτοσχέδιων βομβών. Τα παλαιού τύπου λιπάσματα έχουν χρησιμοποιηθεί στις βομβιστικές επιθέσεις στο Μπαλί (2002 – 202 νεκροί), στην Oklahoma City (1995 – 168 νεκροί με βόμβα δύο τόνων).

New fertilizer would foil bomb-makers

Industrial manufacturer Honeywell said today it has developed a new nitrogen-based fertilizer that is difficult to ignite — a discovery that could reduce criminals' ability to make explosives used in major terrorist attacks like the Oklahoma City bombing.

Honeywell International Inc. said its patented fertilizer combines ammonium sulfate with ammonium nitrate, providing the nitrogen and sulfur needed for plant nutrition but making it largely useless as a fuel for explosives. The company said that when mixed with substances such as fuel oil — a volatile combination often used to make bombs — the new fertilizer did not detonate. "The unique composition of this new fertilizer makes it extremely difficult to turn it into a weapon," said Qamar Bhatia, vice president and general manager of Honeywell Resins & Chemicals, in a statement. "Ammonium nitrate has long been an excellent fertilizer, but this technology makes it safer." Fertilizer explosives were suspected in attacks that include the 2002 nightclub bombings in Bali, which killed 202 people, and the 1995 attack on a federal building in Oklahoma City with a two-ton bomb that killed 168. Five men linked to al-Qaida were sentenced in Britain to life in prison last year for stockpiling a half-ton of fertilizer for planned attacks on targets in London. Many countries now closely regulate the sale of fertilizer, and some U.S. states have instituted measures to track sales. Last year, Congress required both purchasers and sellers of ammonium nitrate to register and keep track of sales. While the Department of Homeland Security has not yet issued its regulations for putting the new policy in place, the requirements are meant to keep people from stockpiling, explained Kathy Mathers, vice president of public affairs for industry group The Fertilizer Institute. Fertilizers commonly have high levels of ammonium nitrate, which provides the nitrogen that plants need for growth. But the substance is also an oxidizing agent that can be combined with fuel to create an explosion. Honeywell said its new fertilizer fuses ammonium nitrate with the non-explosive ammonium sulfate — neutralizing the compound's potential for danger. Morris Township, N.J.-based Honeywell, a conglomerate that makes products ranging from aerospace equipment to chemicals to spark plugs, already produces around 1.6 million tons of ammonium sulfate annually for fertilizer. It said tests of the new combined fertilizer found that it was at least as effective as other fertilizers on crops including cabbage, tomatoes and oranges. The fertilizer's volatility was positively evaluated in independent tests using federal guidelines, Honeywell said. The technology has been given a Department of Homeland Security designation that gives it liability protection, under legislation established to provide incentives for developing anti-terrorism technologies to reduce security threats. Honeywell is conducting pilot plant test production to finalize scale-up and engineering plans for manufacturing. It also is in talks with potential manufacturing partners. The company hopes to have limited quantities for sale in some regions next year and plans to market the material as Sulf-N 26 fertilizer.



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Πυρηνικά απόβλητα και αμερικανικά νοσοκομεία

Οι ραδιενεργές πηγές των αμερικανικών νοσοκομείων αποτελούν ελκυστικό στόχο για επίδοξους τρομοκράτες καθώς μπορούν να τις μετατρέψουν εύκολα σε «βρώμικες

βόμβες». Η συσσώρευση των εν λόγω πηγών προκλήθηκε από την διακοπή της απόρριψης τους σε συγκεκριμένη περιοχή της Νότιας Καρολίνας με αποτέλεσμα τα πυρηνικά απόβλητα των νοσοκομείων 36 πολιτειών να συσσωρεύονται στις αποθήκες τους και να αντιπροσωπεύουν σημαντικό κίνδυνο για τη δημόσια υγεία. Κατά την τελευταία δεκαετία έχουν χαθεί με διάφορους τρόπους 4.363 ραδιενεργές πηγές και ουδείς γνωρίζει την τύχη τους.

Nuclear waste piling up at U.S. hospitals

Tubes, capsules and pellets of used radioactive material are piling up in the basements and locked closets of hospitals and research installations around the country, stoking fears they could get lost or, worse, stolen by terrorists and turned into dirty bombs. For years, truckloads of low-level nuclear waste from most of the U.S. were taken to a rural South Carolina landfill. There, items such as the rice-size radioactive seeds for treating cancer and pencil-thin nuclear tubes used in industrial gauges were sealed in concrete and buried. But a South Carolina law that took effect July 1 ended nearly all disposal of radioactive material at the landfill, leaving 36 states with no place to throw out some of the stuff. So labs, universities, hospitals and manufacturers are storing more and more of it on their own property. “Instead of safely secured in one place, it’s stored in thousands of places in urban locations all over the United States,” said Rick Jacobi, a nuclear waste consultant and former head of a Texas agency that unsuccessfully tried to create a disposal site for that state. State and federal authorities say the waste is being monitored, but they acknowledge that it is difficult to track and inspected as little as once every five years. Government documents and dozens of Associated Press interviews with nuclear waste generators, experts, watchdogs and officials show that thousands of these small radioactive items have already been lost, and that worries are growing.

Flea markets and eBay; landfills and recycling plants

“They’ll end up offered up on eBay and flea markets and sent to landfills, or metal recycling plants — places where you don’t want them to be,” said Stephen Browne, radiation control officer at Troxler Electronic Laboratories, one of the world’s largest manufacturers of industrial gauges that use radioactive material. There are millions of radioactive devices in use for which there is no long-term disposal plan. These include tiny capsules of radioactive cesium isotopes implanted to kill cancerous cells; cobalt-60 pellets that power helmet-like machines used to focus radioactive beams on diseased brain tissue; and cobalt and powdered cesium inside irradiation machines that sterilize medical equipment and blood. Most medical waste can simply be stored until its radioactivity subsides within a few years, then safely thrown out with the regular trash. Some institutions store their radioactive material in lead-lined safes, behind doors fitted with alarms and covered with yellow-and-black radiation warning signs. Over the past decade, however, 4,363 radioactive sources have been lost, stolen or abandoned, according to a Nuclear Regulatory Commission report released in February. Though none of the material lost was rated “extremely dangerous” — meaning unshielded, up-close exposure can cause permanent injury within a few minutes and death within an hour — more than half the radioactive items were never recovered, the NRC said. Since the Sept. 11 attacks, owners of dangerous amounts of radioactivity have been told by the government to take greater precautions, such as having 24-hour surveillance, erecting barriers and fingerprinting employees, regardless of whether the devices are in use or stored as waste.

Close to a crisis?

Yet in 2003, the federal Government Accountability Office reported there wasn't even a record of how many radioactive sources existed nationwide. In June, the GAO concluded that while there has been progress, more must be done to track radioactive material to prevent it from falling into terrorists' hands and ending up in a dirty bomb, or one that uses conventional explosives to scatter radiation. "I don't think we're yet in crisis, but certainly there's information out there to suggest we may be closer to that than is comfortable for me," said Gregory Jaczko, a commissioner with the NRC, one of the agencies charged with tracking the material. In 1987, four people died and hundreds fell ill after looters in Brazil found a cancer-therapy machine in an abandoned medical clinic and sold it as scrap metal. More recently, 19 small vials of cesium-137, implanted for cervical cancer treatments, disappeared in 1998 from a locked safe at Moses Cone Memorial Hospital in Greensboro, N.C. The tubes were never found and were believed stolen. A terrorist would need to gather far more of those vitamin-sized capsules to create a dirty bomb capable of killing anyone within one city block, said Kelly Classic, a health physicist at Mayo Clinic in Minnesota. For decades, the government urged states to build low-level nuclear waste landfills, either on their own or in cooperation with nearby states. But those efforts have run into strong not-in-my-backyard resistance of the sort that led South Carolina lawmakers to close the Barnwell County landfill to all but three states. Only one low-level landfill, in Utah, has opened in the past 30 years. One more could open in Texas



by the end of next year, but it would accept trash from only Vermont and the Lone Star State. The government never set up penalties for states that failed to build landfills. "Congress should have gotten involved a long time ago," said Richard Gallego, vice president of Thomas Gray and Associates Inc., a California company that prepares low-level waste for disposal. Rich Janati, chief of nuclear safety for

Pennsylvania's Department of Environmental Protection, said: "It's a national issue, and we should look at it as a national problem and come up with a solution." The government this week did move to shore up security by requiring hospitals and labs to better secure machines used to irradiate blood. Also, dirty-bomb fears have prompted the National Research Council to urge replacing the roughly 1,300 such machines in the U.S. with less hazardous but more expensive equipment.

Δηλητηρίαση υδάτινων πηγών σε Δανία και Μ Βρετανία

Σε ευρείας κυκλοφορίας τρομοκρατικό διαδικτυακό forum αναρτήθηκε σχέδιο για τη δηλητηρίαση με χημικούς και βιολογικούς παράγοντες των υδάτινων πόρων στη Μ Βρετανία και τη Δανία ως εκδίκηση για την προσβολή στο πρόσωπο του Μωάμεθ με τα σχετικά cartoons που είχαν δημοσιευθεί πριν από αρκετό καιρό. – Αυτό για να μην περιπέσουμε σε πλάνη ότι ο πόλεμος ή η εκστρατεία κατά της τρομοκρατίας έχει αποδώσει καρπούς και γι' αυτό έχει καιρό να δεχτεί η Ευρώπη σημαντικό τρομοκρατικό κτύπημα.

UK/Denmark: Poisoning the water wells

A major jihadi internet forum has posted a terrorist plot to use chemical and biological agents to contaminate water resources in Europe in general and Great Britain and Denmark in particular, the latter in retaliation for insulting the Prophet Muhammad through publication of the infamous "Muhammad cartoons." The posting, entitled "Back Breaking Blow to Denmark, the U.K, and the European Union," discussed ways of poisoning water resources and reservoirs to cause mass killings (al-ekhlaas.net, August 16). Even though many forum participants consented to the plan and participated with ideas on the kind of chemical agents that might be used in such attacks, some forum members disagreed with the terror plan, arguing that mass killing has neither religious justification nor a fatwa (religious ruling) to authorize it. The anti-attack forum members appeared to have a strong case from a religious standpoint, leading to a protracted discussion lasting over a week.

Σούσι και βιοτρομοκρατία

Όταν συνελήφθη ο Edward Bachner (Ιούλιος 2008) επειδή είχε αγοράσει 98 mg νευροτοξίνης tetrodotoxin ικανής να δηλητηριάσει 100 περίπου άτομα, η μελλοντική διασύνδεση των παρασκευαστών σούσι με τη βιοτρομοκρατία ήταν πλέον γεγονός. Και αυτό γιατί η νευροτοξίνη που ανευρίσκεται σε είδος ψαριού (Japanese puffer fish) που μόνον πολύ εξειδικευμένοι σούσι-σεφ (μόνον το 30% των υποψηφίων περνούν τις σχετικές εξετάσεις) μπορούν να παρασκευάσουν (fugu). Όμως δεν είναι μόνον τα ψάρια που περιέχουν δηλητηριώδεις ουσίες εν πολλοίς άγνωστες. Αρκετά τροπικά φρούτα που χρησιμοποιούνται ως διακοσμητικά μπορούν επίσης να δημιουργήσουν προβλήματα υγείας. Για παράδειγμα το εθνικό φρούτο της Jamaica - Ackee, μπορεί να προκαλέσει οξεία ναυτία και εμέτους αμέσως μετά την κατανάλωση του. Η φύση εξακολουθεί να κρύβει πολλά μυστικά – εξαρτάται ποιος θα τα ανακαλύψει πρώτος...

World's deadliest delicacies

When Edward Bachner was arrested in July for buying enough poison to kill about 100 people, he inadvertently implicated sushi chefs as potential bioterrorists. The 35-

year-old Chicagoan ordered 98 milligrams of Tetrodotoxin, a nerve toxin found in the Japanese puffer fish served as fugu, an expensive sashimi dish. Sometimes called the Russian roulette of sushi and once featured on an episode of "The Simpsons", fugu requires delicate preparation for its edible meat to be separated from its toxic internal organs. Before they're licensed to serve fugu, Japanese chefs undergo months of training and a rigorous exam which only 30 percent of applicants pass. Even when properly prepared, fugu's toxicity is a critical part of its appeal. The flavor is so subtle it's nearly nonexistent, but eating it numbs the lips, and creates an alcohol-like buzz for the diner. Popular in Japan, it's banned in Europe and offered in a small number of restaurants in the United States and Korea. But while it's the most notorious toxic fish, fugu is neither the most powerful nor the most commonly served. And beyond fish, there are scores of other foods whose deadliness equals their deliciousness, including commonly served fruits and vegetables that come with a sickening (and maybe lethal) kick. While the dangers can usually be avoided through proper preparation, this association with danger is irresistible to adventurous diners. Fish present the most clear and present danger. There are hundreds of species of toxic fish, and many find their ways to dinner plates. "People would definitely be surprised at how venomous fish are," says Dr. Leo Smith, assistant fish curator at the Field Museum in Chicago. Smith is a leading researcher of poisonous and venomous fish, and says that while snakes are more often associated with venom, there are far more poisonous species of fish. "Because humans live on land, they don't think of fish as venomous." In nature, the most venomous fish is the stonefish, a fixture of Asian and tropic cuisine whose potentially fatal sting has been described as the worst pain a human can feel. However, human death from eating stonefish is rare to nonexistent. "There's an important distinction you have to make between poisonous and venomous," Smith says. Venom is commonly deployed when a fish bites its prey, but certain fish are poisonous due to their diet and environment. When stonefish venom is cooked, it loses its potency. And when served raw—as is the sashimi dish Okoze—its venomous dorsal fins are simply removed. The body meat that remains is delicious and nontoxic. On the other hand, puffer fish and the silver-striped blaasop do not deploy venom, but they are nonetheless toxic to humans because of bacteria in their diet. As a result, puffer fish farmers in Japan have been able to breed non-poisonous puffer fish by restricting the fish's diet. The newly safe but still legally suspect puffer fish liver, where Tetrodotoxin is most concentrated, has reportedly become a sought-after underground delicacy in parts of Japan. Of course, you needn't rely on the ocean to provide dangerous delicacies; a number of poison plants serve as side dishes and garnishes around the world. Ackee is the national fruit of Jamaica. This bulbous-looking plant has the look and taste of scrambled eggs when cooked, and is often paired with stonefish and eaten as breakfast. But pray that breakfast comes at the right time—ackee can cause extreme nausea if served when it's not ripe enough, which occurs often enough for the condition to acquire the nickname "Jamaican vomiting sickness." It can be even fatal to children. Like ackee, cassava is a dietary staple in the tropics. In Brazil, Peru, Cuba and other countries, it's used to make breads, ground into pastes and fried into cakes. Also like ackee, it can have undesirable consequences if not washed and prepared properly; the root vegetable contains enough cyanide to kill. Cassava is found in Africa, too, where it's at home with the Namibian bullfrog, a nasty-looking specimen that grows to the size of a housecat—and contains enough poison to be lethal. The fans of these foods argue that deliciousness outweighs the danger. And anyway, a simple chicken dinner isn't guaranteed to be safe. According to the Center for Disease Control, an average of 600 Americans die from the chicken-

borne bacterial disease Salmonella every year. On the other hand, annual worldwide deaths by fugu amount are just a small fraction of that. Of course, Salmonella poisoning occurs if the chicken is undercooked or dirty—the chicken itself isn't inherently poisonous. James Briscione, chef and instructor at Manhattan's Institute of Culinary Education, speculates that it takes a certain mindset to order a dish with a lethal reputation. "I think it gets back to when a kid eats worms in the playground. It's an adventurous thing to do and you're going to have a story to tell."

Στρατηγική ιού Ebola για την είσοδο του στα κύτταρα

Ερευνητές από το University of Texas Medical Branch at Galveston ανακάλυψαν σημαντική βιοχημική παράμετρο-κλειδί μέσω της οποίας ο ιός Ebola Zaire μολύνει τα κύτταρα και οδηγεί στον θάνατο περίπου το 90% των προσβληθέντων. Πρόκειται για την μεταβολική οδό PI3-kinase μέσω της οποίας ο ιός «ξεγελά» το κύτταρο και εισέρχεται στο εσωτερικό του μέσω ενδοσώματος που σχηματίζει. Όντας στο εσωτερικό του κυττάρου, ο ιός εξέρχεται του ενδοσώματος και αρχίζει να αναπαράγεται.

Researchers uncover Ebola cell-invasion strategy

University of Texas Medical Branch at Galveston researchers have discovered a key biochemical link in the process by which the Ebola Zaire virus infects cells - a critical step to finding a way to treat the deadly disease produced by the virus. Ebola produces severe and often fatal haemorrhagic fever in its victims and inflicts mortality rates close to 90 percent in some outbreaks. No vaccine or antiviral therapy has been developed against the virus, and it is considered a high-risk agent for bioterrorism. In addition, recent devastating outbreaks hit in Uganda in 2008 and the Democratic Republic of the Congo in 2007. The UTMB group tied Ebola's cellular invasion mechanism to a series of biochemical reactions called the phosphoinositide-3 kinase pathway (named for an enzyme found in the cell membrane). By activating the PI3 kinase pathway, they found, an Ebola virus particle tricks the cell into drawing it into a bubble-like compartment known as an endosome, which is pulled, together with the virus, into the cell. Then - at a critical point - the virus bursts free from the endosome and begins to reproduce itself. However, if the PI3 kinase pathway is shut down - as the UTMB team did with a drug designed for that purpose - Ebola virus particles can't escape from the endosome, and the disease process comes to a halt. 'The nice part about identifying entry mechanisms is you can prevent the virus from infecting the cell,' said UTMB microbiology and immunology associate professor Robert Davey, senior author of a paper on the investigation appearing online in the current issue of the journal PLoS Pathogens. 'You can stop the whole show before it even gets started.' The researchers did some of their work using the Ebola Zaire virus itself, working in UTMB's Robert E. Shope, MD, Biosafety Level 4 laboratory to ensure their safety. They also conducted experiments using harmless, hollow, virus-like particles coated with the critical envelope proteins that activate the PI3 kinase pathway. Using a unique test created at UTMB that adds a light-emitting molecular beacon, called luciferase, to Ebola viruses and the virus-like particles, the investigators were able to determine exactly when and where each broke out of its bubble, and track its progress. 'Up to that point, it's really a bus ride for these viruses, and PI3 kinase is the bus driver,' Davey said. 'Whether you're talking about Ebola or Ebola virus-like particles, they've all got the virus envelope proteins that trigger the PI3 kinase pathway, which is the first step of getting the virus onto that bus. Davey noted that while other viruses had been found that activated the PI3 kinase pathway, Ebola was the first with

envelope proteins that had been seen doing so. In addition, he said, it was the first virus to be discovered interacting with the PI3 kinase pathway in order to enter cells, which could have profound implications. 'It's actually triggering the reorganising of the cell for its own devious outcomes - infecting the cell,' Davey said. 'But there are other possible outcomes of fiddling around with the PI3 kinase. You can get the cell to move, you can get it to live longer, all advantages for a virus. So I'm sure that this is going to be important in other viruses.' In addition, a new generation of drugs are being developed that target PI3 kinase, since the enzyme is often activated in cancers. It is possible that these could also be used to defend against Ebola virus.

Οι τρομοκρατικές ομάδες αναπτύσσουν «βρώμικη βόμβα»

Βρετανικές υπηρεσίες πληροφοριών εκτιμούν ότι τρομοκρατικές ομάδες με έδρα το Πακιστάν καταβάλλουν προσπάθειες κατασκευής «βρώμικης βόμβας».

Terror groups developing 'dirty bomb', say security chiefs

They are exploiting the political chaos in Pakistan in a bid to acquire nuclear material for a 'spectacular' attack. At least one plot has been uncovered involving Pakistani-based terrorists planning to use nuclear material against a major European target. Osama bin Laden's al-Qa'eda terror group, whose terrorist infrastructure is based in the province of Waziristan in northwest Pakistan, is known to be trying to acquire nuclear technology to use in terror attacks against the West. Other militant Islamist groups in Pakistan, such as the newly formed Pakistani Taliban, have also shown an interest in developing weapons with a nuclear capability, according to Western security officials. Security chiefs fear the mounting political instability in Pakistan will make it easier for militant Islamist groups to develop a primitive nuclear device. Pakistan is the world's only Muslim country with a nuclear weapons arsenal, which was developed during the 1990s by the rogue Pakistani nuclear scientist Dr Abdul Qadir (AQ) Khan. Dr Khan was placed under house arrest after he was accused of selling the blueprint for Pakistan's atom bomb to rogue states such as Libya, North Korea and Iran. But the restrictions on Dr Khan's detention have been eased since President Pervez Musharraf was forced from power. Pakistan's nuclear arsenal is subject to stringent security safeguards put in place with the help of the American military when Mr Musharraf was in office. But there is mounting concern within Western security circles that Islamic terror groups will gain access to Pakistan's expertise in developing terrorist weapons containing nuclear material. "Islamist militant groups want to carry out terror attacks on a massive scale, and there is no better way for them to achieve that objective than to develop some form of primitive nuclear device," said a senior U.S. security official. The most likely terror device using nuclear material is a "dirty bomb", where conventional explosives are fitted with radioactive material. Security experts believe the detonation of such a device in a city like London would provoke widespread panic and chaos, even though the area of contamination would be relatively small. Western security officials say they have uncovered evidence that a Pakistani based group was planning to attack a European target with such a device, although details of the planned attack have not been made public. The sweeping victory of Asif Ali Zardari, the widower of murdered Pakistani leader Benazir Bhutto, in the presidential election at the weekend, has done little to reassure Western diplomats that the security situation in Pakistan is about to improve. Mr Zardari was jailed for nine years on corruption charges, and Western diplomats have little confidence in his ability to provide strong leadership. "Pakistan is in danger of becoming a failed state, and Mr Zardari's election victory is unlikely to improve the

situation," said a Western diplomat. Tensions grew last week when American special forces staged a cross-border incursion from Afghanistan into Pakistan's lawless tribal regions. They were targeting suspected al-Qaeda operatives, signalling a possible intensification of US efforts to disrupt militant safe havens in Pakistan. Despite fury in Pakistan, US defence officials have said that the number of cross-border missions might grow in coming months in response to the growing militancy. But there are fears this could but this could provoke an Islamist backlash throughout Pakistan that could play into the terrorists' hands. Most of the recent Islamist terror plots against Britain – including the July 7 attacks in London in 2005 – had links with Pakistan, and British security officials say groups based in Pakistan continue to pose the greatest terrorist threat to Britain. British security officials recently confirmed that they were investigating at least 30 terror plots that originated in Pakistan. "In the past many of the plots have been fairly primitive, but we are seeing a growing level of sophistication. We fear it is only a question of time before the groups based in Pakistan develop some form of nuclear capability."

Αγώνας ειδικών-τρομοκρατών με έπαθλο τα πυρηνικά υλικά

Με αφορμή την πρόσφατη απομάκρυνση αποθέματος εμπλουτισμένου ουρανίου από τη Βουλγαρία, τίθεται εκ νέου το θέμα των πυρηνικών υλικών που παραμένουν σε κρατικές και μη εγκαταστάσεις με ελάχιστη φύλαξη και προστασία. Στην περίπτωση της Βουλγαρίας τα 6 κιλά ραδιενεργού υλικού προερχόμενα από ερευνητικό αντιδραστήρα ήταν αχρησιμοποίητα και ξεχασμένα για περίπου 20 έτη πριν μεταφερθούν οδικώς και στη συνέχεια σιδηροδρομικώς στη Ρωσία (Chelyabinsk).

A team of experts is battling to retrieve tons of nuclear material before terrorists do. But time's running out...

A little before dawn on a recent summer morning, three large blue lorries, a handful of police cars and a bus rumbled along the dual carriageway heading north out of the Bulgarian capital of Sofia. The lorries were unmarked, the bus carrying a few sleepy policemen was old and scruffy, while the lumbering shipment was big and slow enough to explain the escort and its flashing blue lights. But for Bulgaria, and indirectly for the rest of us, the convoy's progress marked an important transition - the departure of the country's last remaining stockpile of High-Enriched Uranium (HEU), the stuff nuclear bombs are made of. Cause for concern: Experts fear terrorist may



misappropriate a weapons-grade material stored in a civilian reactor at a power station or university. It took two years of talks and work before the highly radioactive material - just over 6kg of spent fuel from a defunct research reactor - was fished out of the storage pools in which it had lain unused and largely forgotten for nearly 20 years. It was sealed in steel casks and lowered onto the three trucks.

During the morning of July 5, the convoy made its way over the mountains and down to the banks of the Danube, where the containers were winched aboard a black barge bound for Ukraine. Ten days and a

rail journey later, the HEU arrived in Russia, from where it had come nearly half a century earlier as a gift. In Chelyabinsk, just east of the Ural Mountains, it is to be reprocessed or blended down. I was allowed to witness its secret journey as long as nothing was printed until the shipment reached its destination, and this small but lethal fragment of the Cold War was made safe. Its journey was part of a programme between the U.S. and Russia in happier times, in the window of co-operation that followed the Cold War - a window that is now rapidly closing. Russia's own HEU was never part of this and there now seems little chance it will be any time soon. If relations get much worse, the whole scheme could be frozen. A joint effort to make the world safer could unravel - one of the many toxic by-products of the crisis in the Caucasus. US presidential hopeful Barack Obama has called nuclear terrorism the 'greatest danger we face. The operation I saw was part of an accelerating scramble to clean up the scattered legacy of nuclear profligacy in a race against a new and terrifying threat: nuclear terrorism. In the Fifties and Sixties, the U.S. and the Soviet Union exported HEU-powered nuclear reactors to their allies for power generation and experimentation. When the Cold War eventually came to an end, deals were done on dismantling the redundant weapons in the former Soviet republics. Yet that still left thousands of kilos of weapons-grade material in civilian reactors at power stations and universities worldwide, some with no more security than a watchman and a padlock. With the logic of deterrence and mutually-assured destruction receding from the collective memory, only to be supplanted by the fears evoked by the September 11 attacks, nuclear terrorism has emerged as the number one threat to Western security. The suicidal extremist driving a crude nuclear device into the centre of a major city is now the ultimate nightmare. Bush and Blair went to war in Iraq with the ostensible aim of preventing Saddam's assumed nuclear stockpile falling into the hands of Al Qaeda jihadists. Barack Obama has called nuclear terrorism 'the greatest danger we face'. But the gap between rhetoric and effective action is startling. The U.S. has spent more than £350billion on the Iraq war to eliminate a threat that never existed. The amount spent on removing fissile material from countries that *do* have the ingredients for a nuclear device has been relatively paltry. The Global Threat Reduction Initiative (GTRI), launched in 2004 after previous efforts at eliminating the world's civilian stocks of fissile material had proved ineffectual, has an annual U.S. budget of about £75million, or roughly what the U.S. military spends in eight hours in Iraq. Al Qaeda, led by Osama Bin Laden, has spent years trying to locate the materials needed to build a nuclear weapon. Yet the threat of nuclear terrorism is real. In 1998, Osama bin Laden declared it was a religious duty to acquire nuclear weapons 'to terrorise the enemies of God'. Just days before the September 11 attacks in 2001, the Al Qaeda leader met a Pakistani delegation, including two retired nuclear scientists, in Kandahar. According to accounts of that meeting, Bin Laden expressed interest in how to build a bomb and was told it was technically quite simple - acquiring the fissile material was the main obstacle. Al Qaeda has spent years trying to overcome that problem. Western intelligence officials believe the organisation was cheated several times by middlemen claiming to have weapons-grade material for sale. An Al Qaeda defector, Jamal Ahmed al Fadl, has described helping Bin Laden clinch a deal in Sudan, his home country; Bin Laden paid \$1.5million for a 30-inch cylinder supposedly containing South African uranium. The contents are widely believed to have been fake. Ivan Ivanov, a Bulgarian businessman working for a Dubai-based building contractor, claims to have met Bin Laden in Pakistan in April 2001, and to have been approached the day after by an Al Qaeda scientist who proposed a scheme for buying Bulgarian nuclear material. Ivanov says he refused the deal, but Bulgaria

has remained a source of concern for anyone worried about proliferation. The country's post-Soviet nuclear industry has been hit by a stream of safety scandals, and the EU has - unusually - cut off funds because of the hold that corruption and organised crime have on the country's economy. The removal of Bulgaria's HEU last month was, therefore, more than a technicality. In theory, it represented the elimination of a significant threat. Officials at Sofia's Institute for Nuclear Research and Nuclear Energy, where the spent fuel had been stored since its reactor was closed in 1989, claimed security had been beefed up in recent years, but the Institute was clearly suffering from years of neglect. Feral dogs chased each other through the bushes in the grounds around the reactor. The removal operation was overseen by a two-man American team, who represent the business end of the GTRI. They fly around the world trying to persuade governments that it is in their long-term interests to part with their stocks of fissile material. The U.S. duo is both immigrants. Andrew Bieniawski, a 41-year-old from South Africa, is in charge of the programme at the National Nuclear Security Administration, the part of the U.S. department of energy responsible for looking after the U.S. nuclear arsenal, making sure the bombs still work and do not blow up unexpectedly. His deputy, Igor Bolshinsky, a former mine technician from Ukraine, repatriates the Soviet-origin material and does most of the travelling and persuading - 'schmoozing for world peace,' as Bolshinsky put it. Removing the Bulgarian HEU was not easy. On the designated day of its departure, Bulgarian security ordered the uranium convoy to leave the institute an hour earlier than agreed, without telling Bolshinsky. He had to jump into a car for a high-speed chase along a Bulgarian motorway, pursuing the missing uranium casks. But as the cargo reached its waiting barge, and moved off, heading towards a rendezvous with a Russian train, Bulgaria became officially free of HEU. Yet that should not give the West any cause for complacency. There are two kinds of nuclear bomb. Modern warheads involve an implosion device, in which the fissile material, normally plutonium, is compressed by shaped charges until it reaches critical mass, and the process of nuclear fission becomes self-sustaining. This is extremely hard to pull off reliably, and is the province of sophisticated state programmes. However, there is a much cruder form of bomb which achieves critical mass by firing one chunk of nuclear material at another. It was a 'gun-type' bomb such as this that was dropped on Hiroshima. As the apartheid government in South Africa discovered, it can be developed by a relatively small team with basic engineering skills. It is the sort of bomb a terrorist organisation would build. Plutonium is useless for such a device. It needs HEU - which happens to be far more plentiful and much less guarded. Under the GTRI, 610kg of HEU fuel has been returned to Russia from countries including Serbia, Romania, Libya, Uzbekistan, Poland, Germany, the Czech Republic, Latvia and Vietnam. Hungary and Kazakhstan are next on Bieniawski and Bolshinsky's visiting list. By 2010, it is hoped that almost all the Soviet-origin spent HEU will have been removed from civilian sites around the world. It is a race against the clock and, for Bieniawski, every day counts. 'We are very concerned about this material. We take this threat to be very real. The information that we have lets us know we have to act as aggressively as possible to remove this material,' he said. But there is a troubling question hanging over Bieniawski and Bolshinsky's work: Could their efforts already be too late? They are running a race against an unknown enemy, blindfold. They do not know where their adversaries are. Perhaps the terrorist groups, smugglers and bent officials with whom they are competing have already acquired the nuclear material. Since the Cold War ended, the UN's nuclear watchdog, the International Atomic Energy Agency (IAEA), has logged more than 800 incidents in

which radioactive material has gone missing or been seized from smugglers. Eighteen of those cases involved weapons-grade material, HEU or plutonium, mostly of Soviet origin. Another seven cases of weapons-grade theft or contraband have yet to be confirmed by the IAEA, but are considered well-founded. In a recent example, a Russian fish trader and occasional smuggler named Oleg Khinsagov was arrested in Georgia in early 2006. He had about 100g of weapons-grade HEU in his leather jacket, wrapped in a plastic bag, and it was thought he was about to sell his sample to a Muslim from a 'serious organisation' in the market for fissile material. Khinsagov told his customer there were two more kilos available. The would-be buyer turned out to be a Georgian government agent, and Khinsagov is now in prison in Tbilisi, apparently too terrified of his Russian contacts to name them. At a time when long-standing Russian-Georgian tensions have exploded into conflict, Moscow has been very unhelpful, claiming implausibly that it is impossible to tell where Khinsagov's nuclear material came from. Coincidentally, an estimated 2kg of highly enriched uranium went missing when a top-secret former Soviet nuclear laboratory in the Georgian region of Abkhazia fell to Russian-backed separatists in 1993. It disappeared into the chaotic underworld of the Caucasus where organised crime thrives on national rivalries, and it has not been seen since. Last November, on the other side of the world, two groups of armed men broke into the emergency control centre at South Africa's 'high-security' Pelindaba nuclear facility, where hundreds of kilos of HEU are stored. They stumbled on a senior security official who was not meant to have been there but was keeping his girlfriend company. The intruders shot him and fled. In formal testimony to the IAEA, the South African government admitted the attackers were 'technically sophisticated' and had 'prior knowledge of the electronic security systems'. Yet they insisted the site's fissile material had not been in danger and that only a computer was taken. There have been no arrests. Most of the nuclear thefts located by the IAEA have involved small quantities of HEU, far short of the 55kg necessary to build a gun-type bomb, but no one knows how much more has disappeared unnoticed. Matthew Bunn, a nuclear proliferation expert at Harvard, has estimated the risk of a nuclear attack on the U.S. in the next decade to be 29 per cent - almost one in three. He says London is at a smaller risk, but still 'a real number'. James Acton, a nuclear proliferation expert at King's College London, said: 'Even if you think that there is a one per cent or a half per cent chance of there being such a catastrophic event, it's probably worth taking a lot more precautions than we are at the moment.' A terrorist group could make do with much less than the 55kg of HEU needed to make a 'dirty bomb' to cause widespread panic, if not a full-scale nuclear blast. Acton believes radioactive material could also be sprayed like an aerosol across a wide urban expanse, in a stealth attack that could pass unnoticed until it was too late, leaving huge swathes of a major city uninhabitable. 'If people insist on the same standards [for radioactivity] we have now, we would have to give up large areas of the city. People would ultimately have to get used to the risk of going back to a slightly contaminated part of London,' Acton said. Such a nuclear attack would be so easy to perform and so devastating in its effects, he added: 'I really don't know why an attack hasn't happened already.' Dhiren Barot, a North London Al Qaeda member arrested in 2004 on terrorism charges, had been planning a dirty-bomb attack using tiny radioactive particles found in home smoke-alarms, which he intended to buy by the thousand. Jacqui Smith, the Home Secretary, has said the Government is taking the threat seriously. A computer simulation of a radiological attack on London was carried out by the Home Office last year. Senior officials in the Bush administration took part in a similar exercise involving three simultaneous dirty bomb blasts. Spain,

another recent terrorist target, carried out a drill earlier this year. Meanwhile, radiation detectors are being installed in ports around the world as a last line of defence against a smuggled nuclear device. So far they have produced millions of false alarms (a compound found naturally in bananas, for example, can set off the sirens). The White House has its own nuclear bomb squad, which it scrambled in 2005 to intercept U.S.-bound ships suspected of carrying a weapon. It turned out they were carrying scrap metal contaminated by illegally dumped radioactive material. This is the emerging battlefield of the 21st century. Western governments have little idea whether they are being overly paranoid or recklessly negligent in their preparations. But the potential is so horrifying; there seems little choice but to prepare for the worst.

Πλησιάζει η θεραπεία του αιμορραγικού πυρετού Ebola;

Σε συνέχεια της ανακάλυψης του τρόπου που ο ιός Ebola καταφέρνει να διεισδύσει στα κύτταρα του ξενιστή μέσω της οδού PI3-kinase, ερευνητές διαπίστωσαν ότι ο αποκλεισμός της εν λόγω οδού, ο ιός δεν μπορεί να απελευθερωθεί από το ενδοσωμάτιο με αποτέλεσμα να μην μπορεί να προκαλέσει νόσο – κάτι που διαπιστώνεται με τη βοήθεια ειδικού μοριακού φάρου με την ονομασία «λουσιφεράση». Εκτιμάται ότι μια νέα σειρά φαρμάκων που θα στοχεύει την οδό PI3-kinase θα μπορέσει να αντιμετωπίσει αποτελεσματικά την μόλυνση πριν αυτή προκαλέσει νόσο στο άτομο που προσβλήθηκε.

Treatment for Hemorrhagic Fever on the Anvil Following New Discovery

Ebola produces severe and often fatal hemorrhagic fever in its victims and inflicts mortality rates close to 90 percent in some outbreaks. Till date, scientists haven't come up with a vaccine or antiviral therapy to fight against the virus, which is considered a high-risk agent for bioterrorism. In the latest study, scientists tied Ebola's cellular invasion mechanism to a series of biochemical reactions called the phosphoinositide-3 kinase pathway (named for an enzyme found in the cell membrane). When they activated the PI3 kinase pathway, they found that an Ebola virus particle tricks the cell into drawing it into a bubble-like compartment known as an endosome, which is pulled, together with the virus, into the cell. Later, at a critical point, the virus bursts free from the endosome and begins to reproduce itself. But, if the PI3 kinase pathway is shut down - as the UTMB team did with a drug designed for that purpose - Ebola virus particles can't escape from the endosome, and the disease process is hampered. "The nice part about identifying entry mechanisms is you can prevent the virus from infecting the cell. You can stop the whole show before it even gets started," said Robert Davey, UTMB microbiology and immunology associate professor. They also used a unique test created at UTMB that adds a light-emitting molecular beacon, called luciferase, to Ebola viruses and the virus-like particles. And this made them to determine exactly when and where each broke out of its bubble, and track its progress. "Up to that point, it's really a bus ride for these viruses, and PI3 kinase is the bus driver. Whether you're talking about Ebola or Ebola virus-like particles, they've all got the virus envelope proteins that trigger the PI3 kinase pathway, which is the first step of getting the virus onto that bus," said Davey. He pointed out that amongst all other viruses that had been found to activate the PI3 kinase pathway, Ebola was the first with envelope proteins that had been seen doing so. It was also the first virus to be discovered interacting with the PI3 kinase pathway in order to enter cells, which could have profound implications. "It's actually triggering the reorganizing of the cell for its own devious outcomes - infecting the cell. But there are other possible outcomes of fiddling around with the PI3 kinase.

You can get the cell to move, you can get it to live longer, all advantages for a virus. So I'm sure that this is going to be important in other viruses," said Davey. The scientists are also developing a new generation of drugs that target PI3 kinase, since the enzyme is often activated in cancers. It is possible that these could also be used to defend against Ebola virus. The study is appearing online in the current issue of the journal PloS Pathogens.

Υπάρχει καπνός χωρίς φωτιά;

Ενώ περίπου τα μισά περιστατικά θανάτων από γρίπη των πτηνών σε ανθρώπους έχουν συμβεί στην Ινδονησία, η χώρα δια της Υπουργού Υγείας Siti Fadilah Supari και από του βήματος των Ηνωμένων Εθνών αρνήθηκε να μοιραστεί δείγματα του ιού με ειδικούς ξένων χωρών εμπλέκοντας σειρά παγκόσμιων συνωμοσιών για πλούσιες χώρες που κατασκευάζουν ιούς τους οποίους απελευθερώνουν στις φτωχές χώρες για να δημιουργήσουν αγορές για τα νέα φάρμακα που κατασκευάζουν. Από μηνών, η Ινδονησία έχει σταματήσει να ενημερώνει τη διεθνή κοινότητα για νέους θανάτους από τη γρίπη των πτηνών και προσπαθεί με δικά της μέσα να αντιμετωπίσει το πρόβλημα.

Alarm as Indonesia thumbs nose at West over bird flu

With nearly half the world's human bird flu deaths, concern is building over Indonesia's refusal to share virus samples and its health minister's increasingly strident denunciations of global "conspiracies". Indonesia stopped sharing the samples with the World Health Organisation (WHO) in December 2006 on fears pharmaceutical



companies would use them to make vaccines that are too expensive for poor countries. The initial move by Health Minister Siti Fadilah Supari earned international plaudits for taking on an unfair global system, but with WHO negotiations at an impasse, Supari's increasing belligerence is raising alarm. The minister has broadened her critique of an "unfair, neocolonialist" global health system, raising the possibility earlier this year the United States was using the virus to

develop biological weapons in her book "It's Time for the World to Change: Divine Hands Behind Avian Influenza." Supari told a rapturous crowd at a book discussion last week that rich nations were creating "new viruses" and sending them to developing nations in order create markets for drug companies to sell vaccines. "Indonesia sends a virus to the WHO but it suddenly it ends up with the US government. Then the US government turns the virus into dollars and we don't know what kind of research," Supari said. "Then the virus is turned into vaccines (that are sent to) Indonesia and Indonesia has to buy them and if they don't buy them, it turns and turns again, and in the end developed countries make new viruses which are then sent to developing countries," she said. "The conspiracy between superpower nations and global organisations isn't a theory, isn't rhetoric, but it's something I've experienced myself." Bird flu scientists abroad and in Indonesia have raised concerns that while Supari seeks to reshape the global order, time is being wasted in understanding a virus that could potentially kill millions if it mutates into a form

transmissible between humans. Indonesia announced in August that 112 people have died from the virus, out of more than 240 worldwide since late 2003. Only a handful of samples and genetic sequences have been shared with the WHO and researchers. The health ministry also earlier this year stopped publicly announcing bird flu deaths, only releasing information weeks or months after victims have died. "I'm a bit suspicious what she's doing is more politics and not in fact for the global health system," said Ngurah Mahardika, a virologist from Udayana University on Bali island. "This will lessen the strength, the power of the preparedness of the global system ... (withholding samples means) we don't have any epidemiological and virological signal now of what the virus looks like," Mahardika said. "This is really



increasing our pandemic risk (because) we don't know about any signals of a pandemic." While Supari has insisted Indonesia and other developing countries can stand on their own in researching the virus, Indonesian scientists say they too have been shut out from access to flu samples. "The minister of health is keeping the virus in the laboratories but they are giving no access to Indonesian scientists at the moment," said Amin Subandrio, the

head of the national bird flu committee's expert panel. Subandrio, who has supported Supari in trying to extract a change in WHO rules to allow developing nations to secure supply of and revenue from vaccines taken from their virus strains, said withholding samples was nonetheless risky. He said Supari's claim of a Western-led global conspiracy was not backed by evidence. "I really cannot explain it 100 percent, but probably she received the wrong information from the wrong person," he said. But while scientists and global health authorities express worry, Supari continues to enjoy popularity at home. Her book has entered into multiple print runs in Indonesian and English and plans have reportedly been made for a film adaptation. Mainstream academics have also rallied to her side "I believe she represents a kind of minister or politician who has a very clear political standing," political scientist Bima Arya Sugiarto said. President Susilo Bambang Yudhoyono has distanced himself from Supari's more controversial comments but has made no sign of moving her from her post. "In Indonesia we recognise that there are issues to be resolved in the world health system but certainly we don't believe in conspiracy theories," presidential spokesman Dino Patti Djalal said.

Νέο παγούρι που σώζει ζωές

Το νέο παγούρι LifeSaver™, μπορεί με ασφάλεια να μετατρέψει το βρώμικο νερό σε πόσιμο με ποσοστό κατακράτησης των παθογόνων μικρο-οργανισμών (ιών και βακτηρίων), που πλησιάζει το 100%.

'Lifesaver' Bottle Purifies Water in Seconds

On the outside, it looks like an ordinary sports bottle. On the inside, there's a miracle: an extremely advanced filtration system that makes murky water filled with deadly viruses and bacteria completely clean in just seconds. The Lifesaver removes 99.999 percent of water-borne pathogens and reduces heavy metals like lead, meaning even

the filthiest water can be cleaned — immediately. It will be a boon to soldiers in the field, so it's winning accolades from the military. It also stands to revolutionize humanitarian aid. It could be the first weapon in the fight against disease after a natural disaster, like the one in Myanmar this week. I attended the Lifesaver's launch at DSEi London, the world's largest arms fair. Its inventor provided a pool of dirty pond water as a test subject, and I drank some after it was filtered. Not only did it look pure once it passed through the Lifesaver, it tasted pure, too. The process takes only 20 seconds and is simple enough: scoop some



water, pump it through the filter and you're ready to go. The instructions are displayed in pictures on the side of the bottle, so it can be used by anyone, removing the language barrier. Outdoor enthusiasts may find it useful, but the Lifesaver is perfect for the military. The bottle is designed to "scoop and go," so soldiers won't have to carry the added weight of clean bottled water. They can pick some up out of any source and keep moving. As an added bonus, the bottle can shoot a pressurized jet of water from any angle, which will be useful for washing wounds free of contaminants and debris. Other filters use ceramic pores and can't catch most bacteria and viruses, but the Lifesaver uses microscopic pores a mere 15 nanometers across — about one-hundredth the width of a spider's silk — narrow enough to stop the tiniest threats. That means virtually nothing — not even bacteria and viruses — can get through. And since the bottle uses a carbon filter, it makes water safe and sterile without any chemicals, removing that iodine or chlorine taste. The bottle weighs about 1.5 pounds and can filter one and a half pints of clean drinking water each go. Its replaceable filter can handle more than 1,500 gallons of dirty water before it has to be replaced. And since it won't process any water once the filter has expired, it will be impossible to

drink contaminated water by mistake. Michael Pritchard, a British entrepreneur, designed the Lifesaver in the wake of freshwater shortages that followed the 2004 tsunami and Hurricane Katrina. Delivering bottled water to disaster areas is difficult, especially in places like Myanmar, where the government is currently interfering with efforts to distribute supplies and aid. If disaster victims had access to the Lifesaver, they could have ongoing access to clean water without the need for airlifts. Delivering



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those planeloads of water is expensive, too. A U.S. Army study revealed that the cost of delivering bottled water to Afghanistan was \$4.69 per gallon. Pentagon figures on Hurricane Mitch showed the cost of air freight was even higher: \$7.60 per gallon. Just one Boeing C-17 transport plane full of Lifesaver bottles would provide 500,000 people with access to safe drinking water for up to 16 months — saving millions and saving lives.

Υγρά εκρηκτικά και αναφυσκτικά

Η πορτοκαλάδα Tang Orange σε μορφή σκόνης, περιέχει συστατικό που μπορεί να χρησιμοποιηθεί μαζί με υπεροξειδίο του υδρογόνου (οξυζενέ) ως υγρό εκρηκτικό σε συνδυασμό με το flash των φωτογραφικών μηχανών που θα μπορούσε να πυροδοτήσει το θανατηφόρο μίγμα. Το κιτρικό οξύ της πορτοκαλάδα δρα ως καταλύτης ενώ η έκρηξη ενός μπουκαλιού-βόμβας θα μπορούσε να ανοίξει τρύπα στα τοιχώματα του αεροσκάφους με ανάλογες συνέπειες.

Tang Bomb: Liquid Explosives Are the New 'Weapon of Choice'

Tang, the breakfast drink powder, was an ingredient in a potentially lethal liquid bomb, according to British prosecutors. Far-fetched as it sounds, bombs made from hydrogen peroxide and the breakfast powder drink Tang could have taken down seven planes bound for the U.S. and Canada — using flash cameras to trigger the explosions. A British court saw video evidence this week of the "liquid explosives plot," an alleged terrorist cabal British police say they thwarted in August 2006. The suspects allegedly had planned to use common household chemicals to mix bombs while aboard jets flying over the Atlantic. The alleged plot, and the excellent police work that went into busting it, resulted in the tough carry-on restrictions passengers face before boarding an airplane. Knowing the dangers of liquid explosives should make the hassle of tossing your bottles when traveling a lot easier to bear. Peter Wright, a lawyer prosecuting the case in London against eight of the 18 accused suspects, called the bombs "a deadly cargo." It's a simple one, too. Prosecutors say the alleged terrorists intended to carry the components on board each plane to form a bomb. One was

a mix of hydrogen peroxide and Tang. The citric acid in the Tang acts as a catalyst, making the mixture deadly. The other component is a mixture known as HMTD — hexamethylene triperoxide diamine, a chemical cocktail made from readily available household and commercial ingredients. HMTD is extremely unstable and can be set off by heat, movement and even contact with metal. Prosecutors say the suspects had planned to hide the Tang-and-bleach mixture in plastic soda bottles and



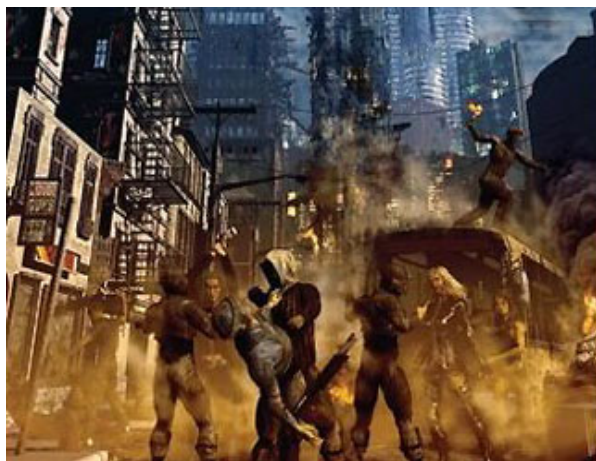
the HMTD in hollowed-out AA batteries. The initial charge would have been set off in the HMTD, causing a larger explosion. According to Erroll Southers, the chief of intelligence and counterterrorism at Los Angeles International Airport, peroxide-based bombs are on the rise all over the world. "Peroxide-based explosives are the weapon of choice in the Middle East," he said. "They leave no residue, they're extremely volatile, they're easy to make and they've been quite effective." Just one bottle-sized bomb could be powerful enough to rip a hole in a plane's hull — certain tragedy for the passengers aboard the seven targeted flights. Prosecutors say the attack was planned for between August and December, two of the busiest months of the year for air travel. Had the planes been full, nearly 2,000 people would have been killed. Jurors in the trial were shown video of what those explosions would have looked like. Scientists at the Forensic Explosives Laboratory in London re-created the device, but as a precaution they left the testing area and had a robotic arm mix the deadly chemicals. It was a smart move: The tiny bomb destroyed one of the video cameras and sprayed the lab with pieces of the protective walls meant to contain the blast. Next time you're feeling inconvenienced because you can't take a bottle of shampoo or soda pop through security, think again. Those restrictions at the gate are there to ensure that you'll reach your destination safe and sound.

Συγγραφείς επιστημονικής φαντασίας κατά μελλοντικών τρομοκρατικών επιθέσεων

Οι πλέον γνωστοί συγγραφείς επιστημονικής φαντασίας έχουν ιδρύσει την ομάδα SIGMA και προσφέρουν, χωρίς αμοιβή, πιθανά μελλοντικά σενάρια τρομοκρατικών επιθέσεων. Οι αρχικοί δέκα της ομάδας έχουν γίνει πλέον 35 άτομα και στην πλειοψηφία τους διαθέτουν τίτλους PhDs και συνεργάζονται με κρατικές υπηρεσίες όπως η CIA, η DARPA, η NASA κα. Ορισμένες από τις προτάσεις τους εξετάζονται σοβαρά στα πλαίσια ενδεχόμενης υλοποίησης τους.

Science-Fiction Writers Help Government Prepare for Attacks of the Future

It's the stuff of Hollywood storylines, but to the U.S. government such plots are potentially very real and very dangerous. So the government has turned to an unlikely source for help in identifying these threats: science-fiction writers. Sci-fi writers were envisioning nightmarish scenarios like these well before the technology emerged to make them possible. Now the government is hoping their imagination will help protect against whatever may come next. Some leading science-fiction writers and computer designers have formed SIGMA, the creation of prolific author Arlan Andrews, and they're offering their time — and



— and minds — free of charge. Their only incentive is keeping America safe. Since the end of the Cold War, "any given spot is in more danger than before," said Andrews, who was a White House Science fellow under George H. W. Bush. "More than 200,000 Americans are putting their lives at risk. If we were too afraid to accept responsibility for our ideas, we would be too wimpy and not American." I recently had the

opportunity to sit in on a Department of Homeland Security meeting with SIGMA in Los Angeles. SIGMA — it takes its name from the Greek letter used as a summation symbol in mathematics — is similar in concept to the JASON group, a team of physicists, biologists and chemists that has advised the country since World War II. Originally a group of 10, SIGMA has swelled to include 35 members. Most have Ph.D.s and all are popular writers and designers in their own right. These sci-fi writers are particularly adept at envisioning new technologies and planning against “disruptive technology,” according to Andrews. He said he would pit his group “against any other in the world.” Those in the know in government clearly agree, since SIGMA members have long consulted with agencies like the Homeland Security and Defense Departments, DARPA, Sandia Labs, NASA and the CIA. Some current members are employed by NASA and the Navy; one is a director at Los Alamos National Laboratory. So just what have these guys been thinking up? Andrews recently proposed “intelligent bullets” that could correct their own course and loiter in the air before landing. Designed to suit current weapons, these bullets could contain explosives or even video equipment and be useful in urban operations. Instead of relying on distant video feeds from unmanned aerial vehicles, soldiers could fire short bursts into the air that would transmit decrypted, de-spun video straight to their goggles. To help shore up border security in an emergency, one SIGMA member suggested a plan for C130 planes to fire pointed telephone poles, equipped with sensors and hooked up electronically, into the ground every half mile. Another idea they developed to help patrol large borders was to disperse millions of tiny sensors the size of maple seeds with half-inch-long transmitters. The sensors would then transmit to a tower if people passed by. SIGMA has also considered how to mitigate and prevent damage caused by natural disasters. Greg Bear, writer of bestsellers such as “Quantico,” has been looking at how to prevent plant pathogens from wiping out crops in Florida. They also floated a plan to defuse the devastating power of hurricanes by spraying aerosolized dry ice into a storm to cool it down. To alert authorities to escalating water levels, members proposed designing dikes with sensors that could rapidly feed back data and hasten emergency response. There are even plans to create a virtual world that could test current security planning in computer models of major cities — like a “Second Life” or “World of Warcraft” for terror activity. Designed using supercomputers, these virtual cities and countries would match the real ones in incredible detail. Once inside those computer-constructed cities, SIGMA would operate as a “red team,” whose job would be to work like terrorists and move around a virtual Baghdad, Fallujah or even New York, launching attacks in order to test the consequences. That could be invaluable, as sci-fi writers have been notably prescient in envisioning unorthodox technologies. Sci-fi writers anticipated critical military advances like stealth technology, artificial intelligence, communications satellites and the laser, Andrews said. So even as real terrorists are exploiting Second Life and other virtual-world games for recruitment, planning and financing, SIGMA is turning the tables to give the United States a home court advantage in the fight for the future.

Εμφυτευμένα chip αναγνώρισης

Όταν η επιστημονική φαντασία γίνεται πραγματικότητα με τα RFID chips (παθητικά ή ενεργητικά). Τα πρώτα δεν διαθέτουν μπαταρία και το βεληνεκές τους δεν υπερβαίνει τα δέκα μέτρα. Τα ενεργά chips έχουν δική τους πηγή ενέργειας και πολύ μεγαλύτερο βεληνεκές ενώ μεταδίδουν δεδομένα σε απομακρυσμένο ηλεκτρονικό

υπολογιστή. Η εξέλιξη αυτή έχει εγείρει σειρά αντιδράσεων με επίκεντρο τα προσωπικά δεδομένα εκείνων στους οποίους θα εμφυτευτούν τα νέα chips.

The Implanted Radio-Frequency Identification Chip: "Smart Cards" in a Surveillance Society

If incorporating personal details into an RFID (radio-frequency identification) chip implanted into a passport or driver's license may sound like a "smart" alternative to endless lines at the airport and intrusive questioning by securocrats, think again. Since the late 1990s, corporate grifters have touted the "benefits" of the devilish transmitters as a "convenient" and "cheap" way to tag individual commodities, one that would "revolutionize" inventory management and theft prevention. Indeed, everything from paper towels to shoes, pets to underwear have been "tagged" with the chips. "Savings" would be "passed on" to the consumer. Call it the Wal-Martization of everyday life. RFID tags are small computer chips connected to miniature antennae that can be fixed to or implanted within physical objects, including human beings. The RFID chip itself contains an Electronic Product Code that can be "read" when a RFID reader emits a radio signal. The chips are divided into two categories, passive or active. A "passive" tag doesn't contain a battery and its "read" range is variable, from less than an inch to twenty or thirty feet. An "active" tag on the other hand, is self-powered and has a much longer range. The data from an "active" tag can be sent directly to a computer system involved in inventory control--or surveillance. But as Consumers Against Supermarket Privacy Invasion and Numbering (CASPIAN), the American Civil Liberties Union (ACLU), the Electronic Frontier Foundation (EFF) and the Electronic Privacy Information Center (EPIC) state in a joint **position paper**, "RFID has the potential to jeopardize consumer privacy, reduce or eliminate purchasing anonymity, and threaten civil liberties." As these organizations noted: While there are beneficial uses of RFID, some attributes of the technology could be deployed in ways that threaten privacy and civil liberties:

** **Hidden placement of tags.** RFID tags can be embedded into/onto objects and documents without the knowledge of the individual who obtains those items. As radio waves travel easily and silently through fabric, plastic, and other materials, it is possible to read RFID tags sewn into clothing or affixed to objects contained in purses, shopping bags, suitcases, and more.*

** **Unique identifiers for all objects worldwide.** The Electronic Product Code potentially enables every object on earth to have its own unique ID. The use of unique ID numbers could lead to the creation of a global item registration system in which every physical object is identified and linked to its purchaser or owner at the point of sale or transfer.*

** **Massive data aggregation.** RFID deployment requires the creation of massive databases containing unique tag data. These records could be linked with personal identifying data, especially as computer memory and processing capacities expand.*

** **Hidden readers.** Tags can be read from a distance, not restricted to line of sight, by readers that can be incorporated invisibly into nearly any environment where human beings or items congregate. RFID readers have already been experimentally embedded into floor tiles, woven into carpeting and floor mats, hidden in doorways, and seamlessly incorporated into retail shelving and counters, making it virtually impossible for a consumer to know when or if he or she was being "scanned."*

** Individual tracking and profiling. If personal identity were linked with unique RFID tag numbers, individuals could be profiled and tracked without their knowledge or consent. For example, a tag embedded in a shoe could serve as a de facto identifier for the person wearing it. Even if item-level information remains generic, identifying items people wear or carry could associate them with, for example, particular events like political rallies. ("Position Statement on the Use of RFID on Consumer Products," Privacy Rights Clearinghouse, November 14, 2003)*

As the corporatist police state unfurls its murderous tentacles here in the United States, it should come as no surprise that securocrats breathlessly tout the "benefits" of RFID in the area of "homeland security."



When linked to massive commercial databases as well as those compiled by the 16 separate agencies of the "intelligence community," such as the Terrorist Identities Datamart Environment (TIDE) that feeds the federal government's surveillance Leviathan with the names of suspected "terrorists," it doesn't take

a genius to conclude that the architecture for a vast totalitarian enterprise is off the drawing board and onto the streets. As last week's mass repression of peaceful protest at the Republican National Convention in St. Paul amply demonstrated, the Bush regime's "preemptive war" strategy has been rolled out in the *heimat*. As the *World Socialist Web Site reports*,

*On Wednesday eight members of the anarchist protest group the Republican National Convention Welcoming Committee (RNCWC) were charged under provisions of the Minnesota state version of the Patriot Act with "Conspiracy to Riot in Furtherance of Terrorism." The eight charged are all young, and could face up to seven-and-a-half years in prison under a provision that allows the enhancement of charges related to terrorism by 50 percent. ... Among other things, the youth, who were arrested last weekend even prior to the start of the convention, are charged with plotting to kidnap delegates to the RNC, assault police officers and attack airports. Almost all of the charges listed are based upon the testimony of police infiltrators, one an officer, the other a paid informant. (Tom Eley, "RNC in Twin Cities: Eight protesters charged with terrorism under Patriot Act," *World Socialist Web Site*, 6 September 2008)*

As the ACLU pointed out, "These charges are an effort to equate publicly stated plans to blockade traffic and disrupt the RNC as being the same as acts of terrorism. This both trivializes real violence and attempts to place the stated political views of the defendants on trial," said Bruce Nestor, president of the Minnesota Chapter of the National Lawyers Guild. "The charges represent an abuse of the criminal justice system and seek to intimidate any person organizing large scale public demonstrations potentially involving civil disobedience," he said. An affidavit filed by the cops in order to allow the preemptive police raid and subsequent arrests declared that the RNCWC is a "criminal enterprise" strongly implying that the group of anarchist youth were members of a "terrorist organization." Which, as we have learned over these last seven and a half years of darkness, is precisely the point: keep 'em scared and passive. And when they're neither scared nor passive, resort to police state tactics of mass repression. While the cops beat and arrested demonstrators and journalists outside the

Xcel Energy Center, neanderthal-like Republican mobs chanted "USA! USA!" while the execrable theocratic fascist, Sarah Palin, basked in the limelight. But I digress... Likened to barcodes that scan items at the grocery store check-out line, what industry flacks such as the Association for Automatic Identification and Mobility (**AIM**) fail to mention in their propaganda about RFID is that the information stored on a passport or driver's license is readily stolen by anyone with a reader device--marketers, security agents, criminals or stalkers--without the card holder even being remotely aware that they are being tracked and their allegedly "secure" information plundered. According to a blurb on the **AIM website**,

Automatic Identification and Mobility (AIM) technologies are a diverse family of technologies that share the common purpose of identifying, tracking, recording, storing and communicating essential business, personal, or product data. In most cases, AIM technologies serve as the front end of enterprise software systems, providing fast and accurate collection and entry of data. ("Technologies," Association for Automatic Identification and Mobility, no date)

Among the "diverse family of technologies" touted by AIM, many are rife with "dual-use" potential, that is, the same technology that can keep track of a pallet of soft drinks can also keep track of human beings. Indeed, the Association touts **biometric identification** as "an automated method of recognizing a person based on a physiological or behavioral characteristic." This is especially important since "the need" for biometrics "can be found in federal, state and local governments, in the military, and in commercial applications." When used as a stand-alone or in conjunction with RFID-chipped "smart cards" biometrics, according to the industry "are set to pervade nearly all aspects of the economy and our daily lives." Some "revolution." The industry received a powerful incentive from the state when the Government Services Administration (GSA), a Bushist satrapy, issued a 2004 memo that urged the heads of all federal agencies "to consider action that can be taken to advance the [RFID] industry." An example of capitalist "ingenuity" or another insidious invasion of our right to privacy? In 2006, IBM obtained a patent that will be used for tracking and profiling consumers as they move around a store, even if access to commercial databases are strictly limited. And when it comes tracking and profiling human beings, say for mass extermination at the behest of crazed Nazi ideologues, IBM stands alone. In his groundbreaking 2001 exploration of the enabling technologies for the mass murder of Jews, communists, Roma and gays and lesbians, investigative journalist Edwin Black described in *IBM and the Holocaust* how, beginning in 1933, IBM and their subsidiaries created technological "solutions" that streamlined the identification of "undesirables" for quick and efficient asset confiscation, deportation, slave labor and eventual annihilation. In an eerie echo of polices being enacted today against Muslims and left-wing "extremists" by the corrupt Bush regime in their quixotic quest to "keep America safe" in furtherance of capitalist and imperialist goals of global domination, Black **writes**:

In the upside-down world of the Holocaust, dignified professionals were Hitler's advance troops. Police officials disregarded their duty in favor of protecting villains and persecuting victims. Lawyers perverted concepts of justice to create anti-Jewish laws. Doctors defiled the art of medicine to perpetrate ghastly experiments and even choose who was healthy enough to be worked to death--and who could be cost-effectively sent to the gas chamber. Scientists and engineers debased their higher

calling to devise the instruments and rationales of destruction. And statisticians used their little known but powerful discipline to identify the victims, project and rationalize the benefits of their destruction, organize their persecution, and even audit the efficiency of genocide. Enter IBM and its overseas subsidiaries. (IBM and the Holocaust: The Strategic Alliance Between Nazi Germany and America's Most Powerful Corporation, New York: Crown Publishers, 2001, pp. 7-8)

As security and privacy analyst Katherine Albrecht **writes** describing IBM's patented "Identification and Tracking of Persons Using RFID-Tagged Items in Store Environments,"

...chillingly details RFID's potential for surveillance in a world where networked RFID readers called "person tracking units" would be incorporated virtually everywhere people go--in "shopping malls, airports, train stations, bus stations, elevators, trains, airplanes, restrooms, sports arenas, libraries, theaters, [and] museums"--to closely monitor people's movements. ("How RFID Tags Could Be Used to Track Unsuspecting People," Scientific American, August 21, 2008)

According to the patent cited by Albrecht, as an individual moves around a store, or a city center, an "RFID tag scanner located [in the desired tracking location]... scans the RFID tags on [a] person.... As that person moves around the store, different RFID tag scanners located throughout the store can pick up radio signals from the RFID tags carried on that person and the movement of that person is tracked based on these detections.... The person tracking unit may keep records of different locations where the person has visited, as well as the visitation times." Even if no personal data are stored in the RFID tag, this doesn't present a problem IBM explains, because "the personal information will be obtained when the person uses his or her credit card, bank card, shopper card or the like." As Albrecht avers, the link between the unique RFID number and a person's identity "needs to be made only once for the card to serve as a proxy for the person thereafter." With the wholesale introduction of RFID chipped passports and driver's licenses, the capitalist panoptic state is quickly--and quietly--falling into place. If America's main trading partner and sometime geopolitical rival in the looting of world resources, China, is any indication of the direction near future surveillance technologies are being driven by the "miracle of the market," the curtain on privacy and individual rights is rapidly drawing to a close. Albrecht writes,

China's national ID cards, for instance, are encoded with what most people would consider a shocking amount of personal information, including health and reproductive history, employment status, religion, ethnicity and even the name and phone number of each cardholder's landlord. More ominous still, the cards are part of a larger project to blanket Chinese cities with state-of-the-art surveillance technologies. Michael Lin, a vice president for China Public Security Technology, a private company providing the RFID cards for the program, unflinchingly described them to the New York Times as "a way for the government to control the population in the future." And even if other governments do not take advantage of the surveillance potential inherent in the new ID cards, ample evidence suggests that data-hungry corporations will.

I would disagree with Albrecht on one salient point: governments, particularly the crazed, corporate-controlled grifters holding down the fort in Washington, most

certainly will take advantage of RFID's surveillance potential. In 2005 for example, the Senate Republican High Tech Task force praised RFID applications as "exciting new technologies" with "tremendous promise for our economy." In this spirit, they vowed to "protect" RFID from regulation and legislation. Needless to say, the track record of timid Democrats is hardly any better when it comes to defending privacy rights or something as "quaint" as the Constitution. Under conditions of a looming economic meltdown, rising unemployment, staggering debt, the collapse of financial markets and continuing wars and occupations in Iraq and Afghanistan, U.S. imperialism, in order to shore up its crumbling empire, will continue to import totalitarian methods of rule employed in its "global war on terror" onto the home front. The introduction of RFID-chipped passports and driver's licenses for the mass surveillance and political repression of the American people arises within this context.

Τα μάτια μας έχουν προδιαγραφές ακτίνων-X!

Ενδιαφέρουσα μελέτη που έγινε σε 319 είδη 17 κατηγοριών θηλαστικών και ανασκοπώντας το παρελθόν των ματιών και της όρασης στα έμβια όντα κάνει προβλέψεις για το μέλλον!

Study Says Eyes Evolved for X-Ray Vision



The advantage of using two eyes to see the world around us has long been associated solely with our capacity to see in 3-D. Now, a new study from a scientist at Rensselaer Polytechnic Institute has uncovered a truly eye-opening advantage to binocular vision: our ability to see through things. Most animals — fish, insects, reptiles, birds, rabbits, and horses, for example — exist in non-cluttered environments like fields or plains, and they

have eyes located on either side of their head. These sideways-facing eyes allow an animal to see in front of and behind itself, an ability also known as panoramic vision. Humans and other large mammals — primates and large carnivores like tigers, for example — exist in cluttered environments like forests or jungles, and their eyes have evolved to point in the same direction. While animals with forward-facing eyes lose the ability to see what's behind them, they gain X-ray vision, according to Mark Changizi, assistant professor of cognitive science at Rensselaer, who says eyes facing the same direction have been selected for maximizing our ability to see in leafy environments like forests. All animals have a binocular region — parts of the world that both eyes can see simultaneously — which allows for X-ray vision and grows as eyes become more forward facing. Demonstrating our X-ray ability is fairly simple: hold a pen vertically and look at something far beyond it. If you first close one eye, and then the other, you'll see that in each case the pen blocks your view. If you open both eyes, however, you can see through the pen to the world behind it. To demonstrate how our eyes allow us to see through clutter, hold up all of your fingers in random directions, and note how much of the world you can see beyond them when

only one eye is open compared to both. You miss out on a lot with only one eye open, but can see nearly everything behind the clutter with both. “Our binocular region is a kind of ‘spotlight’ shining through the clutter, allowing us to visually sweep out a cluttered region to recognize the objects beyond it,” says Changizi, who is principal investigator on the project. “As long as the separation between our eyes is wider than the width of the objects causing clutter — as is the case with our fingers, or would be the case with the leaves in the forest — then we can tend to see through it.” To identify which animals have this impressive power, Changizi studied 319 species across 17 mammalian orders and discovered that eye position depends on two variables: the clutter, or lack thereof in an animal’s environment, and the animal’s body size relative to the objects creating the clutter. Changizi discovered that animals in non-cluttered environments — which he described as either “non-leafy surroundings, or surroundings where the cluttering objects are bigger in size than the separation between the animal’s eyes” (think a tiny mouse trying to see through 6-inch wide leaves in the forest) — tended to have sideways-facing eyes. “Animals outside of leafy environments do not have to deal with clutter no matter how big or small they are, so there is never any X-ray advantage to forward-facing eyes for them,” says Changizi. “Because binocular vision does not help them see any better than monocular vision, they are able to survey a much greater region with sideways-facing eyes.” However, in cluttered environments — which Changizi defined as leafy surroundings where the cluttering objects are smaller than the separation between an animal’s eyes — animals tend to have a wide field of binocular vision, and thus forward-facing eyes, in order to see past leaf walls. “This X-ray vision makes it



possible for animals with forward-facing eyes to visually survey a much greater region around themselves than sideways-facing eyes would allow,” says Changizi. “Additionally, the larger the animal in a cluttered environment, the more forward facing its eyes will be to allow for the greatest X-ray vision possible, in order to aid in hunting, running from

predators, and maneuvering through dense forest or jungle.” Changizi says human eyes have evolved to be forward facing, but that we now live in a non-cluttered environment where we might actually benefit more from sideways-facing eyes. “In today’s world, humans have more in common visually with tiny mice in a forest than with a large animal in the jungle. We aren’t faced with a great deal of small clutter, and the things that do clutter our visual field — cars and skyscrapers — are much wider than the separation between our eyes, so we can’t use our X-ray power to see through them,” Changizi says. “If we froze ourselves today and woke up a million years from now, it’s possible that it might be difficult for us to look the new human population in the eye, because by then they might be facing sideways.” Changizi’s research was completed in collaboration with Shinsuke Shimojo at the California Institute of Technology, and published online in the *Journal of Theoretical Biology*. It was funded by the National Institutes of Health. Changizi’s X-ray vision research, along with his research about our future-seeing powers, color telepathy, and eye computation abilities, will appear in his book *The Vision Revolution* (BenBella Books), due out in stores this spring.

Έλλειψη προετοιμασίας για επίθεση με βρώμικη βόμβα

Σύμφωνα με πρόσφατη μελέτη της Radiological Threat Awareness Coalition σχετικά με την εθνική προετοιμασία των ΗΠΑ, ποσοστό 81% των ερωτηθέντων θεωρεί την βρώμικη βόμβα ως σοβαρή απειλή ενώ μόνον το 1/3 εξ αυτών θεωρεί ότι είναι προετοιμασμένοι για την αντιμετώπιση μιας τρομοκρατικής επίθεσης.

National Survey Shows Lack of Preparedness for a Dirty Bomb Attack

The Radiological Threat Awareness Coalition (R-TAC) today released a national survey on homeland security preparedness, showing that at least 81% of those polled



said the threat of a "dirty bomb" is serious, yet less than one third (32%) feel prepared for a terrorist attack. The national survey of public sentiment finds that a majority of likely voters would not know what to do in the event of a "dirty bomb" attack, and have not taken steps to make themselves more prepared. "Seven years after 9/11 proved that America was vulnerable, the American people know the danger of a dirty bomb, but they don't know what to do about it," said R-TAC chairman James P. Pinkerton. "The sense of urgency that sparked R-TAC will help deploy much-needed support to federal, state, and local

responders to address the threat of a dirty bomb. This is the best way to honor their efforts and protect America."

AMONG THE FINDINGS:

- 81% said they consider the threat posed to the United States by the possibility of a "dirty bomb" attack by terrorists to be serious.
- A majority (56%) said they were not confident they would know what to do in the event of a "dirty bomb" attack.
- 63% said they do not feel prepared in the event of a terrorist attack on their community.
- Only 34% of voters agreed the government was doing a good job informing people about preparedness for a terrorist attack.

The nationwide survey of 502 likely voters was conducted August 25-28, 2008 by Mr. Peter Brodnitz of the Benenson Strategy Group.

Εστιάστε στις βιολογικές απειλές

Σύμφωνα με ομάδα ειδικών σε θέματα όπλων μαζικής καταστροφής, ο νέος Πρόεδρος των ΗΠΑ, θα πρέπει να εστιάσει στην αντιμετώπιση των βιολογικών απειλών και κατά δεύτερο λόγο στις πυρηνικές απειλές καθώς αμφότερες μπορούν να προκαλέσουν τον θάνατο χιλιάδων ατόμων.

WMD Panel Urges Focus on Biological Threats

The next U.S. president should put more emphasis on countering biological threats as part of a rethinking of national security strategy, according to early assessments from the leaders of a commission investigating the threat from weapons of mass destruction. Both biological and nuclear threats are significant in their ability to kill hundreds of thousands, but a biological attack is easier to launch and harder to combat because many biological weapon components are widely available and have benign

Planning for the Worst

A commission chaired by former Sens. Bob Graham and Jim Talent is developing recommendations on weapons of mass destruction

Mr. Graham's preliminary assessment of preparedness:

- Against nuclear terrorism: 'Good-plus'
- Against bioterrorism: 'Very exposed'



Jim Talent

Likely recommendations:

- Focus on bioterrorism and nuclear threat
- Improve recruitment, retention of people with WMD expertise
- Combat terrorist recruitment
- Bolster international cooperation, pursue diplomacy
- Reduce the risk of nuclear-technology transfer with new initiatives for the Nuclear Non-Proliferation Treaty
- Strengthen intelligence
- Some agency reorganization may be needed

uses, said the commission's chairman, former Sen. Bob Graham of Florida. The Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism will hold public hearings during the run-up to the November election. The first, examining the nature of the threat, is to be held Sept. 10 in New York. The commission's final recommendations are due in mid-November. Multiple assessments of government progress against security threats are planned for release this week, timed to the seventh anniversary of the 2001 terrorist attacks. Their findings might pressure the next administration to overhaul the government's national-security operations. A report from the Project on National Security Reform, a separate government-funded initiative analyzing the government's national security apparatus, is due out next month. The commission, which is scheduling meetings with the Democratic and Republican presidential campaigns and plans to deliver its recommendations to the next president, hasn't yet settled on conclusions. Commissioners will focus much more attention on preventing an attack than on

responding to one. "My own assessment at this point is the more likely form of attack is going to be in a biological weapon," said commission chairman Mr. Graham, a Democrat who presided over the Senate intelligence panel's 9/11 investigation. Mr. Graham grades the government's response to date to the nuclear threat a "good-plus," but he said the government is "very exposed" to biological attacks. A German intelligence official says the threat posed by even small amounts of a biological weapon carries a disruptive potential far beyond its ability to kill or injure. "The anthrax attacks in the U.S. shortly after the Sept. 11 [attacks] crippled the flow of mail to government and businesses for months," the official said. Congress assembled the commission in May and gave it six months to report back. The nine commissioners have travelled to meetings in Europe, and commissioners and staff members paid visits to experts around the U.S., from Sandia National Laboratories in New Mexico to the New York Police Department. Several commissioners are focused on threats from countries that possess or aspire to make nuclear weapons, such as Pakistan, Iran and North Korea. Some urge U.S. counter-proliferation efforts to pay stronger attention to Pakistan as the government grows more unstable. Several commissioners want to prevent others from emulating Abdul Qadeer Khan, who pioneered the development of Pakistan's nuclear arsenal and traded in weapons technology. The international "Khan Network" of nuclear traders poses the greatest nuclear proliferation risk, experts say, because they know how to buy and sell nuclear-weapons technology and might sell to a terrorist group. "We don't have any indication that the network was ever taken down," Mr. Graham said. The commission is likely to emphasize the critical role of intelligence in understanding and preventing attacks. "All the controversies about intelligence in Washington, we have to resolve them and be able to move forward with a consensus," said the commission's co-chairman, former Missouri Sen. Jim Talent, a Republican.

Βλαστοκύτταρα στο πεδίο της μάχης

Αν και τα βλαστοκύτταρα έχουν προβληθεί παγκοσμίως ως μέσα «ανανεωτικής ιατρικής», οι στρατιωτικοί ερευνητές (DARPA) προσανατολίζονται σε άλλες χρήσεις όπως η κατασκευή ερυθρών αιμοσφαιρίων για μεταγγίσεις που θα καλύψουν το έλλειμμα της αιμοδοσίας στο πεδίο της μάχης ενώ θα είναι απαλλαγμένες από τα λοιμώδη νοσήματα του σήμερα. Στα προγράμματα αυτά υπάρχει και ο απαραίτητος Έλληνας – η ερευνήτρια Θάλεια Παπαγιαννοπούλου, καθηγήτρια ιατρικής στο University of Washington.

For Stem Cells, a Role on the Battlefield

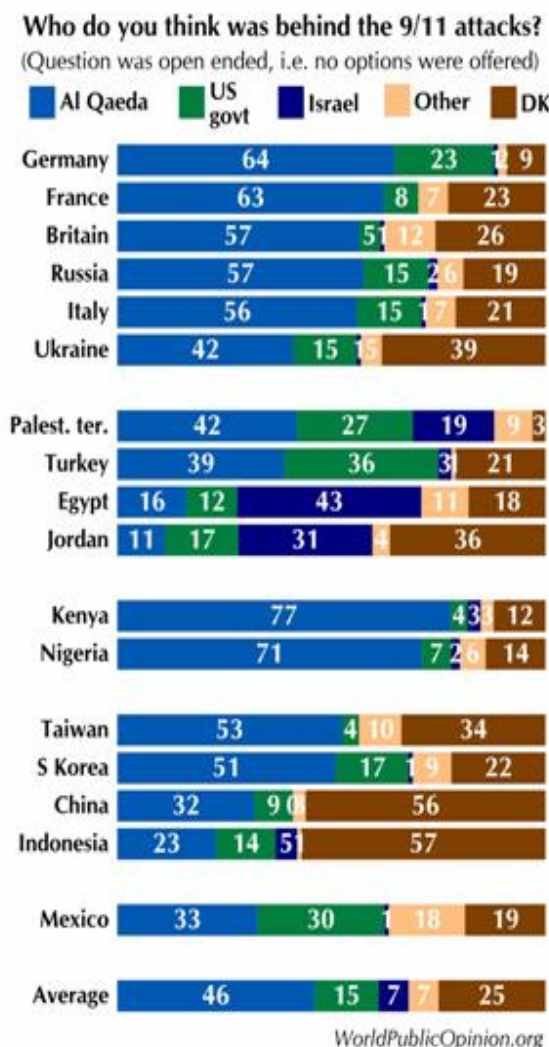
When people envision using human embryonic stem cells for “regenerative medicine,” they often talk about making neurons to treat Parkinson’s disease, cardiac cells to repair the damage caused by a heart attack, or pancreatic islet cells to replace those destroyed by diabetes. But some scientists say an early therapeutic use of such cells might be more prosaic: making red blood cells for transfusions. Such blood cells, perhaps made in huge vats, might one day supplement blood donations, which are often in short supply. And the blood might be free of the infectious diseases that can be found in donated blood. The military is especially interested because it can be hard to find and store red cells for use on the battlefield. The Defense Advanced Research Projects Agency, known as Darpa, is starting a “blood pharming” program aimed at developing a system that can make red blood cells from progenitor cells on the battlefield. Making red cells is “one of the easiest things one might do starting with embryonic stem cells,” said Eric E. Bouhassira, a professor of cell biology and hematology at Albert Einstein College of Medicine, who is doing research in the field. The reason, he said, is that to treat Parkinson’s disease, heart attacks or diabetes,

scientists have to figure out not only how to make the proper cells, but also how to get them functioning in the body. But once scientists learn how to make red blood cells — or platelets, the cells that allow blood to clot — they already know how to use them. In addition, matching a blood type is easier than matching other types of tissue to avoid rejection of a transplant. Still, those advantages are offset by the huge volume of cells required for transfusions, far more than might be needed to treat Parkinson's or other diseases. That is why a paper published online in August by the journal *Blood* drew some attention. Scientists at Advanced Cell Technology reported making 10 billion to 100 billion red cells starting from a plate of human embryonic stem cells. "It's the first time to my knowledge that anyone has been able to produce these on a sufficient scale to talk of using them for transfusion purposes," said a co-author of the paper, Dr. George Honig, an emeritus professor and pediatric hematologist at the University of Illinois at Chicago. But even that amount is less than needed for one transfusion. A unit of blood, about a pint, contains more than one trillion cells, said Dr. Dan S. Kaufman, associate professor at the University of Minnesota. Advanced Cell Technology, which is struggling to raise money to stay in business, is not the only company pursuing blood cells. James A. Thomson of the University of Wisconsin, the first person to derive human embryonic stem cells, was a founder of Stem Cell Products, a company formed to pursue making blood products from stem cells. The company has since merged with another he helped found, Cellular Dynamics, which is working on making cells to be used in pharmaceutical research. The idea faces other challenges beyond the huge volume of cells needed. The red cells produced from embryonic stem cells so far tend to resemble embryonic or fetal red cells more than adult ones. They tend to be larger and often contain nuclei, which could impede their passage through the body. And they have a different form of the globin molecule, which carries oxygen. How well the cells would work in the body is still unknown. The red cells produced by Advanced Cell Technology carried as much oxygen as adult red cells in laboratory tests. But they have not yet been tried in animals or people. "The real test is in vivo," said **Dr. Thalia Papayannopoulou**, a professor of medicine at the University of Washington, adding that the manufactured cells might not last as long in the body as donated red cells because of differences in their membranes. Safety is another issue. Blood substitutes made other ways have harmed patients in some circumstances. Finally, there is the issue of cost. "People donate for free, and free is a difficult price point to compete with," said Nick Seay, chief technology officer of Cellular Dynamics. Even after the donated blood is processed, hospitals can buy a unit for about \$200. But with the expensive growth factors needed to develop red cells from embryonic cells, the costs could be thousands of dollars per unit, said Dr. Michael P. Busch, director of the research institute at Blood Systems, a large nonprofit blood center. Red cells might conceivably be one of the first therapies derived from so-called induced pluripotent stem cells, which are made from adult skin cells. These cells are becoming popular for research because they avoid the ethically controversial destruction of embryos needed to create embryonic stem cells. But a big barrier to using induced cells for therapy is that they are created by adding genes to the skin cell using a virus. One of the genes that has been used can cause cancer, as can the use of the virus. But red cells made this way would presumably not carry the cancer risk because the cells have no nuclei, Dr. Kaufman said. Other cells, like those from bone marrow or cord blood, can also be used to make red blood cells. But those cells cannot reproduce indefinitely in culture like embryonic stem cells. Researchers like Cornelis Murre at the University of California, San Diego, are working on ways around this. Darpa's initial "blood

pharming” contracts will not involve human embryonic stem cells, said Mr. Seay of Cellular Dynamics. Under Bush administration policy, federal money can be spent for research on only a small number of approved embryonic stem cell lines. None of those lines is Type O negative, the universal donor that Darpa wants.

Η διεθνής κοινή γνώμη αμφιβάλλει ακόμη εάν για την 11η Σεπτεμβρίου ευθύνεται η Αλ Κάιντα

Επτά χρόνια μετά τις επιθέσεις της 11ης Σεπτεμβρίου στις Ηνωμένες Πολιτείες εξακολουθεί να μην υπάρχει ομοφωνία σε άλλες χώρες του κόσμου ότι πίσω από την



αιματοχυσία βρίσκεται η Αλ Κάιντα, σύμφωνα με διεθνή δημοσκόπηση της WorldPublicOpinion.org σε 17 χώρες. Η έρευνα, η οποία διενεργήθηκε σε δείγμα 16.063 ανθρώπων σε 17 χώρες, κατέδειξε ότι μόνο σε εννέα χώρες η πλειοψηφία πιστεύει ότι η Αλ Κάιντα ευθύνεται για τις επιθέσεις του 2001 στη Νέα Υόρκη και την Ουάσινγκτον που προκάλεσαν το θάνατο περίπου 3.000 ανθρώπων. Κατά μέσον όρο, το 46% των ερωτηθέντων στις 17 χώρες δήλωσε ότι η Αλ Κάιντα ευθύνεται για τις επιθέσεις, το 15% ότι ευθύνεται η αμερικανική κυβέρνηση, το 7% το Ισραήλ και άλλο ένα 7% κάποιος άλλος δράστης. Επίσης ένας στους τέσσερις δήλωσε ότι δεν γνωρίζει ποιος κρύβεται πίσω από τις επιθέσεις. Η δημοσκόπηση διεξήχθη από την WorldPublicOpinion.org, ένα σχέδιο συνεργασίας ερευνητικών κέντρων σε διάφορες χώρες, το οποίο διαχειρίζεται το Πρόγραμμα πάνω στις Θέσεις Διεθνούς Πολιτικής του Πανεπιστημίου του Μέριλαντ στις ΗΠΑ. Στην Ευρώπη, το 56% των Βρετανών και των Ιταλών επιρρίπτει την ευθύνη για τις επιθέσεις στην Αλ

Κάιντα, το 63% των Γάλλων και το 64% των Γερμανών. Επίσης, το 23% των Γερμανών ρίχνει την ευθύνη στην αμερικανική κυβέρνηση, όπως και το 15% των Ιταλών. Στη Μέση Ανατολή οι ερωτηθέντες ήταν ιδιαίτερα πιθανόν να κατονομάσουν κάποιον άλλο δράστη από την Αλ Κάιντα, έδειξε επίσης η έρευνα. Την υπόθεση ότι το Ισραήλ κρυβόταν πίσω από τις επιθέσεις στήριξε το 43% των ερωτηθέντων στην Αίγυπτο, το 31% στην Ιορδανία και το 19% στα Παλαιστινιακά Εδάφη, ενώ τις ευθύνες στην αμερικανική κυβέρνηση επέρριψε το 36% των Τούρκων και το 27% των Παλαιστινίων. Στο Μεξικό, το 30% των ερωτηθέντων κατηγόρησε την αμερικανική κυβέρνηση και το 33% την Αλ Κάιντα. Οι μόνες χώρες στις οποίες η συντριπτική πλειοψηφία επέρριψε την ευθύνη στην Αλ Κάιντα ήταν η Κένυα με ποσοστό 77% και η Νιγηρία με ποσοστό 71%. Η δημοσκόπηση, η οποία έχει περιθώριο σφάλματος συν, πλην 3 έως 4 μονάδες, διεξήχθη από τις 15 Ιουλίου ως τις

31 Αυγούστου στις εξής χώρες: Κίνα, Ινδονησία, Νιγηρία, Ρωσία, Αίγυπτος, Γαλλία, Γερμανία, Βρετανία, Ιταλία, Ιορδανία, Κένυα, Μεξικό, Παλαιστινιακά Εδάφη, Νότια Κορέα, Ταϊβάν, Τουρκία και Ουκρανία.

Μεγάλο κύμα αλλαξοπιστίας στην Ισπανία

Τουλάχιστον 10.000 Ισπανοί (3.500 στην Ανδαλουσία και 3.000 στην Καταλονία), ασπάστηκαν τον Ισλάμ κατά την τελευταία πενταετία σε μια χώρα που οι μουσουλμάνοι πλησιάζουν πλέον τα 1.2 εκατομμύρια που εξυπηρετούνται από 11 τζαμιά και 480 θρησκευτικά κέντρα διαφόρων τύπων και δομών.

Spain: 10,000 converts in five years

At least 10,000 Spaniards have converted to Islam in the past five years, according to Spanish Christian news agency ACPress. Spain now has 1.2 million Muslims. Though there is no official data, Muslim organization in Spain published numbers Monday, at the beginning of Ramadan. The organizations think that in the past five years 10,000 Spaniards (3,500 in Andalusia and 3,000 In Catalonia) converted to Islam, which would bring the number of Spanish Muslims up to 25,000. The local Muslims and especially the immigrants have 11 mosques in Spain and 480 other religious centers, according to ACPress. According to a spokesperson of the Muslim community in Seville those joining are both practicing Roman Catholics as well as other Spaniards.

Τα δέκα πλέον τρομακτικά βιολογικά όπλα

Ενδιαφέρουσα αναφορά στα δέκα πλέον τρομακτικά βιολογικά όπλα: (1) ευλογιά, (2) άνθρακας, (3) αιμορραγικός πυρετός Ebola, (4) πανώλης, (5) τουλαραιμία, (6) αλλαντοτοξίνη, (7) μόλυνση ορυζώνων από μύκητα *Pyricularia* (rice blast), (8) μόλυνση βοοειδών από ιό *Rinderpest*, (9) ιός *Nipah*, και (10) ιοί-χίμαιρες

10 Scariest Bioweapons

At one time or another, humans have turned to just about every viable option on the planet for new means of destroying one another. We've leveled forests, plundered the elements and diverted religion, philosophy, science and art to fuel humanity's desire for bloodshed. Along the way, we've even weaponized some of nature's most formidable viral, bacterial and fungal foes. The world is home to a number of deadly viruses, bacteria and fungi. Biological warfare



involves the human use of these agents to destroy one another. The use of **biological weapons**, or **bioweapons**, dates back to the ancient world. As early as 1,500 B.C. the Hittites of Asia Minor recognized the power of **contagions** and sent plague victims into enemy lands. Armies, too, have long understood the power of bioweapons, catapulting diseased corpses into besieged fortresses and poisoning enemy wells. Some historians even argue that the 10 biblical plagues Moses called down against the

Egyptians may have been more of a concentrated campaign of biological warfare rather than the acts of a vengeful god. Since those early days, advances in medical science have led to a vastly improved understanding of harmful pathogens and the way our immune systems deal with them. But while these advancements have led to vaccinations and cures, they have also led to the further weaponization of some of the most destructive biological agents on the planet. The first half of the 20th century saw the use of the biological weapon anthrax by both the Germans and Japanese, as well as the subsequent development of biological weapons programs in nations such as the United States, the United Kingdom and Russia. Today, biological weapons are outlawed under 1972's **Biological Weapons Convention** and the **Geneva Protocol**. But while a number of nations have long destroyed their stockpiles of bioweapons and ceased research into their proliferation, the threat remains.

Bioweapon 10: Smallpox

The term "biological weapon" typically summons mental images of sterile government labs, hazmat suits and test tubes full of brightly colored liquid apocalypse. Historically, however, biological weapons have often taken much more



mundane forms: a wandering exile, paper bags full of plague-infested fleas or even, during the 1763 French and Indian War, a simple blanket. At the orders of Cmdr. Sir Jeffrey Amherst, British forces infamously distributed smallpox-infected blankets to Native American tribes in Ottawa. The native inhabitants of the Americas were particularly

susceptible to the illness since, unlike their European invaders, they hadn't encountered smallpox before and lacked any degree of immunity to it. The disease cut through the tribes like wildfire. **Smallpox** is caused by the **variola virus**. The most common form of the disease has a 30 percent **mortality**. Signs of smallpox include high fevers, body aches, and a rash that develops from fluid-filled bumps and scabs to permanent, pitted scars. The disease predominantly spreads through direct contact with an infected person's skin or bodily fluids, but also can be spread through the air in close, confined environments. In 1967, the **World Health Organization (WHO)** spearheaded an effort to eradicate smallpox through mass vaccinations. As a result, 1977 marked the last naturally occurring case of smallpox. The disease was effectively eliminated from the natural world, but laboratory copies of smallpox still exist. Both Russia and the United States possess WHO-approved stores, but as smallpox played a role in several nations' bioweapons programs, it's unknown how many secret stockpiles still exist.

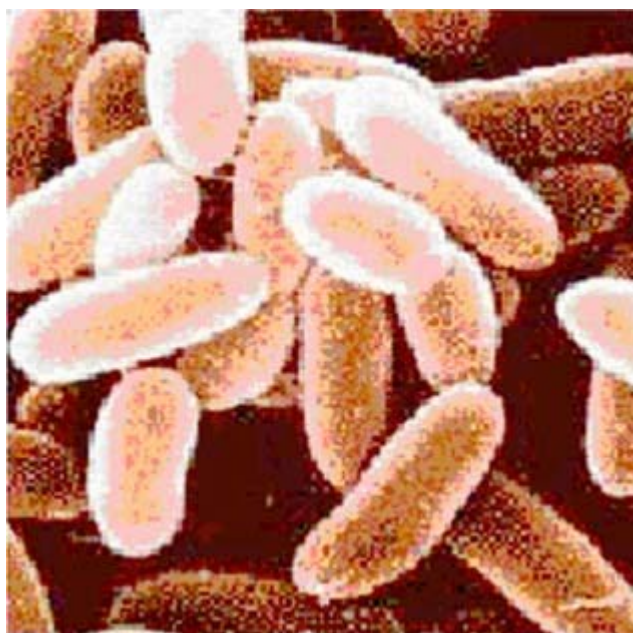
Category A Biological Weapons

The U.S. Centers for Disease Control and Prevention classifies a Category A biological weapon as any easily spread microorganism or toxin that has a high potential for casualties, might cause public panic and requires special public-health preparedness. Only six biological agents currently meet these criteria, all of which we thought deserved to be named scary bioweapons. The CDC classifies smallpox as a Category A biological weapon due to its high mortality rate and the fact that it can be

transmitted through the air. While a smallpox vaccine exists, typically only medical and military personnel undergo vaccination -- meaning the rest of the population is very much at risk if smallpox were unleashed as a weapon. How might the virus be released? Probably in aerosol form or even in the old-fashioned way: by sending an infected individual directly into the target area. The method for unleashing a biological weapon doesn't have to be flashy, however. Consider how much press our next bioweapon received, all with a few postage stamps.

Bioweapon 9: Anthrax

During the fall of 2001, letters containing a curious white powder began turning up at U.S. Senate offices and media outlets. When word spread that the envelopes



contained the spores of the deadly bacteria *Bacillus anthracis*, panic ensued. The **anthrax** letter attacks infected 22 people and killed five. Seven years later, the FBI finally narrowed down its investigation to government anthrax scientist Bruce Ivans, who committed suicide before the case could be closed. Thanks to its high mortality rate and environmental stability, the anthrax bacteria is also classified as a Category A biological weapon. The bacteria live in the soil, where grazing animals typically come into contact with spores while rooting around for food. People, however,

may become infected with anthrax by touching the spores, inhaling them or ingesting them. Most cases of anthrax are **cutaneous**, transmitted through skin contact with the spores. The most deadly form is **inhalation anthrax**, when the spores travel to the lungs and then the immune cells carry them to the lymph nodes. Here, the spores multiply and release toxins that result in such symptoms as fever, respiratory problems, fatigue, muscle aches, enlarged lymph nodes, nausea, vomiting, diarrhea and black ulcers. Inhalation anthrax carries the highest mortality rate of the three (100 percent, 75 percent with medical treatment), and unfortunately, that was the form contracted by all five casualties from the 2001 anthrax letters. The disease isn't easy to catch under normal situations, and it can't be transmitted from person to person. Still, health workers, veterinarians and military personnel normally undergo vaccinations. The rest of us, however, remain at risk if someone were bent on another anthrax attack. Along with the lack of widespread vaccination -- a common theme among our scary bioweapon nominees -- longevity is another point in anthrax's favor. Many harmful biological agents can only survive a short while under certain conditions. But hardy *B. anthracis* can sit on the shelf for 40 years or more and still pose a lethal threat. These attributes helped to establish anthrax as a favorite among bioweapons programs throughout the world. Japanese scientists conducted human experiments with aerosolized anthrax in the late 1930s in their infamous Unit 731 biological warfare facility in occupied Manchuria. British forces experimented with anthrax

bombs in 1942, managing to so thoroughly contaminate test site Gruinard Island that, 44 years later, 280 tons of formaldehyde were required to decontaminate it. In 1979, the Soviet Union accidentally released airborne anthrax, killing 66 people in the process. Today, *B. anthracis* remains one of the most well-known and feared bioweapons. Numerous biological warfare programs have worked to produce anthrax over the years and while a vaccine exists, mass vaccination would only become viable if mass exposure occurred. We don't even have a vaccine for some bioweapons. The only way to avoid our next entry is to avoid exposure.

Bioweapon 8: Ebola Hemorrhagic Fever

Another well-documented killer exists in the form of the Ebola virus, one of more than a dozen different **viral hemorrhagic fevers**, nasty illnesses sometimes marked by copious bleeding. Ebola began to make headlines in the late 1970s as it spread through Zaire and Sudan, killing hundreds. In the decades that followed, the virus



maintained its lethal reputation in outbreaks across Africa and proved a volatile organism even in controlled settings. Since its initial discovery, no fewer than seven outbreaks have occurred at hospitals and laboratories in Africa, Europe and the United States. Named for the region of the Congo in which it was first discovered scientists suspect the Ebola virus normally resides within a native, African animal host, but the exact origin and natural habitat of the disease remain a mystery. As such, we have only encountered the virus after it has successfully infected humans or nonhuman primates. Once present in a host, the virus infects others through direct contact with blood or other bodily secretions. In Africa, the virus has proved itself particularly adept at spreading through hospitals and clinics. An infected individual can expect to start experiencing symptoms in between 2 and 21 days. Typical symptoms may include headache, muscle ache, sore throat and weakness, followed by diarrhea and vomiting. Some patients also suffer internal and external bleeding. Between 60 and 90 percent of infections end in death after 7 to 16 days. Doctors don't know why some patients are better able to recover than others. Nor do they how to treat it. And, as noted earlier, there's no Ebola vaccine. In fact, we only process a vaccine for one form of hemorrhagic fever: yellow fever. While many medical professionals labored to

better treat and prevent outbreaks of Ebola, a team of Soviet scientists set out to turn the virus into a weapon. They initially encountered difficulties cultivating Ebola in the laboratory, enjoying more success with the development of Marburg hemorrhagic fever. By the early 1990s, however, they had solved the problem. While the virus normally spreads through physical contact with bodily secretions, researchers have observed it spread through the air under laboratory conditions. The possibility of a weaponized, aerosol form of the virus only further cements Ebola and related viral hemorrhagic fevers as permanent placeholders on the list of Category A agents. The word "Ebola" is already synonymous with terror and death, despite having only become news in the last few decades. Our next entry, however, has been plaguing humans for centuries.

Bioweapon 7: Plague

The Black Death decimated half the population of Europe in the 14th century -- a horror that continues to resonate through the world even today. Dubbed "the great dying," the mere prospect of a return to such times is enough to put a population on edge. Today, some researchers speculate that the world's first pandemic may have



actually been a hemorrhagic fever, but the term "plague" continues to cling to another long-standing suspect and current Category A biological weapon: the *Yersinia pestis* bacterium. Plague exists in two main strains: bubonic and pneumonic. **Bubonic plague** typically spreads by bites from infected fleas, but also can be transmitted from person to person through contact with infected bodily fluids. This strain is named for the swollen

glands, or **buboes**, around the groin, armpit and neck. This swelling is accompanied by fever, chills, headache and exhaustion. Symptoms occur within two or three days and typically last between one and six days. Unless treated within the first 24 hours of infection, 70 percent of those infected die. **Pneumonic plague** is less common and spreads through the air by coughs, sneezes and face-to-face contact. Its symptoms include high fever, cough, bloody mucus and difficulty breathing. Among the countries known or suspected to have pursued plague as a biological weapon are Canada, Egypt, Germany, Japan, North Korea, Russia and the United States. Plague victims themselves -- both dead and alive -- have historically served as effective

delivery vehicles for this biological weapon. A 1940 plague epidemic occurred in China following a Japanese attack that involved dropping sacks of infected fleas out of airplanes. Today, experts predict that plague would likely be weaponized in the form of an aerosol, resulting in an outbreak of pneumonic plague. However, low-tech, vermin-based attacks are still possible. Several countries have explored the use of plague as a bioweapon and, as the disease still occurs naturally throughout the world, copies of the bacterium are relatively easy to come by. With appropriate treatment, plague's mortality rate can dip as low as 5 percent. There is no vaccine. A bioweapon doesn't have to boast a high mortality rate to be successful, though. Consider our next entry.

Bioweapon 6: Tularemia

While **tularemia** only claims an overall 5 percent mortality rate, the microorganism that causes it is one of the most infectious bacteria on Earth. In 1941, the Soviet Union reported 10,000 cases of the illness. Then, during the German siege of



Stalingrad the following year, this number skyrocketed to 100,000. Most of these cases occurred on the German side of the conflict. Former Soviet bioweapons researcher Ken Alibek argued that this surge in infections was no accident, but the result of biological warfare. Alibek would go on to help develop a strain of vaccine-resistant tularemia for the Soviets, before

defecting to the United States in 1992. *Francisella tularensis* occurs naturally in no more than 50 organisms and is especially prevalent in rodents, rabbits and hares. Humans typically acquire the disease through contact with infected animals, infected insect bites, the consumption of contaminated foods or the inhalation of the bacteria in aerosol form. Symptoms typically appear within 3 to 5 days and vary depending on the method of infection. Patients may experience fever, chills, headache, diarrhea, muscle aches, joint pain, dry cough and progressive weakness. Pneumonialike symptoms can also develop. If untreated, respiratory failure, shock and death can follow. The illness typically lasts less than two weeks, but during that time, the infected people are basically bedridden. Tularemia doesn't transfer between human hosts and can be easily treated with antibiotics or prevented with a vaccine. It does, however, spread very rapidly between animal hosts and humans or when used in aerosol form. It is this factor, not its mortality rate, that earned *F. tularensis* a Category A biological weapon ranking. It is especially virile in aerosol form. Due to these factors, the United States, Britain, Canada and the Soviet Union all worked to create weaponized tularemia after the close of World War II. If the idea of discovering bioweapons in cute little rabbits sound scary, just consider our next entry. It's all around you and you can't even see it.

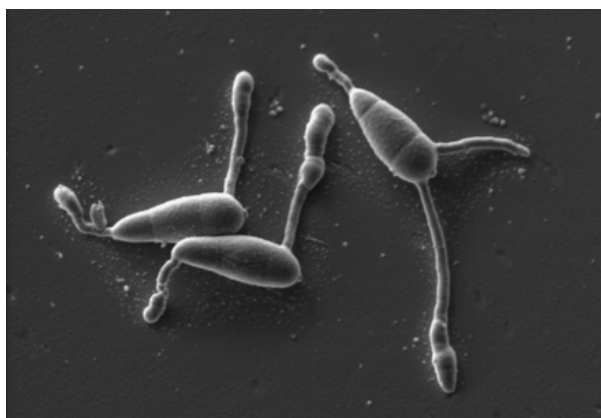
Bioweapon 5: Botulinum Toxin

Take a deep breath. If the air you just inhaled contained **botulinum toxin**, you'd have no way of knowing. In weaponized airborne form, the deadly bacteria would be completely colorless and odorless. Between 12 and 36 hours later, however, the first

signs of **botulism** would begin to take hold: blurred vision, vomiting and difficulty swallowing. At this point, your only hope would be a botulism antitoxin -- and only if you could get your hands on it before symptoms advanced much further. If untreated, paralysis begins to take hold, seizing up your muscles and finally your respiratory system. Without respiratory support, *Clostridium botulinum* can kill in 24 to 72 hours. For this reason, the organism's deadly toxin rounds out the list of six Category A biological weapons. With ventilators to work your lungs, the mortality rate plummets from 70 percent to 6 percent, but recovery takes time. This is because the toxin binds to the point where nerve endings and muscles meet, effectively cutting off the signal from the brain. To recover fully from a case of botulism, the patient actually has to grow new nerve endings -- a process that takes several months. And while a vaccine exists, concerns over effectiveness and side effects have plagued its development, so it's not widely used. As if the symptoms weren't scary enough, *C. botulinum* occurs all over the world, especially in soil and marine sediments. The spores often pop up on fruits, vegetables and seafood. In this state, they're harmless. It's only as they begin to grow that they produce their deadly toxin. Humans primarily encounter the toxin through the consumption of tainted foods, as the temperatures and chemicals in improperly stored foods often provide the perfect conditions for the spores to grow and develop. Deep wounds and infant intestinal tracks also present similar conditions. Its power, availability and limited treatability have made botulinum toxin a favorite among several countries' bioweapons programs. Luckily, effectively using such a weapon can still provide challenges. In 1990, members of the Japanese cult Aum Shinrikyo released an aerosol of the toxin against several political targets, but were unable to cause the mass deaths they desired. When the cult switched to the chemical agent sarin gas in the 1995 attack, however, they killed a dozen people and injured thousands. It may have an untreated mortality rate of 70 percent, but as it turns out, botulism isn't all bad. By using small amounts of purified botulinum toxin, doctors are able to harness the bacteria's paralytic power to help soothe neurologic diseases, facial ticks and even smooth away wrinkles. You probably know it better by its brand name: **Botox**. But bioweapons don't have to focus on hurting the enemy directly. As our next two entries illustrate, they can dramatically affect the food supply.

Bioweapon 4: Rice Blast

A number of bacteria, viruses and toxins pose a significant threat to human beings, but plenty of the world's biological agents prefer different prey: cultivated food crops. Cutting off an enemy's food supply is a time-tested military strategy, whether you're defending your homeland against an invading force or besieging a walled city. Without food, populations weaken, panic, riot and eventually die. Several countries, especially the United States and Russia, have devoted a great deal of research to diseases and even insects that target key food crops. The fact that modern agriculture typically focuses on the large-scale



production of a single crop only sweetens the deal for the architects of blight and famine. One such bioweapon is **rice blast**, a crop disease caused by the fungus *Pyricularia oryzae* (also known as *Magnaporthe grisea*). The leaves of affected plants soon develop grayish lesions composed of thousands of fungal spores. These spores quickly multiply and spread from plant to plant, sapping the plants and leading to much lower crop production. While breeding resistant plants is a good defensive measure against some crop disease, rice blast presents a problem because you wouldn't have to breed resistance to one strain of fungus, but 219 different strains. Such a bioweapon wouldn't be as sure of a killer as the likes of smallpox and botulism. It could however lead to severe starvation in poorer countries, as well as financial losses and other huge problems. A number of countries have pursued rice blast as a biological weapon, including the United States. By the time the U.S. dismantled its anti-crop program, it had amassed nearly a ton of the harmful fungus for a potential attack on Asia. What's that? You prefer a nice hamburger to a rice dish? Well, our next entry proves that you meat eaters aren't safe either.

Bioweapon 3: Rinderpest

When Genghis Khan invaded Europe in the 13th century, he inadvertently unleashed a fearsome biological weapon in the wake of his conquest. The gray steppe cattle used



by his supply trains introduced a deadly cattle plague, known throughout the world today by its German name, **rinderpest**. Rinderpest is caused by a virus closely related to measles, and it affects cattle and other ruminant animals such as goats, bison and giraffes. The condition is highly contagious, causing fever, loss of appetite, dysentery and inflammation of the mucus membranes. The condition drags on for six to 10 days, when the animal typically succumbs to dehydration. Over the

centuries, humans have introduced rinderpest-infected animals to various corners of the globe, often resulting in millions of dead cattle, along with other livestock and wild animals. At times, outbreaks in Africa have been so severe as to turn starving lions into man-eaters and lead ruined herdsmen to commit suicide. Thanks to extensive quarantine and vaccination programs, rinderpest has been brought under control in much of the world. While Genghis Khan wielded rinderpest as a weapon by accident, many modern countries aren't as innocent. Canada and the United States have both researched use of the virus as an anti-livestock bioweapon. Many of the scariest bioweapons out there have their roots in the ancient world. A few, however, are terrifyingly new.

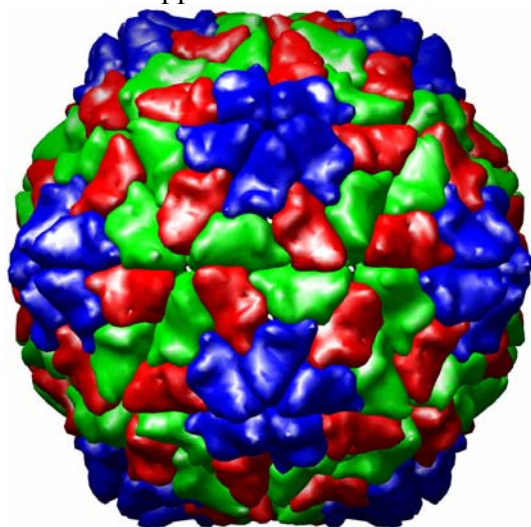
Bioweapon 2: Nipah Virus

Viruses adapt and evolve over time. New strains emerge and, occasionally, close contact between humans and animals allow life-threatening diseases to leap to the top of the food chain. As human populations continue to swell, the emergence of new diseases is inevitable. And every time a new outbreak makes the headlines, you can be

sure someone is considering how to turn it into a weapon. **Nipah virus** is just such a disease, having only risen to the attention of world health agencies in 1999. The outbreak occurred in the Nipah region of Malaysia, infecting 265 and killing 105. While 90 percent of those infected handled pigs for a living, health workers suspect the virus naturally occurs in fruit bats. The exact nature of transference is uncertain, but experts think that the virus may spread through close physical contact or contaminated body fluids. Human-to-human transmission hasn't been reported yet. The illness typically lasts 6 to 10 days, inducing symptoms that range from mild, flulike conditions such as fever and muscle pains to **encephalitis**, or inflammation of the brain. In these more severe cases, patients experienced drowsiness, disorientation, convulsions and ultimately coma. The virus carries a mortality rate of 50 percent, and there currently are no standard treatments or vaccinations. Nipah virus, along with a number of other emerging pathogens, is classified as a Category C biological weapon. While no country is known to have researched its weaponization, its potential for widespread use and 50 percent mortality rate make it a bioweapon to watch for. Is nature constantly coming up with new ways for us to destroy each other? Well, it's not working hard enough for some people. With our last entry, we'll look at how some scientists hope to improve on nature's existing deadly designs.

Bioweapon 1: Chimera Viruses

Plague, smallpox, anthrax -- the world's deadliest biological agents aren't out to get you. Any harmful properties they possess are simply byproducts of their evolution. But what happens when scientists tinker with the genetic makeup of these organisms?



What kind of horrors may come to life when we add the human desire to wage war to their natural design? Unfortunately, the creation of such life forms isn't just a page from a science fiction novel -- it's already happening. In Greek and Roman mythology, the **chimera** combined elements of lion, goat and serpent into one monstrous form. Artists in the late medieval age often used the creature as a symbol to illustrate the complex nature of evil. In modern genetic science, a **chimeric organism** is a life form that contains genes from a foreign species. Given its namesake, you might expect all

chimeric organisms to be awful examples of man twisting nature for nefarious ends. Fortunately, our increased understanding of genetic science has led to some beneficial creations. One such chimera, which combines the common cold with polio, may help cure brain cancer. But as the war continues its forward momentum through human history, the abuse of such science is inevitable. Geneticists have already discovered the means to increase the lethality of such bioweapons as smallpox and anthrax by tweaking their genetic structure. By combining genes, however, scientists could theoretically create a virus that triggered two diseases at once. During the late 1990s, the Soviet Union's Chimera Project studied the feasibility of combining smallpox and Ebola into one super virus. Other potential nightmare scenarios involve strains of viruses that require certain triggers. A **stealth virus** would remain dormant for an

extended period until triggered by predetermined stimuli. Other possible chimeric bioweapons might require two components to become effective. Imagine a strain of botulinum toxin that, when combined with the botulinum toxin antidote, only becomes more lethal. Such a biological attack would not only result in a higher mortality rate, but might erode public trust in health initiatives, aid workers and government response to the outbreak. From splitting the atom to cracking life's genomic riddles, the last century of scientific research has brought about tremendous potential for humans to build a better world -- or destroy the one they have.

Αυξημένη συχνότητα άσματος στους κατοικούντες κοντά στο επίκεντρο της επίθεσης της 11^{ης} Σεπτεμβρίου 2001

Οι ενήλικες που ζούσαν κοντά στο Παγκόσμιο Κέντρο Εμπορίου κατά τη στιγμή της επίθεσης έχουν διπλάσια πιθανότητα να εκδηλώσουν άσθμα σε σύγκριση με τον γενικό πληθυσμό. Εκτιμάται ότι ποσοστό 3% των κατοίκων της περιοχής (3.800 έως 12.600 ενήλικες) έχουν ήδη εκδηλώσει άσθμα ενώ 35.000 έως 70.000 άτομα ανέπτυξαν μετα-τραυματικό σύνδρομο stress.

More Asthma Among Those Near 9/11 Site

Adults who were near the World Trade Center around the time it was attacked in 2001 have been twice as likely to develop asthma as the general population, a new analysis of public health registry data has found. The study of data from the World Trade Center Health Registry, released on Wednesday by the city's Department of Health and Mental Hygiene, tracks health effects two to three years after the attack. It suggests that 3 percent of adult residents and workers in the area on the morning of the attack and soon afterward have developed asthma, twice the rate of newly diagnosed asthma in the general population for the same period. Asthma was more prevalent among adult residents who did not leave the area on 9/11 or who returned home within two days — nearly 4 percent — and less prevalent, at 2 percent, among those who were away until December. The study estimates that 3,800 to 12,600 adults exposed to the World Trade Center disaster site developed asthma, and that 35,000 to 70,000 adults developed post-traumatic stress syndrome. Women, members of minorities and people with low incomes have higher rates of both physical and mental problems, the study says. Lorna Thorpe, a deputy commissioner for epidemiology in the health department, said on Wednesday that the analysis provided high and low estimates to account for the possibility that people who were feeling sick or who had had more intense exposure to the disaster site might have been more motivated to sign up for the study. The numbers were based on telephone interviews. Officials say that the analysis provides the most complete picture yet of the health of 71,437 people, including rescue workers, area workers, passers-by and residents, who agreed to be tracked for up to 20 years after the attack. They represent 17.4 percent of the 410,000 people most intensely exposed to the disaster site. The registry is run by the city's health department and the federal Centers for Disease Control and Prevention. Also on Wednesday, the New York State Workers' Compensation Board announced that 31,543 workers and volunteers who said they performed rescue, recovery or cleanup work at the World Trade Center had filed notices preserving their right to file for workers' compensation claims arising from those efforts. These workers did not file formal workers' compensation claims, but preserved their right to do so if they concluded in the future that an illness stemmed from their work at ground zero. Normally workers have two years after suffering an injury to file for workers' compensation claims, but special provisions were made for those who worked at

ground zero. Under new legislation, Sept. 11, 2010, is the deadline for submitting notices preserving the right to file such claims. The workers' compensation board said that 12,234 cases had resulted from the 9/11 attack.

Αντιμετώπιση βιολογικών όπλων με τη βοήθεια των λάμα

Ο οργανισμός για την άμυνα του χρησιμοποιεί διάφορες ανοσοσφαιρίνες και κατά κύριο λόγο εκείνες της ομάδας G (IgG). Στην αρχή αυτή βασίζεται η λειτουργία των βιο-ανιχνευτών που έχουν κατασκευαστεί για την ανίχνευση επιθέσεων με βιολογικά όπλα πλην όμως είναι ιδιαίτερα ευαίσθητες κυρίως σε υψηλές θερμοκρασίες και είναι βραχύβιες. Οι ανοσοσφαιρίνες των λάμα (sdAbs) είναι ιδιαίτερα ανθεκτικές και αποτελούνται μόνο από βαρείες αλυσούς. Τα δημιουργούμενα αντισώματα μπορούν να συνδέονται με διάφορα αντιγόνα (των βιολογικών όπλων) μπορεί να αποβούν εξαιρετικά χρήσιμα για την ανίχνευση βιολογικών όπλων.

How can llamas help defeat biological weapons?

As most of us know, llamas are our friends. They're soft, good-natured and amusing to view, and their name has the distinction of being one of only 12 words in the English language starting with a double-L (according Webster's Third New International Dictionary, Unabridged). But little did we know that these fuzzy, camel-like creatures might save us all should the End come in the form of a biological attack. For many years, scientists have been developing devices called **biosensors** that can detect the first signs of biological warfare. These sensors are made up of antibodies, usually cloned human antibodies called Immunoglobulin G (IgG). IgGs are one of the tools that the human immune system uses to detect, target and destroy viruses like cholera and smallpox, which have been cited as potential biological weapons. Specific antibodies bind only to specific virus antigens, so different types of sensors detect different types of diseases. The idea is that when these antibody-based sensors start reacting -- that is, binding to particles in the air -- we instantly know that a biological threat is present and which biological threat it is. The problem with antibodies like IgG is that they're delicate. Antibodies are protein chains, and IgG is made up of both heavy and light chains. This means they are complex in structure, with complex binding methods, which makes them expensive and time-consuming to produce. The light protein chains in particular make them very susceptible to environmental changes. IgG has a short shelf life, requires refrigeration, and if it's exposed to high temperatures -- anything above about 150 F (~65 C) -- it completely breaks down, making the sensor useless. Enter the **llama antibody**. Llamas, camels and sharks all produce an antibody that is incredibly **sturdy**. It has no light protein chains, only heavy ones, making it not only hardy but also **simple**, with a tiny binding site (about one-tenth the size of the binding site on a human antibody). Scientists can create these **single-domain antibodies** (sdAbs) quickly, as researchers have done at the U.S. Naval Research Laboratory in Washington, DC. Using small amounts of blood drawn from llamas, scientists have built a library of more than a billion sdAbs engineered to



bind to different antigens. Because the binding site is so small, they're far easier and less expensive to engineer than other kinds of antibodies. And their simplicity makes them strong: They have a much longer shelf life than IgG, require no refrigeration and remain perfectly intact at temperatures up to 200 F (~90 C). Using these tough, simple antibodies, scientists could develop a library of sensors to detect every bio-weapon imaginable -- and then very quickly develop antibodies that bind to new threats as they come up. Placed in portable containers, soldiers could carry these llama-based biosensors into the field to detect a bio-threat as soon as it becomes viable. Temperature and time constraints would no longer prevent the extensive use of biosensors in rugged terrain.

Τρομοκρατικές επιθέσεις που αποσοβήθηκαν

Κατάλογος τρομοκρατικών επιθέσεων που αποσοβήθηκαν κατά την επταετία που πέρασε από την επίθεση της 11^{ης} Σεπτεμβρίου 2001.

Seven Years Since: The List of Thwarted Terror Attacks

As is our tradition on the anniversary of the September 11, 2001 terror attack by al-Qaeda against the United States, we'll observe the notable occasions for which additional terror attacks have been prevented or whose blows have been blunted from achieving their aims against their targets in the past two years. Here's our list of thwarted attacks, presented in reverse chronological order:

[August 18, 2008 Khost, Afghanistan](#)

Two attackers attempted to conduct a suicide bombing of the U.S. base in Khost, Afghanistan on the country's Independence Day, which marks the anniversary of Afghanistan's independence from Britain in 1919. The first attacker detonated his explosive-laden vehicle outside the gates of the facility, killing 12 non-U.S. personnel. U.S. forces repelled the second attacker who fled the scene.

[July 9, 2008 Istanbul American Consulate Attack](#)

Four gunmen attempted to attack the U.S. consulate in Istanbul, Turkey but were thwarted by Turkish police. The BBC provides an eyewitness' description of the attack:

A witness to the attack, Yavuz Erkut Yuksel, said the attackers had initially emerged from a car and surprised the police officers guarding the building.

"One of them approached a policeman while hiding his gun and shot him in the head," he told CNN-Turk.

Governor Guler said: "There is no doubt this was a terrorist attack."

Three policemen were murdered in thwarting the attack. Three of the four assailants were killed, with the fourth escaping.

[December 24, 2007 Istanbul Subway Bombing Attempt](#)

The US State Department provides the following details of this terror attempt in its section detailing travel to Turkey:

In December 2007, a suspected male PKK member carrying three kilograms of A-4 explosive material in a backpack was arrested by Turkish National Police in Istanbul's Mecidiyekoy Square; the intended target was the Mecidiyekoy subway station.

[October 2, 2007 US Austrian Embassy Bomb Plot](#)

Two Bosnian men were arrested in Austria following a failed attempt to bomb the U.S. Embassy in Vienna. The AP reports:

Investigators said both men were citizens of Bosnia-Herzegovina who lived in Tulln and knew each other. The suspects' last names were not released, in line with Austrian privacy laws.

Asim C. was arrested Monday after his bag — packed with the explosives and several handfuls of nails and screws apparently intended to serve as shrapnel — set off a metal detector at the entrance to the heavily fortified embassy, which is guarded by U.S. Marines.

He fled on foot, but was captured a short distance away after tossing the backpack into the street. It did not explode, and no one was injured.

[Ankara Car Bomb September 11, 2007](#)

From the BBC's report:

Police in Turkey's capital, Ankara, have prevented a large bomb from exploding, the city's governor said.

Sniffer dogs detected a van stuffed with explosives in the centre of the city, preventing a "possible catastrophe", Governor Kemal Onal said. ...

Ankara's governor said a large quantity of explosives had been left in the van which had a false licence plate.

It was parked in a multi-storey garage in Kurtulus, a densely populated area of central Ankara.

[German Terror Plot September 4, 2007](#)

Germany announced the arrest of three men, all members of the Islamic Jihad Union, a Uzbekistan-based group with ties to al-Qaeda, who had amassed more than 700 kilograms of hydrogen peroxide (the same chemical used by suicide bombers to kill 56 people and injuring over 700 in London on July 7, 2005), who appeared to be planning massive attacks against locations frequented by U.S. citizens in Germany. Here's more information about the thwarted terror plotters:

The three suspects were all unemployed. Two were German converts to Islam, who had attended Pakistani camps run by Islamic Jihad Union.

Born in Munich, Fritz Gelowicz, 28, moved to Ulm with his parents and brother at the age of 5. He converted to Islam between the ages of 15-18 while attending the Multi-Kultur-Haus in Ulm with friend Tolga Dürbin, and used the name Abdullah. He was married in January 2007, to a German-Turkish woman. He was attending college in Ulm, studying to be an engineer. He was raised in an upper middle class family where his father was a solar heating salesman and his mother was a nurse. His parents separated when he was 15, and Gelowicz remained with his father. He was considered the leader of the plot.

Daniel Martin Schneider, 21, lived in Saarbruecken, where he had disputes with his neighbours over his loud prayers. He dropped out of the twelfth grade after only a few weeks. He converted to Islam at the age of 19, and spent time studying the Koran and Arabic in Egypt.

Adem Yilmaz, varyingly reported as 28 or 29, was born in Turkey. He came to Germany with his family in 1993. He has two younger sisters and a younger brother. His family lives in Germany's Hessian area. Seven lesser figures are also being hunted. Only five are known by name. The other two have been identified by aliases. Four of the ten suspects (including Yilmaz) have been identified as Turkish.

August 6, 2007 Goose Creek Incident

The Goose Creek Incident of 6 August 2007 joins the list of thwarted terrorist activity with the detailing of the explosives found in the car of two University of South Florida engineering students, Kuwaiti national Ahmed Adba Sherf Mohamed and Egyptian national Yousef Samir Megahed, who were stopped near Naval Weapons Station Charleston in South Carolina. TampaBay.com describes what was found:

Those items included: three pieces of PVC piping that were filled with a mixture of potassium nitrate, Karo syrup and kitty litter. Federal authorities called it a potassium nitrate low-grade explosive mixture, and said they also found more of that mixture in a separate container in the trunk.

Additionally they found an electric drill, a box of .22 caliber bullets, a five gallon container filled with gasoline and 23-feet of safety fuse.

FBI analysts said the explosive mixture met the definition for a low-grade explosive. Hoffer said many of the items had been purchased locally, in and around Tampa, by Mohamed.

They also found a laptop computer in the men's car. On the laptop they found a 12-minute video on which a man shows how to turn a radio-controlled toy car into a remote controlled detonator, Hoffer said.

Mohamed admits that it is him in the video, although you cannot see his face, Hoffer said.

In the video, Mohamed said that he was showing how to make such a device "to save one who wants to be a martyr for another battle," Hoffer said.

June 29, 2007 London Car Bombs

Two car bombs were discovered and disabled before they could be detonated. Here's what Wikipedia had to say about the suspects, who are still at large:

U.S. officials told NBC News that three men have been identified and are believed to be from Birmingham. Furthermore, the network reported that one of the three men could be an associate of Dhiren Barot, an Indian convert to Islam who was sentenced to life in prison last year for plotting to fill limousines with explosives similar to those found in these incidents and park them in garages beneath hotels and office complexes. Bharot, whom police described as a high-level al-Qaeda operative, also planned to attack five financial landmarks in the United States: the New York Stock Exchange and the Citigroup Tower in New York City; the International Monetary Fund and the World Bank, both in Washington, D.C.; and the Prudential Building in Newark, New Jersey.

June 30, 2007 Glasgow International Airport Attack

A Jeep Cherokee loaded with propane canisters was driven into a set of glass doors at Glasgow International Airport in Scotland and set on fire by its occupants on June 30, 2007. Wikipedia describes how the terrorists attack was blunted:

Security bollards outside the entrance stopped the car from entering the terminal, although the doors were damaged. The car's driver was severely burnt in the ensuing fire and five members of the public were also injured, none seriously. Some injuries were sustained by those assisting the police in detaining the occupants.

Both of the car occupants were apprehended at the scene, and all those injured were taken to the Royal Alexandra Hospital in nearby Paisley. Within three days, Scotland Yard had confirmed that eight people had been taken into custody in connection with this incident and that in London.

Police identified the two men as Bilal Abdullah, a British-born, Muslim doctor of Iraqi descent working at the Royal Alexandra Hospital, and Kafeel Ahmed, also known as Khalid Ahmed, the driver, who was treated for severe burns at the same hospital. A suicide note indicated that the two had intended to die in the attack. Ahmed did eventually die of his injuries, on 2 August.

[Eight Terror Suspects Arrested in Copenhagen September 4, 2007](#)

Here's Wikipedia's summary of the arrests:

Eight men with alleged links to leading senior Al Qaeda terrorists were arrested, the country's intelligence service said, claiming to have thwarted a bomb plot. The arrests occurred without incident in raids on eleven locations in and around Copenhagen. The suspects are of Afghan, Pakistani, Somali and Turkish origin.

[JFK International Airport Terror Plot Disrupted, June 3, 2007](#)

Three men who had been plotting to blow up JFK's fuel supply pipelines to cause massive casualties in the Queens borough of New York City were arrested after their cell was infiltrated by a police informant. Here's a description of the suspects from Wikipedia:

The suspects are Russell Defreitas, a United States citizen and native of Guyana who was the alleged ringleader and worked for a time at the airport; Abdul Kadir, a citizen of Guyana and former member of the Guyanaese National Assembly; Kareem Ibrahim, a citizen of Trinidad and Tobago; and Abdel Nur, a citizen of Guyana and uncle of former world welterweight boxing champion Andrew "Six Heads" Lewis. Defreitas was a former employee of JFK and was arrested in Brooklyn, New York. Kadir and Ibrahim were arrested in Trinidad on June 3, 2007. Nur surrendered to police two days later in Trinidad. On June 29 the four men were indicted on charges with conspiring to "cause death, serious bodily injury and extensive destruction" at the airport. On August 6 a judge ordered three of the alleged plotters extradited to the United States.

In a recorded conversation, Russell Defreitas allegedly told an informant that "Anytime you hit Kennedy, it is the most hurtful thing to the United States. To hit John F. Kennedy, wow.... They love JFK -- he's like the man. If you hit that, the whole country will be in mourning. It's like you can kill the man twice." Defreitas had allegedly seen arms and missiles being shipped to Israel which he felt would be used to harm Muslims.

[May 6, 2007 Six Arrested in Plot to Attack New Jersey's Fort Dix](#)

Six men were arrested by the FBI in connection with a plot to attack and kill U.S. soldiers in Fort Dix, New Jersey. Apparently "inspired" by videos produced by terrorist organizations, the plot appears to have solely originated in the United States. Here's a summarized background for the six men:

Dritan Duka (age 28), Shain Duka (26) and Eljvir Duka (23), brothers (ethnic Albanians) from ex-Yugoslavia. The Duka family entered the United States illegally through Mexico in October 1984. In 1989, father Ferik Duka made an

application for asylum with the Immigration and Naturalization Service and acknowledged the family's illegal entry into the country. From 1996 to 2006, Cherry Hill police charged Dritan Duka and Shain Duka with assorted disorderly persons offenses, including marijuana possession, improper behavior, prowling, disturbing the peace, and obstructing the administration of law. They were fined between \$20 and \$830 on various occasions and sent home, according to court records. The three brothers were also issued about 50 traffic citations between 1997 and 2006 - more than 20 by Cherry Hill police - for speeding, driving without licenses, driving while on the suspended list, failure to appear in court, and other charges.

Mohamad Ibrahim Shnewer (22), Dritan Duka's brother-in-law, a Palestinian cab driver from Jordan, who became a naturalized citizen.

Serdar Tartar, born in Turkey, worked at his father's pizzeria.

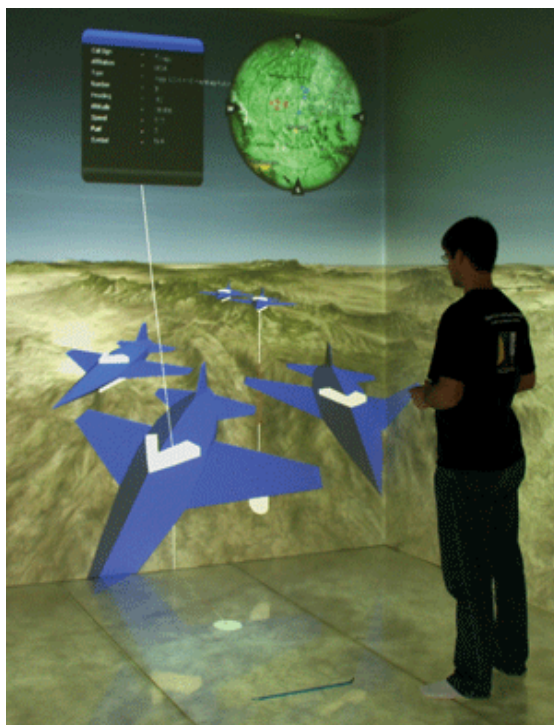
Agron Abdullahu, ethnic Albanian, said to have provided weaponry instruction to the group; and worked at a ShopRite supermarket in Buena Vista Township, New Jersey.

We'll note that we have omitted a series of several smaller incidents for which not enough details are available to fully determine if they fall into the category of terrorist acts, as opposed to unrelated criminal activities. We may update this page as more information about these incidents become available.

Πετώντας πραγματικά UAVs από έναν εικονικό κόσμο

Έχοντας γνώση των δυσκολιών που αντιμετωπίζουν οι επίγειοι χειριστές των UAVs, μια ομάδα ερευνητών στο Iowa State University (Virtual Reality Applications Center), δημιούργησε λογισμικό που επιτρέπει την πτήση των μη επανδρωμένων αεροσκαφών με τη βοήθεια εικονικής απεικόνισης της περιοχής των επιχειρήσεων, γεγονός που επιτρέπει τον ευχερέστερο χειρισμό τους.

Flying Real UAVs From a Virtual World



By now, we all have a mental image of how unmanned aerial vehicles are flown. Some young military service member sits closeted in a small, dark room with lots of camera and data feeds displayed on glowing screens and guides the Predator or other bird with a flight stick from thousands of miles away. But that's not quite right and omits perhaps the most important part of the experience: the intense, continuous attention to a sometimes unchanging scene over many hours and the degree of concentration and patience and visual acuity needed to "see" whatever it is the UAV is looking for and/or at. So much information and attention are involved, in fact, that it takes not one, but two pilots to operate each drone. Robert Kaplan captured some of the grim reality in a terrific

September 2006 story in *The Atlantic*, "Hunting the Taliban in Las Vegas." Here's a look from his visit to a camouflaged trailer at Nellis Air Force Base in Nevada where two Air Force pilots were flying a Predator over Afghanistan: "There were grim, colorless computer bays in freezing, pulsing darkness—a three-dimensional world of flashing digits from light-emitting diodes. Like sub drivers, Pred pilots fly blind, using only the visual depiction of their location on a map and math—numerical readouts indicating latitude, longitude, height, wind speeds, ground elevation, nearby planes, and so forth. The camera in the rotating ball focuses only on the object under surveillance. The crew's situational awareness is restricted to the enemy on the ground. Much of the time during a stakeout, the Pred flies a preprogrammed hexagon, racetrack, bow tie, or some other circular-type holding pattern." Soon, this scene will change. The trailers likely will be abandoned, probably in favor of one or more 10-foot-by-10-foot-10-foot rooms with projectors illuminating all four walls, the ceiling and floor. Pilots likely will wear special glasses to render the projected images into a 3D immersive virtual environment. And they will control not one but several, possibly as many as eight, UAVs at the same time. An Iowa State University team is developing the virtual environment in hopes of reducing the mental fatigue pilots suffer while monitoring a tangle of information on a welter of screens. Inside the room, pilots will see their UAVs, the airspace around them and the terrain below, as well as feeds from instruments, cameras, radar and weapons systems. The 3-D audiovisual stereoscopic facility lives at ISU, where lead researcher on the project, James Oliver, heads the Virtual Reality Applications Center. The C6, as the wrap-around virtual display is known, was refurbished over the last several years thanks to Air Force funding. But it's used by many other federal agencies, as well. The National Science Foundation is sponsoring Meta !Blast, a research application to let people walk around in plant cells to see what happens when researchers make molecular changes. The National Guard wants to use C6 to let soldiers do battlefield walk-throughs before missions or deployments. A combined Air Force and Iowa National Guard project, Virtual Battlespace, pulls together data about about land- and air-based forces and targets and sensor feeds and permits views from multiple perspectives. VRAC is working on a multi-touch table to serve as a controller for UAVs in the 3D space. C6 has myriad commercial applications as well, but what lights up my imagination is its potential for helping people visualize data and the effect of human interventions. Given a complete enough simulation of the real world, walking through it should let users see relationships and consequences the might not otherwise imagine in urban planning, medicine, ecology, and who knows what else.

Απογείωση αυτοδύναμου ελικοπτερου

Ένα αυτοδύναμο ελικοπτερο μήκους λίγο μεγαλύτερου του μέτρου, πέταξε μόνο του και εκτέλεσε μανούβρες, πάνω από το Stanford University. Το αξίας 4.000 δολαρίων ελικοπτερο διαθέτει σύστημα τεχνητής νοημοσύνης και «έμαθε» να πετάει «παρακολουθώντας» την πτήση ελικοπτερου με κανονικό πιλότο. Μελλοντικές εφαρμογές της εν λόγω κατασκευής η πτήση πάνω από πυρκαγιές και πεδία επιχειρήσεων.

Self-flying helicopter takes off

A four-foot-long helicopter flew itself over the Stanford University campus on Monday in a test of artificial intelligence that researchers say could be used to scout wildfires or on military missions. The autonomous helicopter performed flips, rolls, pirouettes, stall-turns, knife-edges, and an inverted hover over a field. The helicopter

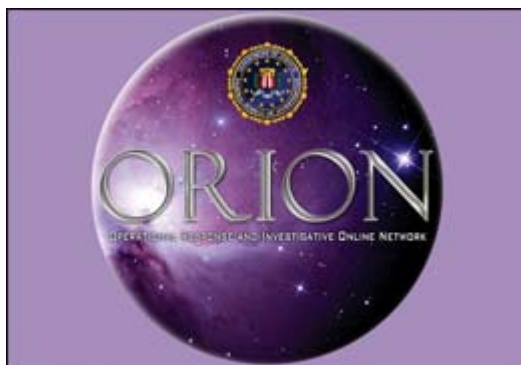
is equipped with an artificial intelligence system developed by computer scientists at Stanford and taught itself to fly by watching the aerobatics of a radio-controlled helicopter flown by a human. "These helicopters can fly manoeuvres at the edge of what a helicopter is capable of," said Adam Coates, a PhD student who worked on the project. The helicopters, which communicate with a ground-based computer that guide it, are still being developed. PhD student Pieter Abbeel said the research group has been contacted by a number of companies interested in surveillance and mapping applications, while scientists saw the mini-helicopters investigating wildfires and looking for land mines. Each helicopter costs approximately \$4,000 and is outfitted with an accelerometer, gyroscope and a magnetometer to determine its orientation and acceleration, and a GPS or two ground-based cameras to determine its location.

Νέα τεχνολογία από το FBI

Το FBI διαθέτει το σύστημα ORION (Operational Response and Investigative Online Network) το οποίο διασυνδέει όλους τους εμπλεκόμενους σε μια επιχείρηση καθιστώντας τους κοινωνούς των ίδιων πληροφοριών και συμπερασμάτων. Παράλληλα διαθέτει αυτοματοποιημένες λειτουργίες τεχνητής νοημοσύνης που επιτρέπει τη διανομή των εισερχόμενων πληροφοριών στους κατάλληλους αποδέκτες ενώ είναι διασυνδεδεμένο με υφιστάμενες βάσεις δεδομένων όπως το LEO (Law Enforcement Online network).

New FBI Technology is Ready to Help

On the morning of October 3, 2002, four people were murdered outside the nation's capital. It was the start of a shooting spree in the region that resulted in 10 deaths and sparked a massive hunt for the killers. The so-called Beltway snipers were caught three weeks later, but the challenges posed by the case—multiple shootings in different locations, several investigative command centers in different jurisdictions, tens of thousands of phone and e-mail tips streaming in (so many that at one point



they had to be collected in boxes and driven to the primary command center every four hours), and difficulty sharing information with our law enforcement partners at lightning speed—underscored the fact that our crisis management software systems needed an upgrade, especially in the post-9/11 era. **Now we have such a tool, a next-generation system built from the ground up by our investigators and technology experts.**

We call it ORION—the **O**perational **R**esponse and **I**nvestigative **O**nline **N**etwork. ORION gives the FBI and its partners a real-time, online network to quickly and effectively coordinate efforts in crisis situations, no matter how many law enforcement personnel are involved...where they might be located...or how big the case. So if an investigation expands from New York to Chicago to Miami, agents in every city could log into ORION and have instant access to every scrap of information on the case, says Supervisory Special Agent Mike McCoy, an investigator on the sniper case who helped design the system. **ORION also has new automated features.** When a phone tip is entered into the system, ORION can

actively process that raw data and “push” leads and intelligence to investigators. For example, if a phone tip is received in the L.A. office about a person in Boston who could be a suspect in a nationwide terrorism case, that information is entered into ORION, reviewed in L.A., and instantly routed electronically to Boston agents for action. ORION also performs automatic searching of new information entered into the system to locate potentially matching persons, locations, vehicles, events, and organizations. These potential matches are shown to ORION users and help investigators “connect the dots” in a case where many FBI offices or law enforcement agencies are involved. **In addition to managing crisis events, ORION is designed for use at large, planned events such as the Super Bowl.** In “watch mode,” ORION is capable of tracking potential threat information in its files such as names and vehicle identifications. ORION is a classified system for Bureau use, but we’ve also designed an unclassified version for our law enforcement partners available through our secure Law Enforcement Online (LEO) network, so we can exchange information on FBI cases virtually instantaneously. State and local agencies can access ORION capabilities for their own critical cases. ORION is managed by our Critical Incident Response Group, or CIRG, which responds at a moment’s notice to terrorist activities, hostage takings, child abductions, natural disasters and airplane crashes, and other high-risk crimes. Since becoming operational, ORION has supported a number of investigations, including domestic terrorism and kidnapping cases. And it was used at both national political conventions this summer. Already, McCoy says, ORION is getting plenty of “real-world experience.” And making a difference.

Χημικές βόμβες λίγα μέτρα από κατοικίες

Τριάντα δύο χημικές βόμβες φωσγενίου βάρους 113 κιλών ήταν θαμμένες για πάνω από 60 χρόνια (από τον 2^ο ΠΠ) σε απόσταση μικρότερη των 100 μέτρων από κατοικίες στην πόλη Marrangaroo, κοντά στο Lithgow. Ανακαλύφθηκαν κατά τα διάρκεια οικοδομικών εργασιών και εξουδετερώθηκαν από ειδικό συνεργείο πυροτεχνουργών.

Chemical bombs sit metres from Lithgow families for 60 years

Imported during World War II as part of a top-secret program, dozens of 250-pound (113kg) bombs containing deadly phosgene were buried less than 100m from private



properties at Marrangaroo, near Lithgow. The bombs were only re-discovered after 84-year-old retired chemical weapons armourer Geoff Burn blew the whistle, identifying the site on an aerial map. "We dug this big trench to hold about 32 bombs, so it was pretty extensive, and just buried them in there," Mr Burn said. "They didn't tell us why they were being buried, but I am

certain they were still full of phosgene gas." The Department of Defence confirmed

the claim, recovering several empty bombs before engaging specialist contractors capable of safely removing the remaining weapons. Nearby residents were shocked when Defence officials told them the deadly chemicals had been stored on the site for over 60 years. Marnell Banning, a mother of four who has lived near the site for eight years, said the find was a real concern. "I am glad they are finally doing something about it but we would like them to fully investigate the site to make sure there are no more bombs there," she said.

Προσπάθειες τιμωρίας του Ιράν

Μέχρι σήμερα τα Ηνωμένα Έθνη, οι Ηνωμένες Πολιτείες και η Ευρωπαϊκή Ένωση έχουν εγκρίνει οικονομικές κυρώσεις σε 153 άτομα και οργανισμούς στο Ιράν που με διάφορους τρόπους συνδέονται με το πυρηνικό πρόγραμμα του.

Tracking the world's efforts to punish Iranian proliferators

As of this month, the United Nations, the United States and the European Union have hit a total of 153 individuals and organizations in Iran with financial penalties. This punishment, meted out in stages since 2005, has been the world's main response to



Iran's efforts to develop long-range missiles and the ability to arm them with nuclear warheads. The Iranian entities punished are all thought to be linked to these efforts. The punishment has largely meant freezing the assets of the entities and prohibiting virtually all transactions with them. See the table below for a list of the entities targeted so far. The U.S., the U.N. and the E.U. have not all chosen the same targets. The U.N. Security Council has approved resolutions requiring member states to freeze the assets of 75 entities; the United States has frozen the assets of 85 by executive order (**); and the

European Union has implemented financial sanctions against 115, including all 75 designated by the U.N. The United States, with the broadest network of general restrictions prohibiting business with Iran, has not shied away from designating major Iranian outfits like the Islamic Revolutionary Guard Corps (IRGC), the Ministry of Defense Armed Forces Logistics (MODAFL) and the Islamic Republic of Iran Shipping Lines, Iran's national maritime carrier. Yet U.S. action against Iranian individuals has lagged. The Security Council, impeded by foot-draggers like Russia and China, has preferred to target only some IRGC and MODAFL officials, not the entire organizations. Also, disagreement among European Union member states has slowed the E.U. process of targeting state-run Iranian banks – a move championed by the United States. The table below reveals who has been sanctioned by whom, and why. A yellow-filled box indicates that no financial sanctions have yet been imposed; a date indicates when the sanction occurred. Each entity's name is linked to a description of its activities (from the Iran Watch Suspect Entities database) and each date is linked to the authority for the designation (from the Iran Watch Library).

NAME	DATE OF SANCTIONS		
	U.N. Security Council	European Union	United States
Abzar Boresh Kaveh Co.	3-Mar-2008	12-Mar-2008	
Aerospace Industries Organization (AIO)		24-Apr-2007	28-Jun-2005
Ammunition and Metallurgy Industries Group (AMIG)	24-Mar-2007	21-Apr-2007	8-Jul-2008
Arian Bank			25-Oct-2007
Armament Industries Group		24-Apr-2007	17-Sept-2008
Armed Forces Geographical Organization		24-Jun-2008	
Asia Marine Network Pte. Ltd.			10-Sept-2008
Atomic Energy Organization of Iran (AEOL)	23-Dec-2006	20-Apr-2007	28-Jun-2005
Bank Kargoshaee			25-Oct-2007
Bank Mellat			25-Oct-2007
Bank Melli Iran, its branches and subsidiaries		24-Jun-2008	25-Oct-2007
Bank Melli Iran Zao		24-Jun-2008	25-Oct-2007
Bank Sepah	24-Mar-2007	21-Apr-2007	9-Jan-2007
Bank Sepah International	24-Mar-2007	21-Apr-2007	9-Jan-2007
Barzagani Tejarat Tavanmad Saccal companies	3-Mar-2008	12-Mar-2008	
CISCO Shipping Co. Ltd.			10-Sept-2008
Cruise Missile Industry Group	24-Mar-2007	21-Apr-2007	
Defense Industries Organization (DIO)	23-Dec-2006	20-Apr-2007	30-Mar-2007
Defense Technology and Science Research Center (DTSRC)		24-Apr-2007	
Electro Sanam Company	3-Mar-2008	12-Mar-2008	
Esfahan Nuclear Fuel Research and Production Center and Esfahan Nuclear Technology Center	24-Mar-2007	21-Apr-2007	12-Aug-2008

Ettehad Technical Group	3-Mar-2008	12-Mar-2008	
Fajr Industrial Group (***)	23-Dec-2006	20-Apr-2007	8-Jun-2007
Farasakht Industries			17-Sept-2008
Farayand Technique	23-Dec-2006	20-Apr-2007	8-Jun-2007
Future Bank B.S.C.			12-Mar-2008
Gharargahe Sazandegi Ghaem			25-Oct-2007
Ghorb-e Karbala			25-Oct-2007
Ghorb Nooh			25-Oct-2007
Hara Company			25-Oct-2007
Industrial Factories of Precision (IFP) Machinery (****)	3-Mar-2008	12-Mar-2008	8-Jun-2007
Iran Aircraft Manufacturing Industries			17-Sept-2008
Iran Communications Industries			17 Sept-2008
Iran Electronics Industries		24-Jun-2008	17-Sept-2008
Iran o Hind Shipping Company			10-Sept-2008
Iran o Misr Shipping Company			10-Sept-2008
Irinvestship Ltd.			10-Sept-2008
Irital Shipping SRL Company			10-Sept-2008
IRISL Benelux NV			10-Sept-2008
IRISL China Shipping Co., Ltd.			10-Sept-2008
IRISL Europe Gmbh			10-Sept-2008
IRISL (Malta) Limited			10-Sept-2008
IRISL Marine Services & Engineering Company			10-Sept-2008
IRISL Multimodal Transport Co.			10-Sept-2008
IRISL (UK) Ltd.			10-Sept-2008
Islamic Republic of Iran Shipping Lines (IRISL)			10-Sept-2008
Islamic Revolutionary Guard Corps (IRGC)			25-Oct-2007
IRGC Air Force		24-Jun-2008	
Jabber Ibn Hayan	3-Mar-2008	24-Apr-2007	12-Aug-2008
Joza Industrial Co.	3-Mar-2008	12-Mar-2008	12-Aug-2008

Kalaye Electric Company	23-Dec-2006	20-Apr-2007	16-Feb-2007
Karaj Nuclear Research Center	24-Mar-2007	21-Apr-2007	12-Aug-2008
Kavoshyar Company	24-Mar-2007	21-Apr-2007	16-Feb-2007
Khatem-ol Anbiya Construction Organization		24-Jun-2008	25-Oct-2007
Khazar Sea Shipping Lines			10-Sept-2008
Khorasan Metallurgy Industries	3-Mar-2008	12-Mar-2008	
Malek Ashtar University		24-Jun-2008	
Marine Industries Group		24-Apr-2007	
Mechanical Industry		24-Jun-2008	
Mellat Bank SB CJSC			25-Oct-2007
Melli Bank PLC		24-Jun-2008	25-Oct-2007
Mesbah Energy Company	23-Dec-2006	20-Apr-2007	4-Jan-2006
Ministry of Defense Armed Forces Logistics (MODAFL)		24-Jun-2008	25-Oct-2007
Ministry of Defense Logistics Export (MODLEX)		24-Jun-2008	
Mizan Machine Manufacturing Group		24-Jun-2008	8-Jun-2007
Niru Battery Manufacturing Company	3-Mar-2008	12-Mar-2008	
Novin Energy Company	24-Mar-2007	21-Apr-2007	4-Jan-2006
Nuclear Fuel Production and Procurement Company (NFPC)		24-Apr-2007	
Oasis Freight Agencies			10-Sept-2008
Omran Sahel			25-Oct-2007
Oriental Oil Kish			25-Oct-2007
Parchin Chemical Industries	24-Mar-2007	21-Apr-2007	8-Jul-2008
Pars Aviation Services Company	24-Mar-2007	21-Apr-2007	
Pars Trash Company	23-Dec-2006	20-Apr-2007	8-Jun-2007
Persia International Bank PLC			25-Oct-2007
Pioneer Energy Industries Development Company	3-Mar-2008	12-Mar-2008	16-Feb-2007
Qods Aeronautics Industries	24-Mar-2007	21-Apr-2007	
Safety Equipment Procurement	3-Mar-2008	12-Mar-2008	12-Aug-2008

(SEP)			
Sahel Consultant Engineers			25-Oct-2007
Sanam Industrial Group	24-Mar-2007	21-Apr-2007	18-Jul-2006
Sepasad Engineering Company			25-Oct-2007
Shahid Bagheri Industrial Group (SBIG)	23-Dec-2006	20-Apr-2007	28-Jun-2005
Shahid Hemmat Industrial Group (SHIG)	23-Dec-2006	20-Apr-2007	28-Jun-2005
Shahid Sattari Industries			8-Jul-2008
Shipping Computer Services Company			10-Sept-2008
Shiraz Electronics Industries			17-Sept-2008
Sho'a' Aviation	24-Mar-2007	21-Apr-2007	
South Shipping Line Iran			10-Sept-2008
Special Industries Group		24-Apr-2007	
State Purchasing Organization (SPO)		24-Jun-2008	
TAMAS Company	3-Mar-2008	24-Apr-2007	8-Jul-2008
Valfajr 8th Shipping Line Co SSK			10-Sept-2008
Ya Mahdi Industries Group (YMA)	24-Mar-2007	21-Apr-2007	18-Jul-2006
7th of Tir	23-Dec-2006	20-Apr-2007	8-Jul-2008
93 organizations sanctioned (*)	36	55	74
Persons	U.N. Security Council	European Union	United States
Fereidoun Abbasi-Davani	24-Mar-2007	21-Apr-2007	
Dawood Agha-Jani	23-Dec-2006	20-Apr-2007	8-Jul-2008
Reza Aghazadeh		24-Apr-2007	
Vice Admiral Ali Akbar Ahmadian	24-Mar-2007	21-Apr-2007	25-Oct-2007
Amir Moayyed Alai	3-Mar-2008	24-Apr-2007	
Behman Asgarpour	23-Dec-2006	20-Apr-2007	

Mohammad Fedai Ashiani	3-Mar-2008	24-Apr-2007	
Abbas Rezaee Ashtiani	3-Mar-2008	12-Mar-2008	
Bahmanyar Morteza Bahmanyar	23-Dec-2006	20-Apr-2007	25-Oct-2007
Haleh Bakhtiar	3-Mar-2008	24-Apr-2007	
Morteza Behzad	3-Mar-2008	24-Apr-2007	
IRGC Brigadier-General Javad Darvish-Vand		24-Jun-2008	
Ahmad Vahid Dastjerdi	23-Dec-2006	20-Apr-2007	25-Oct-2007
Ahmad Derakhshandeh	24-Mar-2007	21-Apr-2007	9-Jan-2007
Dr. Mohammad Eslami	3-Mar-2008	12-Mar-2008	
Reza-Gholi Esmaeli	23-Dec-2006	20-Apr-2007	25-Oct-2007
Mohsen Fakhrizadeh-Mahabadi	24-Mar-2007	21-Apr-2007	8-Jul-2008
Dr. Hoseyn Faqihian		24-Apr-2007	
IRGC Brigadier-General Seyyed Mahdi Farahi		24-Jun-2008	
Mojtaba Haeri		24-Jun-2008	
Brigadier-General Mohammad Hejazi	24-Mar-2007	21-Apr-2007	25-Oct-2007
Mohsen Hojati	24-Mar-2007	21-Apr-2007	8-Jul-2008
IRGC Brigadier-General Ali Hoseynitash		24-Jun-2008	
Seyyed Hussein Hosseini	3-Mar-2008	24-Apr-2007	
Mohammad Ali Jafari		24-Jun-2008	
Mahmood Jannatian		24-Jun-2008	
M. Javad Karimi Sabet	3-Mar-2008	24-Apr-2007	
Mehrdada Akhlaghi Ketabachi	24-Mar-2007	21-Apr-2007	8-Jul-2008
Said Esmail Khalilipour		24-Apr-2007	
Ali Reza Khanchi		24-Apr-2007	
Ali Hajinia Leilabadi	23-Dec-2006	20-Apr-2007	15-Jun-2007
Ebrahim Mahmudzadeh		24-Jun-2008	
Naser Maleki	24-Mar-2007	21-Apr-2007	8-Jul-2008
Hamid-Reza Mohajerani	3-Mar-2008	24-Apr-2007	
Jafar Mohammadi	23-Dec-2006	20-Apr-2007	
Brigadier-General Beik		24-Jun-2008	

Mohammadlu			
Ehsan Monajemi	23-Dec-2006	20-Apr-2007	
Anis Naccache		24-Jun-2008	
Brigadier General Mohammad Naderi		24-Jun-2008	
IRGC Brigadier-General Mostafa Mohammad Najjar		24-Jun-2008	
Brigadier-General Mohammad Reza Naqdi	3-Mar-2008	12-Mar-2008	
Houshang Nobari	3-Mar-2008	24-Apr-2007	
Lt Gen Mohammad Mehdi Nejad Nouri	23-Dec-2006	20-Apr-2007	
Mohammad Qannadi	23-Dec-2006	20-Apr-2007	15-Jun-2007
Amir Rahimi	24-Mar-2007	21-Apr-2007	
Dr. Javad Rahiqi		24-Apr-2007	
Abbas Rashidi	3-Mar-2008	24-Apr-2007	
Brigadier-General Morteza Rezaie	24-Mar-2007	21-Apr-2007	25-Oct-2007
Rear Admiral Morteza Safari	24-Mar-2007	21-Apr-2007	
Maj Gen Yahya Rahim Safavi	23-Dec-2006	20-Apr-2007	8-Jul-2008
Seyed Jaber Safdari	24-Mar-2007	21-Apr-2007	
Gen Hosein Salimi	23-Dec-2006	20-Apr-2007	25-Oct-2007
Rear Admiral Mohammad Shafi'i Rudsari		24-Jun-2008	
IRGC Brigadier-General Ali Shamshiri		24-Jun-2008	
Abdollah Solat Sana		24-Apr-2007	
Brigadier General Qasem Soleimani	24-Mar-2007	21-Apr-2007	25-Oct-2007
Ghasem Soleymani	3-Mar-2008	12-Mar-2008	
IRGC Brigadier-General Ahmad Vahidi		24-Jun-2008	
Brigadier-General Mohammad Reza Zahedi	24-Mar-2007	21-Apr-2007	
General Zolqadr	24-Mar-2007	21-Apr-2007	

60 persons sanctioned	40	60	17
	U.N. Security Council	European Union	United States
Combined, 153 organizations and persons sanctioned	76	115	91
NOTES:			
(*) One entity, Fajr Industrial Group, appears to have been designated twice by the U.N. Security Council and the European Union, under different names.			
(**) The United States has designated a number of additional Iranian entities for their proliferation activities under other authorities, which impose more limited trade sanctions.			
(***) Fajr Industrial Group was also designated under the alias Industrial Factories of Precision (IFP) Machinery, in Annex III to U.N. Security Council resolution 1803.			
(****) Industrial Factories of Precision (IFP) Machinery is an alias of the Fajr Industrial Group, which was designated in the Annex to U.N. Security Council resolution 1737.			

Πενήντα πέντε τάσεις που καθορίζουν το μέλλον της τρομοκρατίας

Ο μελλοντολόγος Marvin J. Cetron που είχε προβλέψει την επίθεση της 11^{ης} Σεπτεμβρίου 2001, περιμένει μεγάλη τρομοκρατική επίθεση κατά των Ηνωμένων Πολιτειών, πιθανόν με όπλα μαζικής καταστροφής, εντός των επόμενων 4-5 ετών.

55 Trends Now Shaping the Future of Terrorism

A major terrorist attack on the United States, probably featuring a weapon of mass destruction, is inevitable during the next four to five years, says Marvin J. Cetron, the futurist who predicted 9/11 with alarming insight.

During an exclusive interview with Newsmax, Cetron said the attack could come in as little as two-and-a-half to three years. Cetron, who startled and embarrassed the intelligence community with his study "Terror 2000," has let the genie out of the bottle again with his latest report, "55 Trends Now Shaping the Future of Terrorism." When Newsmax asked how the expert and founder of Forecasting International Inc. (FI) can be so sure of the impending disasters, he said he needed to guard his classified sources. "Let me put it this way: We have so many good sources of signals intelligence and human intelligence that lets us know what doesn't show up in the press," he said. FI, which produced "55 Trends" has conducted an ongoing study of the forces changing our world for almost half a century in support of clients ranging from General Motors to the YMCA, and from the Central Intelligence Agency to the White House. "Terror 2000," another FI project that was done for the Department of Defense in 1994, warned that terrorists were planning to use commercial aircraft as guided bombs to strike against a major landmark in the New York City area. It also warned that terrorists could hijack a commercial airliner, fly it down the Potomac, and crash it into the Pentagon. Tragically, the report was filed and forgotten. Cetron hopes this will not be the case with "55 Trends," a 252-page treatise that is very short on any good news and includes the disturbing conclusion that worldwide terror networks are stronger today than at the time of 9/11. It also contends that the cells are not taking orders but are free to attack when, where, and how they want. "We're not talking

about al-Qaida running these operations,” Cetron says. “We’re talking about cells and they are self-invigorated, if you will. They run on their own. The second thing that’s a real problem in this is that they don’t take orders. They do what they think is going to be good in their own local sphere.” Cetron is not talking only about cells overseas.

[The Terrorists Are Already Here](#)

He estimates that there are “a dozen or more cells in the United States and they don’t get orders from overseas. They just know what to do. They get what they need.” Lurking in the homeland are small groups of less than five and some between five and 20, Cetron tells Newsmax. “They get their funding from drug funds, they get it from money laundering, they get it from kidnapping, I can throw a whole list, but those people can give us a lot of grief,” he says. “There are two different groups – those that cost less than a quarter of a million to attack a target and then those that cost more than a quarter of a million. So you have to break them into separate areas and see what they are capable of doing and that’s what you got to take a look at.” Cetron provides some detail about these ready-to-pounce cells: “They want to make two or three or four or five operations all at the same time and shoot up a whole bunch of strip malls. They will have already planted – about 50 yards back from those malls – bombs inside cars, so when the police set up their area that they want to cordon, they will blow up the police and the people watching to see what is going on.” As to where such zealots are coming from, Cetron notes, “Only 7 percent of the Muslim population agreed with what al-Qaida is doing, but if you take a look at 7 percent of 1.1 billion people, you are talking about over 1 million people running around here. That’s a hell of a lot of people who will be sympathizers.” A multiple mall attack, however, could just be a warm-up, says Cetron, whose new report takes a hard look at WMD scenarios. “But the biggest thing is that they could be using weapons of mass destruction. For instance, if anybody got into a printer where they print dollars or Euros, and they put pathogens on there, we could end up with literally hundreds of thousands, if not millions, getting ill from that – and you wouldn’t even know where the hell where it came from.” Another likely scenario, Citron says, is cyber war. “The Russians just used that in Georgia. You can literally turn off the electronics. Airplanes in the air wouldn’t be able to fly, you wouldn’t be able to communicate, you can turn off alarm systems. ... They are actively looking to get into our systems...”

[The Issue of Terrorists and Nukes](#)

Cetron’s band of experts in “55 Trends” concludes that, if Muslim extremists cannot lay hands on a stolen weapon from the former Soviet Union, they soon may be able to obtain them from Islamabad. Tehran remains a more distant possibility. This is not a guarantee that terrorists will use nuclear weapons against the United States or other potential targets, Citron’s latest report notes. The fabled “suitcase nuke” may be a terrorist’s dream weapon, but it is technology that no one who would share is likely to possess. Instead, al-Qaida or some future equivalent will receive bulky, low-yield devices that will be much harder to smuggle to their target. They may well try anyway, but it will be some time before this becomes an immediate possibility. During that interval our detection and intercept capability should improve significantly. Other WMDs will be much more practical, the report says. If mushroom clouds do not appear over Manhattan or Washington, clouds of toxic gas or weaponized bacteria easily could. As Aum Shinrikyo, the Japanese cult that released sarin gas in the Tokyo subways in 1995, demonstrated, chemical weapons are available to essentially anyone who wants them enough to put in a modest effort to

make them. Biological weapons suitable for military use take considerably more effort to prepare, but there are practical purposes for which all-out weaponization is not required. And even if radiological dirty bombs are not traditionally considered WMDs, they could be equally disruptive if employed with skill in a major city, the report says. The distinguished panel of experts and consultants behind “55 Trends” makes some grim predictions:

- International terrorism will grow as veterans of the Iraq War return to their native lands, train sympathizers in the tactics of terror, and spread across the world.
- Among the Western lands, Britain and France (owing to their large Muslim populations) and the United States will be at the greatest risk of attack, in that order. Further attacks on the scale of 9/11 are to be expected in all three countries over the range of five to ten years.
- These attacks will combine mass bloodshed and economic impact. Now that the World Trade Center is gone, Grand Central Station at rush hour would be an obvious target for Manhattan. Coordinated attacks on shopping malls, tourist attractions, casinos, schools, churches and synagogues, and sports events also are possible.

For those who still minimize the risk of attacks, Cetron notes that the proof is in the pudding: Many foiled attempts have never reached the public domain because of concerns that intelligence sources will be compromised. “We’ve stopped a lot of attacks,” Citron tells Newsmax. “This is all classified, but the truth is that they have stopped a lot of stuff because we’ve gotten hold of computers. We’ve had a lot of people on the ground with human intelligence. “If you want to put it properly, we’ve been damn lucky.” Citron fears that Britain and France are in a worse position than the U.S. and it all has to do with demographics. “By 2025 they are going to have more Muslims than non-Muslims,” he says. “That’s a problem. In Britain they have to take people from all of the old Commonwealth countries. And it’s not those people who come in the first generation. It’s the second one, the brighter ones that can pass as being Brits or Europeans or French that are going to give us grief.” For anyone who thinks that the startling conclusions of “55 Trends” are the brainchild of one overly paranoid think-tanker, Cetron sets them straight. “We had some 170 of the best people in the United States – not only the United States but all over the world,” he says. It was a case of taking the talents of futurists and combining that with the raw knowledge of folks out in the field. “We sent it out to all of these people all over the world and said look here is what we think is going to happen in the future, now you tell us where we’re wrong, and where we’re right,” Cetron says. “We even had a bunch of flight officers and senior colonels and commanders in the Navy, etc., who sent us back information and said don’t use my name but let me tell you what’s really going on – and we used all of that information.”

Disturbing Trends

If talking to Citron is an eye-opener, reading the great detail of the “55 Trends” report may be even more so. At every other page is the grim news that we may be traveling backward rather than forward in our war on terror. Case in point: In deposing the Taliban regime in Afghanistan and depriving al-Qaida of a safe haven there, the United States struck a major blow against the terrorist movement as it existed five years ago. Yet by failing to follow up on that success effectively, the report

concludes, we have squandered much of the benefit that should have been gained from that first step in the counterterrorist war. The Iraq War has supplied al-Qaida and its sympathizers with a cause around which to rally their existing forces and recruit new ones, the report says. As a result, the terrorist movement is now growing stronger, the report reveals. Up to 30,000 foreign fighters are believed to have gravitated toward Iraq, where they are now gaining contacts and experience that will serve them well in future campaigns against the U.S. and its allies. In this, Iraq is now serving the function that Afghanistan provided in the 1980s. The war in Iraq is building a skilled and disciplined terrorist cadre that will fan out across the world. Saudi Arabia even has been forced to build a major program aimed at keeping young men from going to Iraq. The Wahhid, the dominant Muslim sect in that country, is teaching that joining the jihad is the Muslim man's second-greatest duty, after going to Mecca. They must fight in Iraq, then come back and be available to fight for fundamentalist Islam in Saudi Arabia. Thus are terrorist cells built, independent of al-Qaida but firmly committed to its goals and methods.

Διάσπαση τρομοκρατικών δικτύων μέσω υπολογιστών

Ένα νέο όπλο έχουν στη διάθεση τους οι αντιτρομοκρατικές υπηρεσίες της Μ Βρετανίας. Πρόκειται για το νέο λογισμικό της εταιρείας Detica με την ονομασία TxtReveal στο οποίο εισάγονται όλες οι πληροφορίες που έχουν σχέση με τρομοκρατικές οργανώσεις και επιθέσεις παγκοσμίως προκειμένου να βρεθούν οι διασυνδέσεις και να αποκαλυφθούν πιθανοί στόχοι και τρόποι δράσεως.

How computing cracks terrorist networks

Here is a rare glimpse at how UK law enforcers are picking apart terrorist gangs and criminal networks using the brute power of computing. Mountains of news, intelligence and crime reports are being moulded into detailed maps of underground organisations within minutes, using data mining.



The UK TxtReveal system, made by Detica, is unravelling vital information in counter terrorism and intelligence gathering operations. Head of technology innovation at Detica, Imam Hoque, demonstrated how an analyst knowing almost nothing about a breaking terrorist attack can rapidly pinpoint key insurgents, cells and relationships. Starting with a fictional attack in the Philippines, Hoque pulls up every intelligence report from the country by dragging a box around its borders. More than 100 reports are highlighted but common names and organisations are immediately flagged up and pulled together into a list of key words. This can be

further refined by dragging a box around trouble hotspots, where the largest number of intelligence reports are coming out of, as seen here.

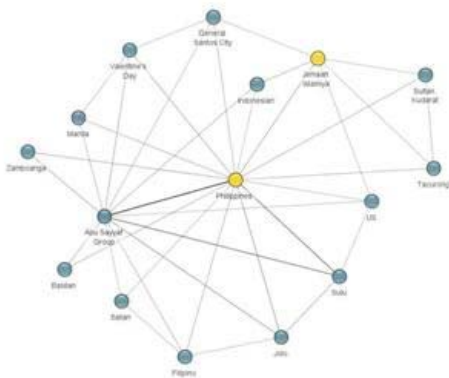
Key people, places and objects - known as entities - from the reports are listed and can be used to refine future searches.

Name	Rank	Score
Abu Sayyaf Group	1	1000
Jemaah Islamiyah	2	800
Manila	3	500
Philippines	4	400
General Santos City	5	300
Davao	6	200
Marikina City	7	150
Quezon City	8	100
Taguig	9	80
Alabang	10	60
Alor	11	50
Alor Setar	12	40
Alor Gajah	13	30
Alor Star	14	20
Alor Setar	15	15
Alor Star	16	10
Alor Star	17	5
Alor Star	18	5
Alor Star	19	5
Alor Star	20	5

Reports in any language can be searched thanks to the system's ability to eliminate "background language" and only list entities. It does not understand the language itself but determines whether a word is a proper noun using statistical analysis of how frequently it appears in the reports. Here, it is obvious that the Abu Sayyaf group (ASG) and the Jemaah Islamiyah Organisation (JI) are active

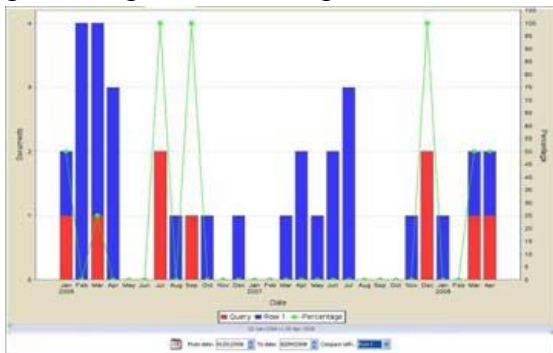
in the Philippines. These names can then be fed into fresh queries to uncover what other people and places are associated with the groups. Only significant entities as flagged up by the system, as each entity is assigned a rank, giving common nouns such as Manila a low score, while rating groups like the ASG highly.

This spider's web of coloured spheres shows how the system reveals the relationships between the key people, places and organisations that frequently occur together.



By pulling a sliding bar on screen the web slowly weaves itself, starting by linking the most significant entities. The demonstration revealed how one individual linked the ASG and JI. Hoque said: "Very quickly you are starting to drill down to create some meaningful intelligence. "In minutes I have gone from a starting point of simply looking at the Philippines to uncovering the main groups and the people connecting them."

The system is also able to map activity onto a timeline, which in the demonstration here shows a flurry of attacks around Easter, helping predict when future atrocities might take place. Hoque said the feature could be used by police forces to map crimes such as drug dealing and assaults to locations and times they took place, to see where and when to deploy patrols. Several police forces in the UK are trialling the system, according to Detica. Hoque said: "In today's fight against terror, lots of countries are generating lots of intelligence all the time and it is important to be able to aggregate



that to make key decisions. "In the past analysts would have used to have to read a mass of documents, think of queries, read more documents and then draw out those relationships by hand. "Some of the analysis that now takes minutes would have taken weeks or months."

The product is also being launched for business, aimed at providing the aggregation of enterprise search, entity extraction, visualisation and mapping. A mobile phone operator has shown an interest in using the system to understand trends

in customer calls and Detica is also researching how the system can predict stock market prices using news articles.

Νέο λογισμικό για διαχείριση μαζικών απωλειών υγείας

Το λογισμικό AHRQ Hospital Surge Model (v 1.2) μπορεί να υπολογίσει τις νοσοκομειακές προμήθειες που απαιτούνται για την αντιμετώπιση των απωλειών υγείας που θα προσέλθουν μετά από τρομοκρατικές επιθέσεις με ΧΒΡΠ όπλα σε αστικό περιβάλλον.

The AHRQ Hospital Surge Model

The AHRQ Hospital Surge Model (V 1.2) estimates the hospital resources needed to treat casualties arising from biological (anthrax, smallpox, pandemic flu), chemical (chlorine, sulfur mustard, or sarin), nuclear (1 KT or 10 KT explosion), or radiological (dispersion device or point source) attacks. When you run the Hospital Surge Model, you select one of the above scenarios and specify the number of casualties you want to assume need to be treated in your hospital(s). The casualties are treated, as necessary, in the Emergency Department (ED), in the ICU, or on the floor. The hospital provides a standard level of care to all casualties.

The Hospital Surge Model estimates:

- the number of casualties arriving at the hospital, by arrival condition (e.g., mild or severe symptoms) and day;
- the number of casualties in the hospital, by unit (ED, ICU, or floor) and day;
- the cumulative number of dead or discharged casualties, by day; and
- the required hospital resources (personnel, equipment, and supplies) to treat casualties, by unit and day

Φετβάς κατά του Μίκι Μάους γιατί είναι «πράκτορας του σατανά»...

Θρησκευτικό διάταγμα κατά του Μίκι Μάους εξέδωσε ο Σαουδάραβας σείχης Μοχάμεντ αλ-Μουνάτζιντ με το σκεπτικό ότι ο θρυλικός ήρωας του Ουόλτ Ντίσνεϊ,



όπως εξάλλου και όλα τα ποντίκια, είναι «πράκτορας του σατανά» και πρέπει να θανατωθεί. Η σαρία (ισλαμικός νόμος) απαιτεί την εξόντωση όλων των τρωκτικών, συμπεριλαμβανομένου του διάσημου κινουμένου σχεδίου, είπε ο σείχης, ο οποίος έχει διατελέσει στο παρελθόν και διπλωμάτης, επισημαίνοντας ότι η προσωπικότητα του Μίκι Μάους κάνει τα ποντίκια συμπαθητικά στους ανθρώπους. Σχολιάζοντας τα λεγόμενα του

Σαουδάραβα σείχη, η Αιγύπτια Σοάν Σαλάχ, ειδική επί θρησκευτικών ζητημάτων και παρουσιάστρια δημοφιλούς εκπομπής σε δορυφορικό τηλεοπτικό δίκτυο, δήλωσε στην αγγλόφωνη αιγυπτιακή εφημερίδα Gazette ότι η φάτουα του Μουνάτζιντ «αμαυρώνει την εικόνα του Ισλάμ» και ζήτησε να σταματήσουν αυτές οι γελοιότητες. «Ένας φετβάς πρέπει να βασίζεται στη γνώση, τη λογική και τον ορθό λόγο. Πράγματι, σύμφωνα με τις επιταγές του Ισλάμ, τα ποντίκια πρέπει να θανατώνονται.

Είναι όμως παράλογο να αντιμετωπίζεις έναν ήρωα κινουμένων σχεδίων ως ζωντανό ποντίκι και να θέλεις να το σκοτώσεις» δήλωσε.

Ισλαμοποίηση στις γαλλικές φυλακές

Σύμφωνα με πληροφορίες από τη γαλλική διοίκηση φυλακών που δημοσιεύθηκαν στην εφημερίδα *Le Figaro*, τουλάχιστον 442 ισλαμιστές φυλακισμένοι επιδεικνύουν ανησυχητική συμπεριφορά. Στην ομάδα αυτή περιλαμβάνονται και 78 άτομα που έχουν συλληφθεί για πράξεις τρομοκρατίας καθώς και 147 φυλακισμένοι που επιδίδονται σε προσηλυτισμό κρατουμένων. Προς τούτο έχουν εκδοθεί ειδικές έντυπες οδηγίες (60 σελίδες) που απευθύνονται σε 24.000 φύλακες, αστυνομικούς και μέλη της αντι-τρομοκρατικής υπηρεσίας και αναφέρονται στο θέμα του «φονταμενταλισμού στις φυλακές».

France: Islamization in prison

The 'beards' are active behind bars. According to a confidential (confidential defense) report of the French prison administration (AP) seen by *Le Figaro*, at least 442 Islamists imprisoned in France exhibit worrying behavior. Among them, 78 arrested for acts of terrorism and six Islamo-thieves convicted for their logistical support networks. Agents of the prison intelligence service also identified 147 prisoners who are involved in "operational activities of proselytizing". In short: a new generation fanning the flames of Jihad. These clandestine religious men are radicalized by surfing the Internet, says one senior source of the AP. Far from being experts of the Koran, they distill passages of the suras which can reference violence and use medieval speech to convert their fellow cell-mates. Their target? At least 211 prisoners are "in the process of radical Islamization," according to the report. It's more than 80% of the French of North African origin. Their low cultural level makes them receptive to the talk about destroying the West. Among the recruits there are also about 10% of young people with higher education, according to an expert. An anti-terrorism magistrate says that many of their files there are now France born converts, for the most part, in prison. He says that it's a real concern. If the radical elements are put in the same area, they eventually conspire. And if they are spread out, they infect the other prisoners. The technique consists of moving them regularly to prevent links from consolidating, explains researcher Farhad Khosrokhavar, author of 'L'Islam dans les prisons' (Islam in the prisons). Concerned about improving the detection of at risk individuals, the Interior Minister, Michèle Alliot-Marie, will present on Sept. 30th at the national security college (Institut national des hautes études de sécurité, Inhes) a 60 page handbook on "fundamentalism in prison". This guide will be given to the 24,000 guards in French prisons, police and anti-terrorism magistrates. An interior ministry official says that for the first time the Algerian security service were involved in the effort. The document dissects the process of radicalization step by step. It stresses the weight of origins, of the city, school dropouts and the marginalization of certain populations, which justifies their root community and their hate for Western democratic values, says an official at the unit for coordinating the anti-terrorism efforts (Unité de coordination de lutte antiterroriste, UCLAT). Then it draws up a list of 23 indicators to identify deviant conduct: besides ostentatious display of logos referencing al-Qaida of the Islamic Maghreb or a picture of Bin Laden on the cell walls, it includes reading certain religious works, refusing to walk with other prisoners, starting to eat together or wanting to ensure that their hours of prayers are scrupulously observed. An official from the interior ministry says that they want to put an end to the continuous

challenges that those prisoners pose to the prison authority and to replace Sharia with the prison regulations. A 20 page appendix includes the logos, symbols and signs of belonging to the al-Qaida movement. The aim is to reveal the outlines and practices so as to better combat it. Sociologist Farhad Khosrokhavar says that this initiative at the least has the merit of raising public and personnel awareness, but the lack of Muslim chaplains in prisons encourages the emergence of this hidden and belligerent Islam. While half the prisoners are Muslims, he says, only 100 imams work in French prisons compared with 600 Christian chaplains. Islam remains, in the mind of many detainees, the 'religion of the oppressed'.

"Pray for the successes of our brothers in America & Europe. Expect 'good news' soon."

Posted by Arabic speaking Islamic terrorist supporter (Σεπτ '08)

Μάθε τον εχθρό σου παρακολουθώντας και αναλύοντας τις ιστοσελίδες

Οι ίδιοι οι jihadis περιστασιακά προβαίνουν σε αναλύσεις των αντι-τρομοκρατικών υπηρεσιών που τους καταδιώκουν και περιγράφουν τις αναλυτικές τους μεθόδους.

Watching the Watchers: A Jihadi View of Terrorism Analysis Websites

Once in a while jihadi internet forums draw their members' attention to Western tracking of such websites by posting messages analyzing terrorism monitoring agencies, often with comments on some of the better-known terrorism analysts. A recent posting entitled "Know your enemy from monitoring and analysis websites" probes and categorizes some of these agencies (al-ekhlaas, September 5). In this posting, a jihadi forum member, nicknamed Zamjari, lists some terrorism monitoring agencies in the West and describes their analytical methods. "I offer this humble effort to jihadi brothers and Islamic jihadi intelligence men as a simple collection effort on the activities of enemy intelligence websites in these crucial times. Dogs and spies scattered in the Islamic forums should know that the mujahideen's intelligence is tracking them before and after they collect any information on us," says Zamjari, who divides the monitoring websites into three categories:

1) Translation Websites:

These websites provide translations of jihadi media, including audio, video and periodicals. These websites also copy texts posted in English, especially those of Islamic media centers such as the Sahab Foundation for Islamic Media Publication and the Global Islamic Media Front. The purpose of translation services is to inform Western citizens of jihadi activities. Zamjari describes a few translation websites such as:

- WorldAnalysis.net

Translates jihadi literature and distributes both the translation and the original Arabic text.

- IntelCenter

This website alleges that it provides intelligence extracted from al-Qaeda publications, says Zamjari.

- LauraMansfield.com

Another translation website that accumulates jihadi material, translates and sell it through the website. Zamjari says this Website is belligerent to Muslims depicting American Muslims and their Mosques as fronts for hostile activity against the U.S.

2) Investigative Websites

These websites monitor and translate every detail of information found in the jihadi sites. Zamjari believes these websites are two-edged sword; besides their negative aspects, they also offer service to non-Arabic speaking Muslims in the West by translating useful Islamic literature. In this category, Zamjari mentions mostly Israeli or Zionist Websites such as Sionisme.xooit.com; a Zionist forum based in France, internet-haganah.com; dedicated to monitoring certain jihadi members (especially those who post material on weapons of mass destruction) and Jihadica.com, deemed the most dangerous by Zamjari.

3) Research websites comprise experts and researchers specialized in thorough analysis.

- The first institute on Zamjari's list is the Jamestown Foundation; "Jamestown is a remarkable research center with a core of experienced and credible analysts. Visitors to the Jamestown website are mostly from the United States, Britain and Turkey," says Zamjari.
- Spirit of Truth is another research center. The main report of the center is entitled "What is Going to Happen Soon" that tries to predict the timing of an imminent al-Qaeda nuclear attack on the United States. (Zamjari makes an unusual selection here. Spirit of Truth is the website of abusive and foul-mouthed televangelist Don Vincent. Excerpts from his bizarre Los Angeles public-access television rants have become popular viewing on YouTube. Vincent's website features links to War on Terrorism-related articles, mostly of an apocalyptic "conspiracy-theory" type).
- Crusade Media - Another US monitoring and analysis center concerned mainly with al-Qaeda's nuclear activities.
- The Terrorism Index 2008 - A very important report prepared jointly by experts, researchers and journalists from Foreign Policy magazine and American Progress research center. Zamjari gives a summary of articles published in the report and posts a downloadable copy of the report.

Ekhlaas.net is comprised of fourteen forums, the major one of which is the "Events-Issues of the Islamic Umma" forum. Among the fourteen are three forums in English, French and Turkish. Directed at Muslim and non-Muslim Western audiences and calling on them to repent and join the jihadi movement, the English section of ekhlaas contains translated religious material, the latest al-Qaeda releases and jihad training manuals. Members of the English section are constantly tracking and re-posting foreign press and analytical reports pertinent to jihad and the mujahideen. "Brothers and sisters, in this thread we put together any information about those who claim they are monitoring and watching the jihad websites....some of them claim they are intercepting videos and other jihadi media releases...the fact is that they copy and paste them from ekhlaas or other authentic forums, and then embed their logos into them to boast in front of the traditional media outlets that they captured and intercepted this and that release," says English section forum member "Motaman." Most often, al-Qaeda affiliated websites contain sections in English and in other foreign languages posting translations of major al-Qaeda and jihadi statements; however ekhlaas.net is one of the very few jihadi websites that agitates against western journalists and relies on participants residing in Western countries to keep members informed about the latest Western reports on terrorism. Jihadis typically consider

journalists and analysts specializing in terrorism to be infidels, calling on members to kill them at the first chance.

Καραντίνα για άνθρακα σε χωριό της Ρωσίας

Ρωσικό χωριό τέθηκε σε καραντίνα στη ρωσική δημοκρατία Bashkortostan στα νοτιοδυτικά Ουράλια επειδή αρκετοί άνθρωποι προσβλήθηκαν από άνθρακα μετά από κατανάλωση μολυσμένου αλογίστιου κρέατος.

Village in Russia's Urals imposes quarantine due to anthrax

Quarantine has been declared in a village in the Russian republic of Bashkortostan in the southwest Urals after several humans were infected with anthrax, a spokesman for the consumer rights regulator said on Friday. Rospotrebnadzor said the measures were announced after 10 residents of the village, Ural, located in the Yanaulsky district, were hospitalized on Wednesday. The spokesman said the residents fell ill after eating meat from an infected horse that had been killed two weeks earlier without any veterinary tests. The meat has been destroyed, and specialists are looking into how the horse became infected. Livestock has been banned from entering or leaving the village, and all local meat retail has been suspended. Anthrax affects both wild mammals and domestic cattle that ingest or inhale the bacterial spores while grazing. The spores can survive dormant in soil for decades. Humans can contract the disease if they are exposed to the blood or tissue of infected animals.

Κοντά στο πρώτο χάπι κατά του άνθρακα;

Η εταιρεία Panthera Bio Pharma βρίσκεται κοντά στη δημιουργία του πρώτου φαρμάκου κατά του άνθρακα σε μορφή χαπιού. Προς το παρόν, η πρώτη ύλη είναι σε μορφή σκόνης και οι υπεύθυνοι της εταιρείας εκτιμούν ότι σύντομα θα κυκλοφορήσουν το πρώτο χάπι κατά της συγκεκριμένης πάθησης.

Aiea company on track to slow down anthrax

An Aiea drug company says it's on track to create the first pill-form treatment for a deadly disease widely-known as a national security threat. Wednesday is a normal day for the scientists working at Panthera Bio Pharma. but it wasn't too long ago when they came up with something out of this world -- the world's only pill-form treatment for anthrax. "It could be used in the time of need," Panthera Bio Pharma president and CEO Will Alameida said. "It could be rapidly deployed, safe and effective, this is very different from what's available today, within the u.s. government." It attacks and destroys the infected cells in a person's body. It's not a preventative drug and chemists say it should be used when a person has been exposed to anthrax. "What we've been working on over the last year or two is improving the potency of these compounds, so that hopefully you won't be taking one of those large vitamin pills, you'll be taking a very small pill," Panthera Bio's director of chemistry Alan Johnson said. It's still in powder form, but Panthera Bio officials hope to make it into a pill which is still a few years off. "Clearly, this shows the work we've been doing has paid off and that's really the fun part for us scientist is coming up with a hypothesis, testing hypotheses, then finding out we were successful," Johnson said. Chemist who worked on the pill says it's a rewarding experience knowing they've helped millions who may come in contact with anthrax. "Adding one more piece to the puzzle and that's basically getting as much data points as we can possibly get, to see the overall picture," Chemist April

Banaag said. The small company has leveraged big federal dollars to come up with a way to help people get through a deadly disease. The anti-anthrax drug is still in pre-clinical stages, but it has completed successful testing on rats. Officials say all animal testing is done in mainland labs. Panthera's Aiea lab works with a non-toxic strain of the disease.

Υπέγραψε και η Σ Αραβία τη συνθήκη κατά των χημικών όπλων

Η Σ Αραβία είναι πλέον μεταξύ των 186 κρατών που έχουν υπογράψει τη συνθήκη καταπολέμησης των χημικών όπλων (CWC).

Kingdom signs treaty against chemical weapons

Saudi Arabia, along with 186 countries, signed the Chemical Weapon Convention (CWC) treaty prohibiting the use of chemical weapons in Colombo, Monday. "We discussed many issues before signing the treaty. The Kingdom's role is to support peace and stand against violence," said Dr. Khalil Al-Khalil, member of the Shoura Council and head of the Security Affairs Commission and the Saudi delegation in Colombo. Members of the Shoura Council arrived in Colombo early on Aug 25 for the two-day meeting of the Organization for the Prohibition of Chemical Weapons (OPCW). Major Mohammed Abu-Sak and Saeed Al-Amri, arbitrator member of the Ministry of Foreign Affairs were among other dignitaries. "This treaty includes many conditions that must be followed by Arab and international countries to ensure world safety," Al-Khalil said. "The treaty prohibits the use of chemical weapons in war and puts a restriction on weapon factories. All countries that have signed the treaty must declare the number of the chemical weapons they have." "All countries should be inspected by the (OPCW) authority to make sure they are free of such weapons", he added. The Kingdom has earlier signed a treaty prohibiting the use of chemical weapons in 1993. Five prominent countries – Russia, US, Israel, Egypt and Syria – did not take part in the event. Bahrain, Kuwait and Oman from the GCC also did not participate.

Φαρμακο-ανθεκτική φυματίωση

Επιβεβαιώθηκε η πρώτη περίπτωση φυματίωσης ανθεκτικής στα φάρμακα (XDR-TB) στην Αυστρία. Μέχρι τον Ιούνιο 2008, 18 χώρες στην Ευρωπαϊκή Ένωση και τη Δυτική Ευρώπη (συμπεριλαμβανομένης και της Ρουμανίας) και 6 στην πρώην Σοβιετική Ένωση έχουν δηλώσει επισήμως περιπτώσεις φυματίωσης XDR-TB. Τέσσερις από τις χώρες αυτές (Τσεχία, Γερμανία, Ιταλία και Σλοβενία) συνορεύουν με την Αυστρία.

Extensively Drug-Resistant Tuberculosis - First Report Of A Case In Austria

We report on the 1st documented extensively drug-resistant tuberculosis (XDR-TB) case in Austria, diagnosed this year [2008]. The term XDR-TB was used for the 1st time in March 2006, in a report jointly published by the Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) to describe a disease caused by "Mycobacterium tuberculosis" that was resistant not only to isoniazid and rifampicin (i.e. multi-drug resistant tuberculosis, MDR-TB) but also to at least 3 of the 6 classes of 2nd-line anti-TB drugs - aminoglycosides, polypeptides, fluoroquinolones, thioamides, cycloserine, and para-aminosalicylic acid. As this definition was dependent on un-standardized drug susceptibility testing (DST)

methodologies and did not necessarily distinguish the most difficult-to-treat cases using the current drug armamentarium, it was eventually modified in October 2006. XDR-TB is now defined as: resistance to at least rifampicin and isoniazid, in addition to any fluoroquinolone and to at least one of the 3 following injectable drugs used in anti-TB treatment: capreomycin, kanamycin, and amikacin.

Case report

In May 2008, a 45-year old male Romanian presented to a pulmonology centre in Vienna, Austria, complaining of fatigue, constitutional symptoms and weight loss. The patient was afebrile (37.5 C) with an oxygen saturation of 91.3 percent on air room, not associated with haemoptysis or night sweats, but presenting with a productive cough yielding large amounts of yellowish-greenish sputum. The patient reported having been treated with an incomplete regimen of anti-tuberculous drugs in Romania in 2002, following his 1st diagnosis of tuberculosis. By 2003, while still on treatment, DST showed resistance to 1st-line anti-tuberculous drugs. No information is available on the drug regimen employed during this 1st episode of MDR-TB. In 2007, having felt no marked improvement, the patient travelled to Sweden to continue treatment. DST of sputum showed resistance against isoniazid, rifampicin, pyrazinamide, amikacin, ofloxacin and sensitivity to ethambutol, linezolid, moxifloxacin and fusidic acid. He was discharged on medication following 7 months of treatment (regimen reportedly tailored to the DST) during which his condition improved and sputum became negative. Upon return to his hometown, however, the patient could not procure all the medication prescribed, and his health deteriorated again. The patient therefore travelled (by train) to Austria to seek further treatment. On examination, the patient was 1.70 m tall but weighed only 53 kg. Auscultation revealed bilateral crepitations. Chest X-ray examination showed a reduced volume of the left lung with alveolar infiltrations, and cavitary lesions on the left side. Blood tests showed leukocytosis (neutrophil count of $13.63 \times 10^9/l$) and an elevated C-Reactive Protein (37 mg/l; local cut-off value 12 mg/l). Ziehl-Neelsen staining of sputum smear showed abundant acid fast bacilli (AFB 3+). Therapy with terizidone, ethambutol, linezolid, moxifloxacin and capreomycin was re-established, based on the results from the sputum cultures from Sweden. Under therapy, the patient's condition improved, he gained 7 kg in weight and the load of AFB in sputum smears fell to 1+. Isolates from sputum samples taken in Austria yielded *M. tuberculosis* spoligotype T1 (11100001111111). On 18 Jul 2008, DST showed in-vitro resistance against isoniazid, rifampicin, pyrazinamide, amikacin, ofloxacin, capreomycin, rifabutin, cycloserine, and prothionamide, and susceptibility to streptomycin, ethambutol, para-aminosalicylic acid and linezolid. Accordingly, capreomycin therapy was terminated, and para-aminosalicylic acid and streptomycin were added to the treatment regimen. The patient is presently isolated in a TB ward at a pulmonology centre in Vienna. We have no information on results of contact tracing performed for this patient.

Discussion

While this is the 1st published report of a case of XDR-TB in Austria, it does not preclude the possibility that other cases had occurred or transited the country previously. This study illustrates some key public health concerns very pertinent to TB in the world today, including disease chronicity, its association with low-resource settings, the mobility of infectious patients and the role of improper medication in the aetiology of drug-resistant disease. By June 2008, 18 countries in the European Union

(EU) and Western Europe -- including Romania -- and 6 in the former Soviet Union had officially reported XDR-TB cases. Four of these countries (Czech Republic, Germany, Italy, and Slovenia) share a border with Austria. A large part of the drug-resistant TB caseload in Europe occurs in the countries of the former Soviet Union. The XDR-TB case in Austria originated from Romania, a resource-constrained country at the eastern border of the EU. Our case shows only too well that XDR-TB is not confined by state borders. Schmid et al. have recently also described an outbreak of MDR-TB among HIV-seronegative refugees in Austria. As the reporters of the 1st XDR-TB case in Ireland concluded in a recent article, we expect to have further cases from amongst nationals of countries with a high burden of drug-resistant TB. The available evidence shows that XDR TB results mainly from poor clinical practice. Poor adherence to treatment, inappropriate prescription, irregular drug supply, and poor drug quality are the main reasons for acquiring resistance in TB. Once XDR-TB is acquired, the prospects of successful chemotherapy remain low. In one series from Western European countries, the mortality among non-HIV patients was reportedly 36 percent. This makes the implementation of appropriate public health measures to prevent further spread all the more crucial. The occurrence of XDR-TB in Austria should serve as a wake-up call to strengthen the national TB control programme by implementing evidence-based measures to regulate the monitoring of TB treatment and contact tracing.

Εγχειρίδιο της al Qaeda βρέθηκε από την ισπανική αστυνομία

Σύμφωνα με τον ραδιοφωνικό σταθμό Cadena Ser η ισπανική αστυνομία ανακάλυψε στο διαδίκτυο εγχειρίδιο (80 σελίδες) της al Qaeda που προοριζόταν για Ευρωπαϊκούς τρομοκρατικούς πυρήνες και αφορούσε τη χρήση τηλεχειριζόμενων βομβών κατά πολυεθνικών στρατευμάτων στον Λίβανο και το Αφγανιστάν.

Spain: Police find European al-Qaeda manual

Spanish police have discovered an internet handbook for al-Qaeda's European cells on the use of remote-controlled bombs against international troops in Lebanon and



Afghanistan, the radio station Cadena Ser reported Monday. The eight-page handbook dating from early July contained detailed instructions on how to stage non-suicide bombings using auto-piloted light aircraft and cars. The instructions included three different ways to set off aircraft bombs by remote control. It was the first time that police detected such

detailed instructions for al-Qaeda cells, including advice on how to avoid being detected, Cadena Ser reported. The methods were believed not to have been used in attacks so far.

Τα όπλα μαζικής καταστροφής κατέληξαν στη Συρία;

Αμερικανός αξιωματούχος επιβεβαίωσε την υποψία ότι τα Ιρακινά όπλα μαζικής καταστροφής μεταφέρθηκαν στη Συρία και τον Λίβανο πριν από την κατάρρευση του Saddam Hussein και την εισβολή των ΗΠΑ και των συμμάχων τους το 2003. Οι πληροφορίες προέρχονται από Ιρακινούς φυλακισμένους που συμμετείχαν ως οδηγοί ή συνοδοί στη διακίνηση των εν λόγω όπλων.

Iraqis said Saddam's WMDs were sent to Syria

An American official has just confirmed what has been long suspected – **that Iraqi weapons of mass destruction (WMDs) were dispersed to Syria and Lebanon prior to the deposition of Saddam Hussein's regime by US-led forces in 2003.** This would tend to confirm a statement by former Israeli Prime Minister Ariel Sharon in 2002, backed up at the time by Israel Defense Forces (IDF) Chief of Staff Lt.-Gen. Moshe Yaalon, that Iraqi WMDs had been removed to Syria. Ryan Munro, 'U.S. official: Iraqis told me WMDs sent to Syria: Former head of prisons says incarcerated ex-Saddam forces disclosed move,' World Net Daily, July 30, 2008 A former American overseer of Iraqi prisons says several dozen inmates who were members of Saddam Hussein's military and intelligence forces boasted of helping transport weapons of mass destruction to Syria and Lebanon in the three months prior to Operation Iraqi Freedom. Don Bordenkircher – who served two years as national director of prison and jail operations in Iraq– told WND that about 40 prisoners he spoke with "boasted of being involved in the transport of WMD warheads to Syria. A smaller number of prisoners, he said, claimed "they knew the locations of the missile hulls buried in Iraq." Some of the inmates, Bordenkircher said, "wanted to trade their information for a release from prison and were amenable to showing the locations." The prisoners were members of the Iraqi military or civilians assigned to the Iraqi military, often stationed at munitions facilities, according to Bordenkircher. He said he was told the WMDs were shipped by truck into Syria, and some ended up in Lebanon's Bekaa Valley. Other Iraqi military personnel, including former top Saddam associates, have made the same claim. In early 2006, Saddam's No. 2 Air Force officer, Georges Sada, told the New York Sun Iraq's WMDs were moved into Syria six weeks before the war started. WND also reported in 2006 a former general and friend of Saddam who defected alleged WMDs were hidden in Syria and said the regime supported al-Qaida with intelligence, finances and munitions. Ali Ibrahim Al-Tikriti, the southern regional commander for Saddam's militia in the late 1980s, said the regime had contingency plans established as far back as the 1980s in the event either Baghdad or Damascus was taken over. Saddam knew the U.S. eventually would come for the weapons, Al-Tikriti said at the time, and had "wanted since he took power to embarrass the West, and this was the perfect opportunity to do so." So he denied they existed and made sure they were moved into hiding, the former general said. Among other claims, WND also reported a former U.S. federal agent and counter-terrorism specialist deployed to Iraq before the war said he waged a three-year, unsuccessful battle to get officials to search four sites where he believed the former Saddam regime buried weapons of mass destruction. Bordenkircher said four of the Iraqi prisoners who separately offered to speak to the "right" people about Saddam's alleged transport of WMD later became involved with U.S. and Iraqi intelligence agencies. Some prisoners said the drivers, upon return from transporting the WMDs out of Iraq, discussed the movement. They said, according to

Bordenkircher, the materials shipped out would return once Iraq got "a clean bill of health from the U.N., and then the program could be kick-started easily." Four of the prisoners – civilians attached to the Iraqi military – said they worked at the al-Muthana Chemical Industries site. They said the cargo included nitrogen mustard gas warheads for Tariq I and II missiles. Bordenkircher said the stories of the military personnel and the civilians matched and did not contradict one another. Bordenkircher also said prisoners confirmed al-Qaida had a presence in Iraq before Operation Iraqi Freedom began, specifically in Mosul and Kirkuk. Iraqis under the command of Uday Hussein, one of Saddam Hussein's sons, supported the al-Qaida elements in the country with training and providing safe harbor, they said. Bordenkircher also was a senior adviser to South Vietnam's correctional system during the war in Southeast Asia, from 1967-72. His task was to improve conditions for 80,000 civilian prisoners. The U.S. Department of Justice asked him to play a similar role in Iraq, sending him first to Baghdad's infamous Abu Ghraib prison in Baghdad in March 2006 to shut it down. Bordenkircher previously served as Marshall County sheriff of Moundsville, W.Va., and police chief and warden of the state penitentiary at Moundsville.

Τρομοκρατικές οργανώσεις ή Clubs;

Οι τρομοκρατικές οργανώσεις φαίνεται ότι λειτουργούν με τις προδιαγραφές των clubs γεγονός που δικαιολογεί τη μεθοδολογία τους και τις πράξεις των μελών τους. Μια ενδιαφέρουσα προσέγγιση που δίνει αρκετές απαντήσεις σε διαχρονικά ερωτήματα.

How Terrorist Organizations Work Like Clubs

Days before the Sept. 11, 2001, attacks, Osama bin Laden left his compound in Kandahar in Afghanistan and headed into the mountains. His driver, Salim Ahmed Hamdan, traveled with him. As U.S. and Northern Alliance forces stood poised to capture Kandahar a few months later, bin Laden told Hamdan to evacuate his family. Hamdan's wife was eight months pregnant at the time, and Hamdan drove her and his infant daughter to the Pakistani border. It was on his way back that Hamdan was captured by Northern Alliance warlords, said Jonathan Mahler, an author who has pieced together the events in his upcoming book, "The Challenge: Hamdan v. Rumsfeld and the Fight Over Presidential Power." Hamdan's captors found two surface-to-air missiles in the trunk of his car. They turned him over to the Americans and pocketed a bounty of \$5,000. Hamdan recently became the first detainee at Guantanamo Bay to face trial. Government and defense lawyers are arguing about Hamdan's significance in al-Qaeda and the extent of his knowledge of the group's activities, but it is the facts the lawyers agree on that raise an interesting question for anyone who studies terrorist groups. Hamdan joined bin Laden after his plan to go to join a jihad in Tajikistan hit a snag. For years, he ferried al-Qaeda's leader to camps and news conferences and was often bored, according to the testimony of his interrogators. Mahler, who interviewed Hamdan's family and attorneys, his FBI interrogators, and the man who recruited Hamdan for jihad, said bin Laden's driver was not particularly religious -- for a poor man from Yemen, jihad was a career move as much as a religious quest. The interesting question is why Hamdan and other minor cogs in terrorist groups who have access to information that the United States would gladly pay for rarely come forward to share it. Dozens of other Hamdans today probably have leads on the whereabouts of bin Laden and other terrorist leaders. Given that some of these potential informers are bound to be poor and uneducated,

why don't they defect, take the money and run? "The generic problem is the question of why people having useful knowledge can't be bribed to reveal it," said David Laitin, a political scientist at Stanford University who has studied why terrorist groups that specialize in suicide attacks are so rarely undermined by defectors and turncoats. Along with Eli Berman, a political scientist at the University of California at Santa Barbara, Laitin has developed a theory to explain why the Hamdans of the world tend to stay loyal to the bin Ladens. Laitin and Berman argue that it is because a group such as al-Qaeda is really an exclusive club. Most people think of clubs as recreational groups, but Laitin and Berman are using a more subtle definition. Clubs are groups that tend to be selective about their members. Unlike political parties and book-reading groups, which allow anyone to join, clubs make it difficult for people to sign up. And once admitted, members must make personal sacrifices to stay. In the case of an exclusive golf club, the sacrifice might involve paying sizable dues. In the case of some religious orders, would-be members might have to go through lengthy periods of initiation. The "club model" of terrorism explains why cogs such as Hamdan stay loyal. Across all kinds of clubs, when members make sacrifices, they are much more likely to become intensely loyal to fellow members. Berman and Laitin think this is because the sacrifices that members make to join a club reduce their value outside the club. If you devote years to learning a religious text, that knowledge can give you social cachet within your club, but your effort counts for little outside the club. "If you have to spend your life reading the Talmud, you are not very good at software," Laitin said. "The sacrifices get you social welfare, but if you took a bribe, your value outside of that club would be minuscule." Whereas software engineers who "defect" from one company to another carry their value with them -- the skills are transferable -- al-Qaeda foot soldiers might enjoy high regard within that club but be worthless outside it. This may help explain why religious cults and organized-crime syndicates reward members for acquiring arcane cultural, scriptural and linguistic skills -- these are skills that cannot be easily transferred to the outside world. In a detailed analysis of terrorist attacks in Israel, Laitin and Berman showed that the degree of "clubbiness" of terrorist groups predicted how violent they would be, especially when it came to suicide attacks: Elite organizations demanded greater sacrifices and elicited greater loyalty, and it was these groups that could plan and carry out the most lethal attacks with little fear of betrayal. The political scientists are not suggesting for a second that clubs are inherently violent -- most, in fact, are harmless. But what Laitin and Berman are suggesting is that clubs offer the kind of organizational structure that happens to provide the secrecy and loyalty needed to run a terrorist group. What does this research mean for counterinsurgency efforts and fighting terrorism? Laitin argued that nations that compete with terrorist organizations to provide social benefits make it less likely that their citizens will be willing to make great sacrifices to join clubs that seek to destroy them. When your software industry takes off, in other words, fewer people need to seek out the social welfare benefits that joining the local terrorist club offers.

Θύμα του άνθρακα εξακολουθεί να παλεύει με τις επιπτώσεις του

Ενδιαφέρον άρθρο που αναφέρεται στην τύχη των θυμάτων της επίθεσης με τα γράμματα του άνθρακα που είχε συγκλονίσει την παγκόσμια κοινότητα το 2001.

Anthrax Survivor Still Battles Effects of Attack

The coverage of the surprising developments in the seven-year investigation of the anthrax-letter attacks after 9/11 have focused on the federal scientist, Bruce Ivins, who committed suicide last week in advance of being charged with murder. The anthrax sent through the mail in 2001 killed five people and injured 17. What became of the sickened people who survived the anthrax attacks? WSJ Health Blogger Jacob Goldstein caught up with one of the victims, Leroy Richmond, a postal worker who inhaled anthrax spores and managed to survive. Richmond thought he was coming down with a bug when he went to see his doctor in October 2001. He was short of breath and felt achy all over. “It was like someone had taken a stick and beat me on



my back,” he told the WSJ. His doctor sent him to the E.R., where doctors diagnosed inhalation anthrax, put him on antibiotics and admitted him to the intensive-care unit. He had inhaled anthrax spores released from a letter that passed through the Washington, D.C., mail-processing center. Richmond stayed in intensive care for about a month. In the first few days there, he says, it grew even more difficult for him to breathe. Fluid was building up inside his lungs. On a few occasions during his hospital stay, doctors used a needle to draw

out several quarts of fluid. After roughly three weeks in the hospital, Richmond managed to get up out of bed for the first time. About a week later, he was sent home. Initially, he was so weak that he could walk only about two blocks before becoming exhausted. But he tried to walk a little every day — an effort that persists to this day. Now he can walk about a mile and a half, he says. He still can’t shoot baskets or go for bike rides with his son the way he did before he got sick. Survival itself was a feat: Roughly half of those who contracted inhalation anthrax in the attacks died. Still, the effects of the infection linger. “I’ve never gotten to the point where I have the same amount of stamina, the same amount of vigor” as before getting sick, Richmond says. He has also noticed problems with his short-term memory.

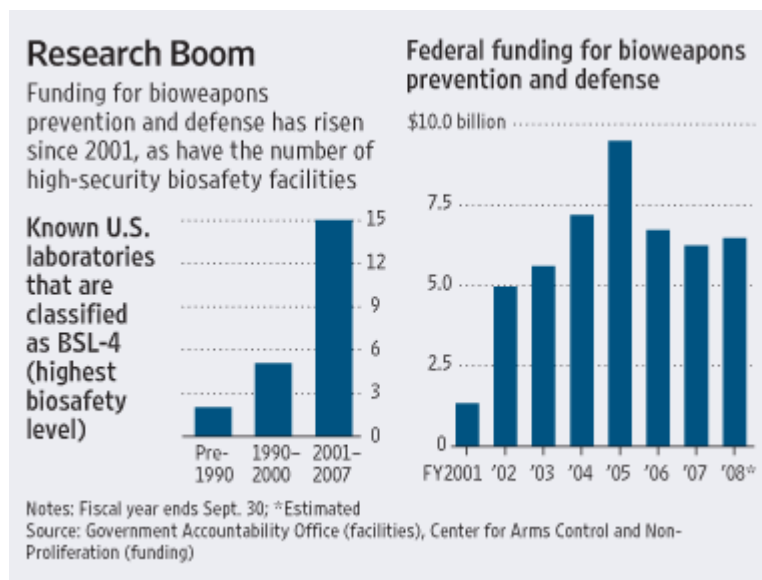
Η βιοτρομοκρατία εξακολουθεί να αποτελεί κορυφαία προτεραιότητα

Ενδιαφέρουσα ανάλυση σχετικά με το τι έχει γίνει και τι μέλλει γενέσθαι στον τομέα της πρόληψης της βιοτρομοκρατίας στις αμερικανικές μεγαλουπόλεις – με ιδιαίτερη επικέντρωση στο σύστημα BioWatch που μπορεί εντός 34 ωρών να ανιχνεύσει και να ταυτοποιήσει κάθε παθογόνο οργανισμό σε 30 πόλεις.

Bioterrorism's Threat Persists As Top Security Risk

So what has the U.S. learned since anthrax was sent through the mail in 2001? It is cheap to do. It is easy to pull off. It is tough to respond to. And for all of those reasons, it remains one of the top concerns of security officials across the country, and one of their greatest frustrations. New York City is at the forefront of confronting the

bioterror threat, with one of the most advanced detection and response systems in the country. But the problem "is not fixed in New York or anywhere else," says Richard Falkenrath, the city's counterterror chief and a former senior White House security aide. The federal government has spent nearly \$50 billion on programs to fight bioterrorism since 2001. Still, experience in New York City and elsewhere



underscores the enduring difficulty of contending with this type of terror attack. Experts in the field say that the nation's ability to detect biological weapons is still inadequate in most locales, as is its ability to distribute drugs to the population once the lethal agent is identified. Hospitals warn that the volume of casualties from an effective attack could simply overwhelm facilities. "We've made very little progress in

[any] of those very big areas," says Dr. Tara O'Toole, director of the Center for Biosecurity at the University of Pittsburgh Medical Center. The U.S. Department of Homeland Security is constructing a center that will merge biothreat information from federal agencies and eventually connect it with localities. The department has also been building its BioWatch system, which deploys equipment to sniff out key deadly pathogens from the air. William O. Jenkins Jr. of the Government Accountability office said in congressional testimony that it isn't clear that the new center will be able to perform as expected when it is launched next month. He also found that the BioWatch system requires up to 34 hours to detect and confirm a pathogen. While the department is trying to develop an interim solution to expedite detection, a faster system isn't scheduled for completion until 2010, he said. Bioterror experts warn that an attack is only going to become easier to launch as the same work that has spawned countless new biotech medical treatments continues to advance. "Unfortunately, there's going to be a dark side," says Randall Larsen, Director of the Institute for Homeland Security, a Virginia-based think tank. The biotech revolution, he said, is making it "easier for nonstate actors to develop sophisticated bioweapons." With easier access to fatal pathogens, it may be impossible to uncover preparations for an attack, leading government officials to focus more on lessening the impact of an attack than preventing one. New York is using the next generation of sensors that the federal BioWatch program hopes to distribute nationwide by 2010. The city has been asking the federal government for more sensors. Most of the devices require up to 34 hours to detect a lethal bug, but about a half dozen new machines can detect an agent more quickly. Yet New York remains at the leading edge. In most other cities, there was little federal guidance about which systems to buy, which led to a patchwork of often ineffective programs. The BioWatch system is active in more than 30 cities. In New York, if a lethal agent is detected, the city plans to immediately distribute drugs to counter the bug. The federal government has worked to develop a national stockpile of drugs to deploy anywhere in the country, and biosecurity experts give the

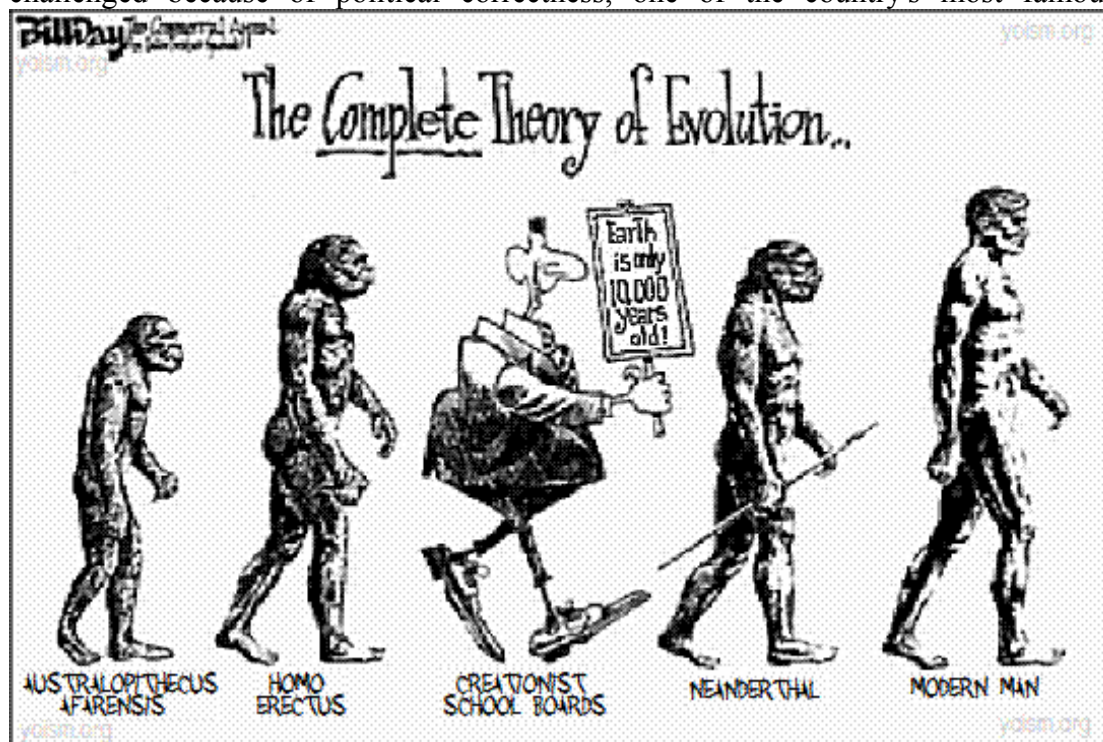
program high marks, saying that it can get the drugs to an affected region quickly. The problem, they say, is getting the medication out of the airport, where the federal government leaves it, and into communities. If a biological attack were to happen tomorrow, said Lawrence O. Gostin, a bioterrorism expert at Johns Hopkins and Georgetown Universities, the best advice the government could give would be for people to stay where they are. He adds: "I have no idea how they would get to my suburban Maryland neighborhood and get me an antiviral or antibiotic." And biosecurity specialists lament that little progress has been made even on the most public of possible biological threats: countering an anthrax attack. Seven years after the nation contended with just such an attack, an \$877 million effort to develop a new anthrax vaccine has failed; there's no quick way to test patients for an anthrax infection; and efforts to develop a drug to counter anthrax's lethal chemicals haven't produced much. "We need to seriously reconsider the approach we've been taking," said Alan Pearson, Director of the Biological and Chemical Weapons Control Program at the Center for Arms Control and Non-Proliferation. He advocates a greater focus on prevention.

Επιστήμη και εξέλιξη στα σχολεία

Οι μουσουλμάνοι εισάγουν τις δικές τους θεωρίες στα βρετανικά σχολεία (creationism) γεγονός που έχει προκαλέσει αντιδράσεις στην επιστημονική κοινότητα της χώρας εξαιτίας της «προστασίας» που απολαμβάνουν κάτω από την απειλή της κατηγορίας για «ισλαμοφοβία». *Οποιος άνοιξε τους ασκούς του Αιόλου ας πληρώσει και τις συνέπειες!*

UK: Scientist accuses Muslims of bringing creationism into schools

Devout Muslims are importing creationist theories into science and are not being challenged because of political correctness, one of the country's most famous



scientists said tonight. Professor Richard Dawkins argued that as a result teachers

were promoting the 'mythology' of creationism over the science of evolution. Professor Dawkins, a geneticist and author of the best-selling book *The God Delusion*, said: 'Islam is importing creationism into this country. 'Most devout Muslims are creationists - so when you go to schools, there are a large number of children of Islamic parents who trot out what they have been taught. 'Teachers are bending over backwards to respect home prejudices that children have been brought up with.'The Government could do more but it doesn't want to because it is fanatical about multiculturalism and the need to respect the different traditions from which these children come.'The Government - particularly under Tony Blair - thinks it is wonderful to have children brought up with their traditional religions. I call it brainwashing.' He added: 'It seems as though teachers are terribly frightened of being thought racist. 'It's almost impossible to say anything against Islam in this country because if you do you are accused of being racist or Islamophobic.'

Πτώση ισλαμοποιήσεων στο Βέλγιο

Ο αριθμός των Βέλγων που ασπάστηκαν τον μουσουλμανισμό είναι πτωτικός και από 1.000 έως 1.200 άτομα ετησίως έχει καταλήξει σε 500-600.

Belgium: Drop in conversions to Islam

The number of conversions to Islam in Belgium is in decline. While the average is estimated to be 1,000-1,200 a year, it came to a total of 500-600 conversions during the past 12 months. Karim Geirnaert, who coordinates conversions in Wallonia and Brussels, explains this 'slowdown' saying that Islam was not spoken about as much last year.

Κυβερνο-τρομοκράτης Nemo

Πρόκειται για τον πλέον γνωστό κυβερνο-τρομοκράτη του διαδικτύου που εξακολουθεί να διατηρεί εικονικά στρατόπεδα εκπαίδευσης για επίδοξους τρομοκράτες παγκοσμίως. Στην ιστοσελίδα του διακινεί ενημερωτικά videos από τρομοκρατικές επιθέσεις αυτοκτονίας, βιβλιογραφία παραστρατιωτικού περιεχομένου ενώ πρόσφατα ανάρτησε και αποτελέσματα δικών του πειραματισμών με εκρηκτικά. Για άλλη μια φορά, αποδεικνύεται ότι το διαδίκτυο αποτελεί το άριστο μέσο εκπαίδευσης όλων όσων αδυνατούν να μεταβούν στα πραγματικά στρατόπεδα εκπαίδευσης του Πακιστάν και του Αφγανιστάν.

Finding Nemo

Cyber jihadist Nemo is well known in online jihadist circles. If information downloaded from the internet ever results in a successful attack, the chances are that he was responsible for circulating it. There is growing concern that the internet has replaced the Afghan training camps as the principal training ground for aspirant jihadists. A vast library of information on bomb-making, weaponry and tactics is now available online. A prominent cyber jihadist who calls himself Nemo is more responsible than any other individual for maintaining this 'virtual training camp'. Nemo's username is taken from the 2003 animated feature film *Finding Nemo*. He has used a picture of the movie's clown fish protagonist as his user image. He is also known as Ozooo - one of his better-known websites was the now-defunct ozooo.tk and his membership of the Al-Ekhlaas jihadist forum is registered to Ozooo. His first website, mowahida.jeeran.com/index.html, was widely known within the online

jihadist scene, although is now defunct. Other websites he has used in the past include www.isi86.jeeran.com, w1000.jeeran.com, ozzzo.jeeran.com and nemo86.jeeran.com. He is currently constructing a new site at 02000123.jeeran.com/index.html, which includes horrific images of the Madrid train bombings. Nemo is an Arab - his posts are in Arabic and he has never demonstrated an ability to translate from other languages. One of his email addresses yousuf1986@hotmail.com could indicate that his first name is Yousuf and that he was born in 1986, making him 21 or 22 years old. He may be a father - a picture of a baby appeared on one of his websites. He later put up a photograph of a young girl wearing a Hamas bandana. If this girl was his daughter, it would suggest he is a Palestinian. While he may dress his daughter in Hamas garb, he also clearly supports Al-Qaeda. Indeed, there is little information to suggest he is formally affiliated to any group. While he does not appear to be actively involved in paramilitary operations, he has posted observations of what seem to be his own experiments with explosives. Nemo has compiled thousands of web pages that are easy to access and download. As well as circulating jihadist propaganda such as videos of suicide bombings, Nemo has become the primary librarian of paramilitary information. The main jihadist forums have a number of relatively permanent addresses, but they are not long-term repositories for large computer files. Instead, they advertise links to other web pages where the information is stored. Often hosted unwittingly by commercial sites, these web pages generally disappear relatively quickly. It is people like Nemo who ensure the information is permanently accessible by constantly reposting it and advertising the new links in the various forums and on his own blogs. Much of the paramilitary information circulating in jihadist circles can be traced back to the Encyclopaedia of Jihad, a lengthy, multi-volume Arabic language document that seems to have been compiled in Afghanistan in the 1980s and, to some extent, consists of translated US military manuals. Hardcopies of various volumes of the encyclopaedia were found at training camps in Afghanistan in late 2001. However, by this stage, it had already been converted into portable document format (pdf) files, making it easier to distribute over the internet. The Encyclopaedia of Jihad covers a wide range of subjects, including making explosives, first aid, weaponry, espionage, counter-surveillance, sabotage, communications, reconnaissance, infiltration, physical fitness and navigation. Jihadists have also drawn on amateurish publications such as *The Poisoner's Cookbook* and *The Anarchist's Handbook* to produce manuals on making chemical and biological weapons. Nemo seems to be trying to bring together all the available information on the various practical topics into one comprehensive database. He hosts an interface on his blog that divides the available information into various sections and sub-sections so his readers can rapidly access information on any given subject. To the older material he has added more recent information such as articles published by Muaskar al-Battar (*Training Camp of the Sword*), an online magazine affiliated to Al-Qaeda's Saudi Arabian branch. In the short period that it was published on a bi-monthly basis in 2003 and 2004, Muaskar al-Battar carried features on weaponry and tactical subjects. While some of the material can be traced back to the Encyclopaedia of Jihad, operational jihadists such as Abd al-Aziz al-Muqrin offered tips on such subjects as kidnapping and urban warfare. Muqrin was killed in Saudi Arabia in 2004 after kidnapping and beheading a US national. Another important source of information for Nemo is the material published by Abu Dhu al-Bajadin, an alias purportedly used by an expert bomb-maker affiliated to Al-Qaeda's 'Highest Firdaws Brigade'. Abu Dhu is something of a consultant who periodically issues detailed answers to questions posted on jihadist forums. Nemo's website currently has links to a series of 10 Abu

Dhu documents that examine suicide vehicle bomb attacks and their ability to effectively destroy enemy installations with references to various incidents such as the 1995 Oklahoma and 1996 Khobar Towers bombings. Jane's was unable to find these documents on any websites other than Nemo's. Other information published by Nemo includes documents produced by Palestinian militants. These include diagrams of the Qassam improvised rockets used by Hamas and a video tutorial on manufacturing and using suicide bomb vests called The Explosive Belt for Martyrdom Operations, which is believed to have been produced by a Palestinian militant group.



The utility of many of the manuals that can be downloaded from the internet remains debatable. They are certainly no substitute for hands-on training sessions with experienced instructors and the material clearly varies considerably in quality, from dangerously vague instructions on making explosives through to more sophisticated productions such as The Explosive Belt for Martyrdom Operations, although this video presumes viewers already have access to plastic explosive and detonators. The information on computer security is arguably of greater use than the paramilitary manuals. Nemo circulates information on how to maintain websites and what file hosting sites to use, therefore contributing to the online jihad more generally. He also publishes a range of advice on preventing hostile parties from tracing or monitoring communications. For example, he has recommended PGP encryption software, which jihadists claim has led to the development of "the first Islamic programme to communicate securely over networks". This, at least, has immediate practical value, allowing jihadists - presumably including operational ones - to communicate safely. At the same time, the paramilitary material allows young radicals to immerse themselves in technical as well ideological aspects of jihad. Nemo is helping to reinforce the macho jihadist culture that appeals to young men. In this respect, he is contributing to the radicalisation process and encouraging grassroots action. Aspirant jihadists can use Nemo's information to prepare before travelling to a training camp or

a conflict zone. As yet there do not seem to be any confirmed cases of successful terrorist attacks being carried out solely using manuals downloaded from the internet. But if there is a successful attack, there is a high probability that Nemo circulated the relevant instructions.

Ναυτική τρομοκρατία στον Ινδικό Ωκεανό

Ο αρχηγός του Ναυτικού της Ινδίας προειδοποίησε πρόσφατα τη διεθνή κοινότητα ότι η ναυτική τρομοκρατία αρχίζει να κάνει την εμφάνισή της στην περιοχή καθώς η Ινδία βρίσκεται στο ενδιάμεσο μεταξύ Ατλαντικού και Ειρηνικού ωκεανών. Πάνω από 200 πλοία διέρχονται τα στενά της Malacca ημερησίως και πάνω από 15.5 εκατομμύρια βαρέλια πετρελαίου διακινούνται δια των στενών του Hormuz.

Maritime terrorism gains roots in Indian Ocean

Maritime terrorism has gained roots in the Indian Ocean region, the Indian Navy says. Delivering a lecture on the Vision of the Indian Navy, its chief Admiral Suresh Mehta denied presence of Al Qaeda terrorists in the region but said there had been a



marked increase in maritime terrorism across national boundaries. "Maritime terrorism across national boundaries has gained momentum in the Indian Ocean. Armed aggression has increased and multinational cooperation is required to curb it," Mehta said. The Indian Ocean provides the shortest link between the Atlantic and Pacific oceans. It accounts for nearly half of the world's container traffic, while two-thirds of the world's oil imports flow through this region. Over 200 ships

pass through the Malacca strait daily. More than 15.5 million barrels of oil is shipped from the Persian Gulf by tankers each day through the Gulf of Hormuz. The Persian Gulf with 65 percent of the world's reserves holds the key to global energy and economic progress. The Indian Navy chief sought better human resource management and training for shipbuilding, ship repair, intelligence sharing, surveillance and other measures against common threats of maritime terrorism and piracy, environmental protection and in other areas of ocean management. The Indian Navy has proposed setting up of an apex body to oversee and coordinate all maritime activities including shipping, fishing and navy itself for better security and protection of maritime assets. "An apex body needs to be formed to manage maritime affairs for quick decision making and rapid response. Currently, the fisheries and other resources are under agriculture ministry, shipping is under a separate ministry," Mehta said. "We need to have an organisational structure in which representatives of both these ministries sit together along with the Indian Navy so that we can take action that will be required when there is an emergency situation," he added.

Ασφάλεια αεροδρομίου Ben Gurion

Στο αεροδρόμιο απασχολούνται 4.000 υπάλληλοι εκ των οποίων οι 2.300 στο τομέα της ασφάλειας. Οι τελευταίοι πρέπει να είναι Ισραηλινοί και να έχουν υπηρετήσει τη στρατιωτική θητεία τους. Οι επιβάτες που χρησιμοποιούν το αεροδρόμιο υπόκεινται σε ελέγχους 12 διαφορετικών κύκλων ενώ ετησίως εκτελούνται 7000 ασκήσεις ώστε

το προσωπικό να διατηρεί την ετοιμότητα και την αποτελεσματικότητά του. Το αεροδρόμιο φυλάσσεται στο σύνολο της περιμέτρου του και όχι μόνον στους αεροδριαδρόμους από ομάδα 150 ενόπλων και ηλεκτρονικό φράκτη. Υπάρχουν μόνον δύο δρόμοι πρόσβασης που ελέγχονται από βαριά οχυρωμένα φυλάκια ελέγχου όπου η πλήρης στάση των αυτοκινήτων είναι υποχρεωτική ενώ υπάρχει αυτοματοποιημένη καταγραφή/αναγνώριση των πινακίδων κυκλοφορίας. Υπάρχει επίσης και σιδηροδρομική γραμμή που επιτηρείται από ένοπλο προσωπικό που εξυπηρετεί τις ανάγκες του αεροδρομίου. Εντός του αερολιμένα, το προσωπικό ασφαλείας φέρει πολιτικά και δεν ξεχωρίζει από τους υπόλοιπους επιβάτες (screeners). Δεν υπάρχουν σκύλοι εργασίας ενώ με τη βοήθεια της σύγχρονης τεχνολογίας γίνεται συνεχής σάρωση των χώρων του αεροδρομίου για ανίχνευση ύποπτων αντικειμένων ή άλλων απειλών. Δεν είναι κακό οι εγχώριοι υπεύθυνοι να κάνουν μια βόλτα μέχρι το Τελαβίβ. *Πάντα υπάρχει περιθώριο για νέες γνώσεις, ιδέες και λύσεις. Η καθημερινή εφεύρεση του τροχού κάποτε καταντάει ενοχλητική αλλά και ασύμφορη.*

Ben Gurion International Airport Security

Zeev Sarig, head of security at Ben Gurion International Airport, hosted dinner at a cozy Jerusalem restaurant on the second night of the Airports Council International–North America Israel security mission in May 2008. I had been invited on the weeklong trip as the group’s lone air cargo guy and listened intently as our charming host filled the evening with lively, interesting, and passionate conversation about U.S.-Israeli relations and current events. As the discussion progressed, it soon became clear why Israel picked the unimposing Six Day War veteran who fought alongside



General Moshe Dayan to meet the challenges of running one of the most secure airports in the world. It is normal to hear about Israel’s practices in any security policy discussion in Washington. Israel’s response to frequent terrorist activity supports an industry thriving on technology, designed to protect the country and its transportation infrastructure. I therefore jumped at the chance to accompany American airport and government officials for a glimpse of what has become the world’s security best practices baseline. It was interesting to find a situation in which airport security and commerce coexist, albeit in a much smaller, more controllable, and perhaps less competitive environment than the United States. The innocent American culture has been replaced by one of eternal vigilance in the

almost seven years since September 11, 2001, as the country awaits another attack. In the same period, Israel has experienced war with neighboring Lebanon, frequent deadly Palestinian suicide bomber attacks, and constant annihilation threats from Iran and other hostile countries. Despite an adverse environment, its tourism industry thrives with worldwide visitors and foreign investment. One cannot visit a country where Americans are looked upon more favorably. It is therefore crucial that Israel’s main entry point, Ben Gurion International Airport, resist attack. This responsibility belongs to Sarig and his security team. Along with our group of airport managers, Department of Homeland Security officials, elected community leaders, and biometric

experts, I was given a glimpse into what is arguably the most protected aviation facility in the world. The airport has 4,000 employees, 2,300 of whom work in the security division. Each is an Israeli citizen and has served a compulsory military enlistment. Passengers wishing to use the airport must endure a 12-layer security process that incorporates vast amounts of baggage screening technology, personal scrutiny, and risk assessment. Despite their youthful appearance, the security personnel are motivated, alert, and serious. Unlike most American airports, Ben Gurion's entire perimeter—not just the airfield—is protected. There are 150 armed officers dedicated to stopping unauthorized entry who patrol the electronic fence. Security personnel undergo 7,000 security drills per year to hone skillful awareness.



Visitors traveling by car can access the facility using only two roads, each with full-stop, heavily armed checkpoints. License plate recognition technology is employed on all vehicles entering the airport. A rail service with security personnel on each train serves the facility as well. Once inside the terminal, however, travelers see no conspicuously uniformed armed guards. Security agents disguised as travelers carry concealed weapons. Holocaust survivors have expressed concerns over the use of attack dogs, and therefore these animals are forbidden. Technology constantly monitors floors and the surrounding environment to detect any introduction of explosives or suspicious material. American airports also use the ideas and gadgets we saw, but the extent varies by geographic location, risk level, and available funds. This seems to make sense, as the terrorist threat in a place like Cedar Rapids, Iowa, probably differs from that in facilities such as New York's LaGuardia or Washington's Reagan National. U.S. airports spend money carefully and, unlike their Israeli counterparts, do not address the security task uniformly. Our government mandates the standards and leaves their implementation to the local authorities. There may be as many as 12 government agencies at a U.S. airport at any given time, each possibly with its own mission and agenda—the Federal Aviation Administration, the Transportation Security Administration, Customs and Border Protection, the FBI,

local police, and state law enforcement to name a few. The Israel Airport Authority is the ultimate government body at Ben Gurion, controlling all security and operational activity, working in conjunction with the Israel Security Agency and the National Police. This alleviates interagency conflict, as decisions are made by one indisputable authority that can quickly respond to security challenges. Many Israelis I met wondered about America's preoccupation with political correctness seemingly at odds with common sense. For example, why are 90-year-old passengers in the United States forced to endure the same passenger screening levels as their more youthful counterparts? Why is every airport in America treating passengers the same despite differing threat vectors? Why are pilots screened through checkpoints in the United States despite having control of the plane's fate? Israelis and Americans may never agree on answers to such questions. Despite Ben Gurion's impressive array of security measures, the Americans on this trip concluded that re-creating the Israeli model in the United States is not feasible. While Israel has six commercial airports operating about 200 departures daily, the United States has 450 airports with over 4,000 departure per day. Sacramento, California, for example, has 180 daily departures, while Ben Gurion has just 150. It is much easier to secure a major airport in a small country. Still, Israel is geographically situated in a sea of hostility that America, we hope, will never experience near its own shores. Perhaps this is why Sarig needs as many security resources as possible to protect his airport. The Israelis were not forthcoming about cargo screening; it appears to be a conundrum to them as well. They too realize that technology capable of adequately screening pallets and unit load devices simply does not exist. Shipments are routinely held for a significant time before departure, making some air cargo services inefficient for occasional shippers. The American model of fast-paced, just-in-time passenger air freight could never exist in Israel. U.S. shippers have grown accustomed to airlines flying urgent medical supplies, replacement assembly line parts, fresh flowers, and seafood across the country within hours. Delaying the process for days while awaiting cargo screening would not only harm the industry but also our nation's commerce and economic viability. However, as the United States begins to roll out its Certified Cargo Screening Program, it is worth noting that Israel also validates frequent shippers, allowing them to become "known" and therefore providing faster flight access. The supply chain becomes part of the security solution because the Israeli government and its citizens understand that their safety and security are most important and, ultimately, everyone's duty. Inviting American companies to play a part in airline security injects the commonsense approach that Israel feels is missing from our airport security policy. U.S. Certified Shipper applicants practicing strict security measures will submit their employees and facilities to TSA background checks and validation. Once accepted into the program, participants will become regulated and trusted to enjoy a swifter security process shared by their Israeli frequent shipper counterparts. While TSA will always reserve the right to randomly screen certified cargo, participating shippers will avoid airport bottlenecks caused by those not in the program awaiting potentially slow, yet required, airline screening. The country known for its extensive security practices weaves its frequent shippers into the fabric of its supply chain security policy through involvement and trust. Americans using the Certified Cargo Screening Program are capable of taking on the same responsibility.

Ιστορία και μέλλον της αυτοκτονικής τρομοκρατίας

Ενδιαφέρουσα ανάλυση του καθηγητού Michael Horowitz του University of Pennsylvania που εστιάζει σε δύο βασικά ερωτήματα: (1) ποια είναι τα αίτια

εμφάνισης της αυτοκτονικής τρομοκρατίας κατά τις τελευταίες λίγες δεκαετίες, και (2) γιατί ορισμένες τρομοκρατικές ομάδες υιοθετούν την πρακτική των βομβιστών αυτοκτονίας και άλλες όχι;

The History and Future of Suicide Terrorism

Michael Horowitz is assistant professor of political science at the University of Pennsylvania. His work has been published in *The Journal of Conflict Resolution*, *The Journal of Strategic Studies*, *Orbis*, and the *Washington Quarterly*. This essay is based on his presentation at FPRI on June 25, 2008. There are two important questions to consider in studying suicide terrorism. First, why has suicide terrorism emerged in the last few decades as such a potent weapon? Second, why is it that some terrorist groups use suicide terrorism, while others have not? Suicide terrorism has emerged as a very powerful weapon over the last several years, with 9/11, car bombings in Iraq, in the West Bank, in Sri Lanka and elsewhere. It has captivated the public. As a tactic, it has infiltrated our national consciousness. However, we need to stop viewing suicide terrorism as something exotic and incomprehensible, which only leads to confusion. It makes more sense to think of it as an example of a military innovation for non-state actors and to apply some of the analytical tools we use to analyze the spread, or diffusion, of nuclear weapons, carrier warfare, or blitzkrieg warfare. Many argue that suicide terrorism is more effective than other kinds of terrorist attacks. In *Dying to Win: The Strategic Logic of Suicide Terrorism* (2005), Robert Pape of the University of Chicago found that, excluding 9/11, from 1980-2003, suicide attacks represented 3 percent of all terrorist incidents, but 48 percent of the casualties. This means that the bang for the buck in the average suicide attack is extraordinarily high. However, we tend to view suicide terrorism as something simple for those who do it you strap a bomb on and blow yourself up, or you get in a car that has a bomb and run it into something. In fact, there is a complicated organizational challenge associated with adopting suicide terrorism. It is not a costless move for terrorist organizations. Some of the difficulties involved in adopting suicide terrorism explain why, while some groups have chosen to use it, others have not. In particular, suicide terrorism proved exceptionally difficult to adopt for the most successful terrorist groups of the pre-suicide bombing era. Like successful businesses that fail to adapt in a changing strategic environment because they were too stuck in their old routines and ways of operating, the PLO, the Provisional IRA, and the Basque ETA all failed to adopt in the short to medium term. Only the PLO's Fatah, of the three, ever adopted it, and that was almost two decades after the introduction of the innovation. In addition to looking at the organizational decision to use suicide bombing, we should also focus on suicide terrorism as an example of the diffusion of innovations. One brief story with repercussions for U.S. national security illustrates the interconnections among groups and the importance of understanding how they operate. In the early 1990s, when Osama bin Laden was shifting Al Qaeda into more of a direct operational role, he needed to figure out the best way to attack an American embassy. He looked at different plans and ideas other groups had had. He recalled Hezbollah bombing of the U.S. Marines barracks in 1983 and Hezbollah other successes with suicide bombings. So, despite profound theological differences between the Salafist/jihadist views of Al Qaeda and the Shiite Hezbollah, Bin Laden sent his operatives to go talk to the Hezbollah leadership. They came back with what were effectively operational blueprints for how to plan and executive suicide attacks, especially against hard targets like embassies. The East African embassy attacks

resulted in part from this example of diffusion. In the 1980s, Hezbollah was really thought of as an innovator, the first mover. This story shows the spread of the idea to the primary adopter of suicide terrorism in the 1990s and beyond Al Qaeda. The subsequent history of suicide terrorism is best thought about as a diffusion process.

Defining Suicide Terrorism

It is very difficult to define terrorism in general. Even parts of the U.S. government cannot agree on a definition. Suicide terrorism is easier to understand conceptually. It is a violent attack designed to kill others where the death of the attacker is a necessary part of the action. This is different from a suicide mission. In WWII movies, you have the suicide mission where the men get together and are sent on a mission that they know they will not survive. The means of destruction in this case, the way they perpetrate the attack, is the machinegun they fire, the grenade they throw, or the bomb they drop. They know they are probably going to die, but it is not their deaths that



cause the mission to succeed. They are simply going to die accomplishing their mission. That is very different than a suicide attack where it is through your death that your mission, the killing of others or destruction of a target, is accomplished. The mission is accomplished through your death. We all know about imperial Japan's use of kamikaze tactics at the end of WWII. In mid-1944, in response to growing Japanese losses and especially the large decline in the quality of Japanese pilots, the Japanese turned to using the planes as weapons themselves, flying them directly into U.S.

ships. Historians disagree about when exactly this debuted, but most would cite Leyte Gulf in October 1944 as the first place we saw it en masse. By the end of the war, the Japanese had sunk between about 34 and 70 ships and killed thousands of Allied soldiers through this tactic. Most military historians do not consider Japan's efforts a success, one reason being that to accomplish this, the Japanese sacrificed almost 5,000 pilots. But this is a clear example of the use of suicide attacks.

The Modern Era

Suicide bombings disappeared until the early 1980s, the beginning of the suicide terrorism era in Lebanon. In 1982, radical elements of the Shiite resistance in southern Lebanon joined together in the Bekka Valley to form Hezbollah. The group was aided by Iranian Revolutionary Guards, who may have brought with them Iranian human wave tactics from the Iran-Iraq war. While not the first suicide attack in the period that occurred in 1981 the first known attack by Hezbollah was on November 11, 1982, against an Israeli military installation. The success of that attack prompted Hezbollah to continue, which led to the worst terrorist attack overseas against U.S. assets, the Marine barracks bombing that killed over 200 Americans. The way Hezbollah thought about the attacks highlights basic questions about motivations that analysts continue to discuss today. According to Martin Kramer, when Hezbollah considered whether to continue suicide bombings, the decision was in part a theological decision driven by practical concerns. Clerics justified suicide bombings for two reasons: the genuine

devotion of the martyr and the practical utility of the attack. As the spiritual leader of Hezbollah, Sayyid Muhammad Husayn Fadlallah, said, the Muslims believe that you struggle by transforming yourself into a living bomb like you struggle with a gun in your hand. There is no difference between dying with a gun in your hand or exploding yourself. However, note the practical element of the justification as well. Later in the 1980s, when Hezbollah's leaders decided the attacks were not achieving the same successes as before, either tactically or strategically, it made sense to stop. This shows, at an early point, the interconnectedness between religious and practical arguments for suicide bombing. The perceived success of the tactic and the notoriety Hezbollah had gained led to the spread of suicide bombing. The Tamil Tigers in Sri Lanka became a non-Muslim and non-Middle Eastern early adopter in 1987. The Tamil Tigers came out of a resistance movement in Sri Lanka that sought independence and autonomy. In 1987 they began a suicide campaign that spanned multiple decades. Before 9/11 and the ensuing spate of suicide bombings in places like Afghanistan and Iraq, the Tamil Tigers were actually the most prolific adopter of suicide terrorism in the world, credited with over 150 attacks; 191 is one estimate. The LTTE is very interesting from a targeting perspective. We tend to conceptualize suicide terrorism as being about attacking civilians. While Hezbollah did not necessarily focus on attacking civilians, groups like Hamas or Al Qaeda (and affiliates) have caused the association of suicide bombings with civilian targeting. Alternatively, the LTTE, especially at the outset, conceptualized suicide attacks very differently. They used suicide bombing more as a substitute for military operations they could not complete with conventional means, making them asymmetric but closer to the traditional military sense of the term. The Tamils thought about suicide bombing more for hard targets and assassinations, not necessarily targeting civilians, though civilians often died in their attacks.

Theories for Rise of Suicide Terrorism

Suicide campaigns increased steadily from the early 1980s to 2001 and beyond. The number of suicide attacks worldwide between 2001 and 2005 shows a more than secular increase in the number of attacks. Why? One explanation revolves around individual-level factors individuals who had grievances against a government or group who sought to demonstrate their anger or fury through a suicide attack. Other explanations postulated psychological weaknesses or proclivity to suicide. Few scholars still accept those sorts of arguments. Research by Alan Krueger and others seems to suggest there is not a strong link between economic weakness and suicide terrorism, either at the national or individual level. Two recent theories, however, have met with some acceptance. One, by Robert Pape, has to do with occupation. He finds that when groups are or feel occupied, they are much more likely to resort to a tactic like suicide terrorism. Pape's argument has intuitive appeal given the actions of a group like Hamas, which feels occupied so arguably turned to suicide terrorism to make a splash, get media attention, and try to demonstrate to their occupier, Israel, the true cost of their actions. However, one problem with Pape's argument is that many occupied groups have not used suicide terrorism. Consider the Provisional Irish Republican Army (IRA) in Northern Ireland, a violent terrorist group whose members had no problem dying for the cause but which never adopted suicide terrorism (on a few occasions they kidnapped families and forced the husband to drive a bomb loaded with explosives towards a checkpoint, but those are coercive rather than voluntary). So, while occupation can explain some cases of suicide bombing, it cannot explain non-adoption by prominent groups. Another explanation, by Mia Bloom of the

University of Georgia, has to do with what she calls outbidding. Bloom held in *Dying to Kill: The Allure of Suicide Terror* (2005) that if you want to understand suicide terrorism, you have to understand the competition for control that often happens in insurgency situations. Multiple groups committed to a cause try to demonstrate their commitment to the broader public, and there is no better way to do that than to show the absolute willingness of group members to give up their lives for the cause. If the public is supportive, the competition proves which groups legitimately represents the interests of its people. This drives the escalation to suicide terrorism. While parts of the outbidding explanation are persuasive, one problem is that while it actually does a reasonable job of explaining some of the behavior in the Palestinian territories, it does not explain suicide campaigns where there are not elite competitions for control. For example, in the Tamil case, the struggle for influence among Tamil resistance groups was over before the Tamil Tigers' suicide terror campaign began. A third theory has to do with the combination of religion and globalization. In *The Globalization of Martyrdom: Al Qaeda, Salafi Jihad, and the Diffusion of Suicide Attacks* (Johns Hopkins University Press, forthcoming November 2008), Assaf Moghadam of the Combating Terrorism Center at West Point argues that the increase in suicide terrorism over time is really driven by the Salafists/jihadists. So most important is understanding Al Qaeda and the globalization of terrorism. Moghadam's work is part of an interesting new wave of suicide terrorism research. Explaining suicide terrorism requires viewing it as a military innovation and better



understanding the organizational requirements needed for its adoption. The Provisional IRA was a non-adopter of suicide terrorism despite being one of the most successful terrorist groups of the 1970s and 1980s. It had complicated training manuals and almost a mini-state-like bureaucracy. It focused first and foremost on the survival of their volunteers, the term they used for group members. How do you square that with something like suicide terrorism? Organizational theorists like James Q. Wilson have identified something called critical task focus, which refers to the way an organization defines its goals and objectives. The Provisional IRA's focus on the survival of its volunteers as part of its goal led to the conflation of its critical task focus with the way it conducted its operations, confusing means and ends. Since the group built into its reason for existing the survival of its members, how do you tell them to go kill themselves? Another way to think about organizational requirements has to do with experimentation and organizational age. Economist Mancur Olson argues that as countries and bureaucracies age, they develop more and more sub-layers and veto points. People gain prestige, privilege, and get promoted in an organization on the basis of their talent, somewhat like in a business. As specialization captures an organization and it develops more extensive bureaucratic layering, it becomes much harder for the organization to change what it is doing if it turns out that it should do something different. So, what do you do with a terror group that has built up expertise in something like remote bombing or attacking military bases? For those groups, adoption of suicide terrorism is very difficult because they

are embedded in the ways they have always done business. Cost generally does not govern whether or not a group is going to adopt suicide terrorism. A suicide terrorism attack costs only about \$150, so money is not the obstacle. The organizational element is the real obstacle. Therefore, which groups should be more likely to adopt and which should be more likely to pass on suicide bombing even if that tactic, on the surface, could help them achieve their goals? It should be easier for the younger groups that do not have embedded ways of doing business to adopt suicide terrorism and harder for those more established groups. How do we test this idea? I studied over 800 terrorist groups from 1968 onwards, the universe of terrorist groups during that period according to the Memorial Institute for the Prevention of Terrorism, looking at whether or not they used suicide terrorism. Using statistical analysis to control for numerous factors, such as whether a group was affiliated with Al Qaeda, whether it was involved in the Arab-Israeli conflict, or whether the group felt it was occupied, I assessed whether the probability that a group will adopt suicide terrorism relates to how long the group has existed, or its organizational age. The results strongly support the idea that there is something about organizational dynamics that helps drive the suicide bombing process. For groups that are religiously affiliated, who claim the reason they exist has something to do with their religious beliefs, the probability of adoption is very high at the beginning. Groups that have more established ways of doing business are significantly less likely to adopt. A good example of these dynamics comes from Fatah, Yasser Arafat's organization in the Palestinian Territories. They eventually adopted suicide terrorism in 2000 in the Second Intifada, years after Hamas and Islamic Jihad. One explanation for their delay is the way prestige was locked up with particular people and within the organization. You received credit and priority in the organization based on hijackings, kidnappings, and remote attacks. It made suicide terrorism something very complicated for them to deal with organizationally. It took them a long time to figure out how to adopt it. For non-religiously motivated groups, how long they exist does not have as strong an affect on the probability of adopting suicide terrorism. Looking at all known suicide terrorism groups from 1983 to 2006, we see many direct connections (for instance, we know that Hamas and Hezbollah talked about suicide terrorism after the expulsion of Hamas members from Israel to southern Lebanon in 1992) and also indirect connections (the Tamil Tigers/LTTE invented the suicide vest, which Middle Eastern groups like Hamas and others then modeled). Adding together the direct and indirect links among groups, almost every suicide terrorism adopter is linked together in one way or another. In the 1980s, Hezbollah was the hub from which suicide tactics spread to the Palestinians and other groups. In the 1990s and beyond, Al Qaeda became the hub. When analysts used to study suicide terrorism, they tended to ask, "Why did Hamas do it? Why did the Taliban do it?" Rather than focusing just on individual groups, the phenomenon is best understood as part of a diffusion process. Over the last few years, Afghanistan and Iraq have become the centers of suicide bombing activity. From March 2003 to February 2006, between former Baathist ideologues and Zarqawi and Al Qaeda in Iraq, there were more than 400 suicide attacks against U.S.-led forces, Iraqi civilians, and other groups. In the past year, the Anbar awakening and the surge have been fairly successful at decreasing the number of all types of attacks against U.S. troops, but the number of suicide attacks has stayed the same or even increased. The month-by-month numbers show spikes in relation to important events such as Fallujah, so it is possible that this divergence, where total attacks decline but suicide attacks stay the same, shows that the decision to engage in suicide attacks is different than the decision to engage in attacks in general or that suicide attacks are simply

much harder to stop. Suicide terrorism in general has become more normalized over the last decade. Bloom recently presented a paper at the annual meeting of the International Studies Association on this point. She has noticed a normalization and regularization in the past couple of years. While it began as something unique, suicide terrorism is now a regular tool of sectarian violence. It is therefore unlikely that we will see suicide bombing go away. We see this both in Afghanistan and with the increasing use of female suicide bombers.

Conclusion

Despite the historical roots of suicide terrorism with the kamikazes in WWII, the tactic never really caught on with states. Nation-states generally have more efficient ways to produce the same amount of force than suicide attacks. The era of suicide terrorism really began in Lebanon in the early 1980s. We can best make sense of it if we think of it as a military innovation, not as something exotic, and if we study it from a diffusion perspective. Instead of wondering why a group is doing this grotesque thing, we need to wonder why they are but others are not. The evidence suggests the importance of organizational factors in driving the adoption or non-adoption of suicide terrorism, as well as the existence of a diffusion process where the innovation spreads among groups. Therefore, we should study suicide terrorism in a serious fashion, looking at the big picture and the key variables that explain behavior, rather than in an emotional manner.

Εμβόλιο κατά του Μαύρου Θανάτου;

Σύμφωνα με πρόσφατη μελέτη που δημοσιεύθηκε στο περιοδικό *Infection and Immunity* ομάδα ερευνητών από το University of Central Florida επέτυχαν να κατασκευάσουν εμβόλιο κατά της πανώλους χορηγούμενο από το στόμα ή σε ενέσιμη μορφή. Οι πρώτες δοκιμές σε πειραματόζωα κρίνονται απόλυτα επιτυχείς. Στην πλέον πρόσφατη επιδημία το 2005 στο Κογκό έχασαν τη ζωή τους από πανώλη 56 άτομα και μολύνθηκαν 124 άτομα πριν οι υγειονομικές αρχές καταφέρουν να αναχαιτίσουν τη νόσο. Ετησίως αναφέρονται στον Παγκόσμιο Οργανισμό Υγείας πάνω από 2.000 περιστατικά μόλυνσης από *Y. pestis*.

Vaccine To Protect Against Black Plague Bioterror Attack

A University of Central Florida researcher may have found a defense against the Black Plague, a disease that wiped out a third of Europe's population in the Middle Ages and which government agencies perceive as a terrorist threat today. UCF Professor Henry Daniell and his team have developed a vaccine that early research shows is highly effective against the plague. Findings of his National Institutes of Health and USDA funded research appear in the August edition of *Infection and Immunity*. The vaccine, which is taken orally or by injection, was given to rats at UCF and the efficacy was evaluated by measuring immunity (antibody) developed in their blood. All untreated rats died within three days while all orally immunized animals survived this challenge with no traces of the plague in their bodies. The rats were exposed to a heavy dose of *Yersinia Pestis* bacteria, which causes the plague, at the U.S. Army Medical Research Institute of Infectious Diseases in Maryland. It is one of a few labs in the world authorized to store and work with the highly dangerous agent. "We are very excited because it appears the oral vaccine is even more effective than traditional injectable vaccine," Daniell said. "This could really make a difference." In the event of a bioterror attack, the oral form makes the vaccine

practical, as the distribution of pills would be much quicker and likely more effective because no special skills or sterile needles are needed to administer them. "It worked beautifully," Daniell said. "It's expensive to create an injectible vaccine. But with oral vaccines, it is quite cheap. You grow your plants and then you convert them into capsules." The plague had a deadly impact on early Europe, it continues to make appearances today in places like Africa and Asia. The World Health Organization reports at least 2,000 cases of the plague annually. The most recent outbreak in 2005 killed 56 people in the Congo and another 124 were infected before the epidemic was stopped. In the mid 1990s more than 400 people were infected in India. Although human trials are still needed, Daniell is confident the vaccine will work for the bubonic and pneumonic plague based on animal studies. Pneumonic plague is spread through the air. Without treatment a person can die within days. Bubonic plague is the more common form and is transmitted through fleabites and kills about 70 percent of those infected within 4-7 days if not treated. It was the version that ravaged Europe. If the early findings hold true, this vaccine could mean an extra layer of protection against natural epidemics and man-made threats. The Centers for Disease Control lists the pneumonic plague as a potential bioterrorism agent because of the speed of which it can be spread and its 60 percent fatality rate if not treated early enough with an aggressive array of antibiotics. Daniell was inspired to investigate an oral vaccine for the plague because of his pioneering work in diabetes. He and his team genetically engineered tobacco and lettuce plants with the insulin gene and then administered freeze-dried plant cells to five-week-old diabetic mice for eight weeks. By the end of this study, the diabetic mice had normal blood and urine sugar levels, and their cells were producing normal levels of insulin. Daniell figured the same approach might work with a vaccine. He genetically engineered plant cells with a protein found on the outside of *Yersinia pestis*. The vaccine was inside the plant cells, which were given to the rats. The vaccine was protected from digestion in the stomach and was then absorbed in the gut. It kick started the immune system into producing antibodies, which protects against the deadly disease. Three to five doses seem to do the trick. Daniell, who was born and raised in India, has dedicated his life to finding treatments and cures to diseases that ravage poor countries. He is conducting research into seven of the top 10 diseases ranked by the World Health Organization and the Centers for Disease Control, which remain real issues developing nations. "I've seen the need. There may be some very expensive treatments available," Daniell said. "But they are so expensive that developing countries can't access them. I want to help change that." Daniell, who is the first UCF Board of Trustee Chair in Life Sciences, began teaching at UCF in 1998. His research led to the formation of UCF's first biotechnology company, called Chlorogen, for the commercial development of patented chloroplast genetic engineering technology. In 2004, he won UCF's Pegasus Professor Award, the top honor given to a faculty member who excels in teaching, research and service. Daniell also became only the 14th American in the last 222 years to be elected to the Italian National Academy of Sciences. In 2007 he was named a Fellow of the American Association for the Advancement of Sciences.

Νέα πειραματικά εμβόλια κατά του άνθρακα

Η εταιρεία BioSolutions Inc ασχολείται με την κατασκευή εμβολίου που θα βασίζεται σε ανασυνδυασμένο προστατευτικό αντιγόνο κατά του άνθρακα (rPA) το οποίο θα είναι πιο σταθερό από αντίστοιχο που αποτελεί προϊόν του USAMRIID (rPA-102).

Development and Procurement of A Recombinant Protective Antigen Anthrax Vaccine

Emergent BioSolutions Inc. announced that it has submitted a proposal in response to a request for proposal (RFP) issued by the U.S. Department of Health and Human Services (HHS) for a recombinant protective antigen anthrax vaccine (rPA). Emergent's rPA vaccine candidate is a reformulated and more stable form of the rPA 102 vaccine originally developed at the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID) and is well-positioned to be a leading candidate for an award under this RFP. One Phase II clinical trial of rPA 102 has been completed. HHS's RFP is designed to meet the government's stated goal to procure 25 million doses of an rPA anthrax vaccine for the Strategic National Stockpile (SNS). In the event that Emergent receives an award under the rPA RFP, doses of rPA procured by HHS would be in addition to the 18.75 million doses of the company's FDA-licensed product, BioThrax® (Anthrax Vaccine Adsorbed), that HHS is procuring under the existing \$448M contract with Emergent. HHS has indicated that any awards under the rPA RFP would be granted at the end of 2008, at the earliest. "We are very pleased with our submission in response to this RFP, and we are confident that our rPA 102 vaccine is a leading candidate to be selected as an advanced rPA anthrax vaccine. Our company is proud of our proven track record of delivering critical biodefense countermeasures to the U.S. government, and we believe our reputation as the premiere domestic biodefense supplier, coupled with our development and manufacturing expertise, uniquely situates Emergent to meet HHS's stated commitment to procure 25 million doses of a recombinant anthrax vaccine for the Strategic National Stockpile," said Fuad El-Hibri, chairman and chief executive officer of Emergent BioSolutions. "Considerable resources have been devoted to improving the stability of the rPA 102 vaccine. Analytical testing and non-clinical data indicate the changes made to the formulation of rPA 102 has significantly improved the stability of this vaccine candidate. We are confident that the formulation changes have addressed previous concerns regarding the stability of the product. We believe that the current formulation will meet the U.S. government's stability requirements for an rPA vaccine," said Dr. James Jackson, senior vice president and chief scientific officer of Emergent BioSolutions. The company expects to manufacture this rPA anthrax vaccine, as well as BioThrax, in its recently constructed, large-scale manufacturing facility at its Lansing campus. The continued development of this rPA vaccine candidate further solidifies Emergent's franchise of anthrax countermeasures, which now includes:

BioThrax - the only FDA-approved vaccine to prevent the infection of anthrax. Nearly 2.0 million men and women of the United States military have received the vaccine, and HHS has procured more than 28 million doses of BioThrax for the SNS;

rPA 102 - a recombinant anthrax vaccine candidate, which is composed of a purified protein with an alum adjuvant and is designed to induce antibodies that neutralize anthrax toxins;

AVA7909 - an anthrax vaccine candidate composed of BioThrax® and the immunostimulatory oligodeoxynucleotide compound CPG 7909 (VaxImmune®) developed by Coley Pharmaceutical Group (purchased by Pfizer Inc. in 2007).;

AVP-21D9 - a human monoclonal antibody product candidate being developed as an intravenous post-exposure treatment for patients who present symptoms of anthrax disease; and

AIG - a polyclonal anthrax immune globulin product candidate being developed as an intravenous post-exposure treatment for patients who present symptoms of anthrax disease, is derived from human plasma from individuals who have been vaccinated with BioThrax.

rPA 102 - The vaccine candidate, rPA 102, is based on a recombinant form of the protective antigen protein. This vaccine contains a purified protein (rPA) formulated with an alum adjuvant and is designed to induce antibodies that neutralize anthrax toxins. The vaccine candidate does not cause anthrax infection and is based on the pioneering work of USAMRIID. rPA 102 has been the subject of two research and development grants totaling approximately \$100 million from the National Institute for Allergy and Infectious Diseases (NIAID).

Βιομηχανικό ατύχημα μεγάλης έκτασης στον Καναδά

Χιλιάδες κάτοικοι του Τορόντο αναγκάστηκαν να εγκαταλείψουν τα σπίτια τους μετά από μεγάλη έκρηξη σε αποθήκες προπανίου, οι φλόγες της οποίας ήταν ορατές σε απόσταση 30 χλμ. Από την έκρηξη σκοτώθηκε ένας πυροσβέστης, υπάρχει ένας αγνοούμενος και προκλήθηκαν αρκετοί τραυματισμοί. Αναφέρθηκαν περιστατικά λεηλασιών στον εμπορικό τομέα της περιοχής της έκρηξης. *Το κακό δεν αναγγέλει τον ερχομό του! Απλά μια στιγμή συμβαίνει για παράδειγμα στην Ελευσίνα. Το πρόβλημα είναι από τη στιγμή αυτή και μετά ξεκινάσει κάθε φορά ο σχεδιασμός αντιμετώπισης βιομηχανικών ατυχημάτων μεγάλης έκτασης (BAME) σε αστικό περιβάλλον...*

Toronto Propane Depot Explosions Force Evacuation of Thousands

Thousands of north Toronto residents were told they would gradually be allowed to return to their homes last night, hours after being evacuated following a series of large explosions at a propane depot. The explosions sent huge fireballs billowing into the early-morning sky yesterday, flames that could be seen as far as 30 kilometers (18 miles) away. One firefighter, identified as Bob Leek, 55, a district chief of emergency planning, died at the scene of the six-alarm blaze that followed the blasts. An employee of the depot operator, Sunrise Propane Industrial Gases, was missing last night. At least eight people were reported to have been treated for minor injuries. Many area homes were badly damaged, and many others had windows shattered and doors blown off their hinges. While City of Toronto officials gave the all-clear for residents to return last night, police were controlling the number allowed back, and were to escort people to their residences, television all-news station CP24 reported. A 16-kilometer stretch of nearby Highway 401, Canada 's busiest highway, which was closed as a precaution, was reopened after being shut for more



than 12 hours. The closure forced traffic on to other roads and caused large traffic jams to the east and west of the blast site throughout the day. Yorkdale Shopping Centre, one of the country's largest retail malls, was evacuated and a no-fly zone was established around the area. Gas and electricity service to the affected area, about a mile in radius around the blast site, was cut off throughout the day. Last night, power



to most of the area had been restored, according to an e-mailed statement from the City of Toronto. Gas service was being restored on a house-to-house basis, with Enbridge Gas employees checking each residence to ensure that it was safe to turn the gas back on, the news release said. The explosion at Sunrise Propane occurred about

3:50 a.m. local time near Keele and Wilson avenues in the North York section of the city, Adrian Ratushniak, a captain with the Toronto Fire Services, said in a telephone interview. The fire department had 34 fire trucks in addition to other support vehicles at the location, Ratushniak said. CP24 reported that parts of the exploded propane tanks were found kilometers from the site of the blast. The cause of the explosions is still under investigation. A voicemail box for Sunrise Propane was full yesterday and couldn't accommodate any new messages. Some evacuees were given shelter at nearby York University, where food, water and bedding were being provided. The area within the 1.6-kilometer radius of the blast is home to about 12,000 people, the Canadian Broadcasting Corp. estimated, based on census figures. According to CP24, there was some looting of retail stores in the area, and a large police presence had been established. Frustrated residents, expecting to return home last night after the city's all-clear, were being halted for security reasons by police, who said people would be permitted to return gradually, in a controlled manner. The Toronto Transit Commission said late yesterday afternoon that subway service on the Yonge-University-Spadina line had been restored; three stations, Yorkdale, Wilson and Downsview, that had been closed, were reopened. Bus routes in the area continued to be diverted. The Government of Ontario Transit service bus station at Yorkdale Shopping Centre remained closed. The GO Transit train service, which uses tracks passing close to the blast site, was cleared to operate after the tracks were inspected last night, CP24 reported.

Φωτοδιόδοι στοχεύουν βιοτρομοκρατικούς παράγοντες

Ερευνητές ανακοίνωσαν στα περιοδικά *Electronics Letters* και *IEEE Photonics Technology Letters* την κατασκευή μιας νέας τάξης υπεριωδών φωτοδιόδων που θα μπορούν με αξιόπιστο τρόπο και χαμηλό κόστος να ανιχνεύουν άνθρακα και λοιπούς βιοτρομοκρατικούς παράγοντες στον αέρα.

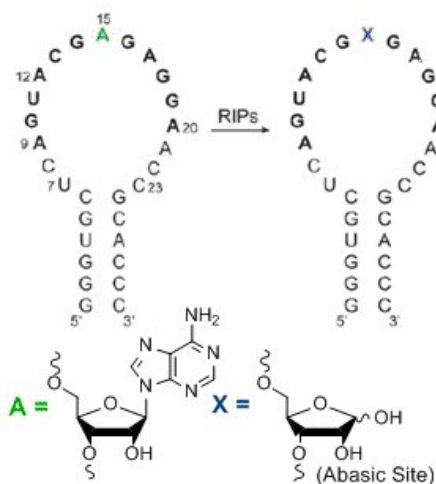
Avalanche photodiodes target bioterrorism agents

Researchers have shown that a new class of ultraviolet photodiode could help meet the U.S. military's pressing requirement for compact, reliable and cost-effective sensors to detect anthrax and other bioterrorism agents in the air. "The military is currently using photomultiplier tubes, which are bulky, fragile and require a lot of power to run them, or silicon photodiodes that require a complex filter so that they only detect the desired ultraviolet light," said Russell Dupuis, Steve W. Chaddick Endowed Chair in Electro-Optics in Georgia Tech's School of Electrical and Computer Engineering (ECE) and a Georgia Research Alliance Eminent Scholar. New research shows that ultraviolet avalanche photodiodes offer the high gain, reliability and robustness needed to detect these agents and help authorities rapidly contain an incident like the 2001 anthrax attacks. The fabrication methods and device characteristics were described at the 50th Electronic Materials Conference in Santa Barbara on June 25. Details of the photodiodes were also published in the February 14 issue of the journal *Electronics Letters* and the November 2007 issue of the journal *IEEE Photonics Technology Letters*. ECE associate professor Douglas Yoder, assistant professor Shyh-Chiang Shen and senior research engineer Jae-Hyun Ryou collaborated on this research, which is funded by the Defense Advanced Research Projects Agency (DARPA) and the Georgia Research Alliance. The team chose to develop avalanche photodiodes for this bioterrorism application because the devices can detect the signature fluorescence of biological molecules in a sample of air. Since most of the molecules of interest to the researchers emit ultraviolet light, they designed special photodiodes that detect the fluorescence in the ultraviolet region, but have no response to visible light. "We built our photodiodes with gallium nitride, which is a semiconductor that can

Ανιχνεύοντας τη δραστηριότητα των βιολογικών παραγόντων

Πρωτεΐνες που απενεργοποιούν τα ριβοσώματα όπως η ρικίνη και η σαπορίνη είναι θανατηφόρες και διαταράσσουν τη σύνθεση των πρωτεϊνών οδηγώντας σε κυτταρικό θάνατο. Ερευνητές από το University of California San Diego ανακάλυψαν νέα στρατηγική ανίχνευσης της δραστηριότητας των εν λόγω πρωτεϊνών που βασίζεται σε ένα τεχνητό νουκλεοτίδιο το οποίο «φωτίζεται» παρουσία τοξινών.

Detecting the activity of a biological toxin



Ribosomal-inactivating proteins like ricin and saporin are deadly toxins that target and disrupt the machinery of protein synthesis, thereby leading to cell death. These proteins are effective killers by ingestion, inhalation, or injection. Since pure ricin can be easily obtained from the pulp that results when castor beans are pressed for oil, it makes a convenient bioterrorism weapon. In fact, ricin already has a history of criminal use. During the cold war, it was used to assassinate Georgi Markov, a communist defector from Bulgaria. It is proposed that the assassin armed the tip of an umbrella with a ricin-filled pellet and stabbed it into Markov's

thigh. Markov died a few days later. In 2003, Scotland Yard found traces of ricin in the homes of Algerian terror suspects. In more recent history, a man fell into a coma from ricin exposure this past February. The FBI found ricin in the Las Vegas hotel room where he was staying and later arrested him for the possession of a biological toxin. Ribosomal-inactivating proteins (RIPs) interfere with protein biosynthesis by catalyzing the depurination of a specific nucleotide in a ribosomal RNA sequence called the α -sacrin/ricin loop (Figure 1). Depurination occurs when a nucleotide loses its nucleobase, becoming an abasic site that's incapable of participating in base pairing. Current methods of detecting ribosomal-inactivating proteins, such as antibodies employed in enzyme-linked immunoadsorbent assays, are complicated and difficult to use in the field. Researchers from the University of California San Diego discovered a new strategy for sensing the activities of these proteins. They synthesized a probe that is highly fluorescent only when it is opposite an abasic site in RNA. Abasic sites in RNA are rare and almost always result from ribosomal-inactivating proteins. Their probe is an artificial nucleoside (Figure 2) that is incorporated into a strand of RNA that complements the α -sacrin/ricin loop. The probe "lights up" the most when it is in an RNA-RNA duplex with an abasic site. Its fluorescence emission is not nearly as enhanced when it's in an RNA-DNA duplex with an abasic site, nor is it significantly emissive when all bases are present. In essence, the researchers developed a straightforward probe that senses depurinations in the α -sacrin/ricin loop. Based on the results of their work, the next step is to take this probe outside of the controlled environments of the lab and see if it's possible to extend its utility to real life applications.

Η απειλή του ηλεκτρομαγνητικού παλμού

Ο ηλεκτρομαγνητικός παλμός εκλύεται μετά από έκρηξη πυρηνικού όπλου ψηλά στην ατμόσφαιρα. Η πλέον ενδιαφέρουσα επίδραση του είναι στις ηλεκτρικές συσκευές κάθε είδους. Φανταστείτε τη ζωή σας χωρίς ηλεκτρισμό και στη συνέχεια διαβάστε το παρακάτω ενημερωτικό...

The EMP Threat

Imagine you're a terrorist with a single nuclear weapon. You could wipe out the U.S. city of your choice, or you could decide to destroy the infrastructure of the entire U.S. economy and leave millions of Americans to die of starvation or want of medical care. The latter scenario is the one envisioned by a long-running commission to assess the threat from electromagnetic pulse, or EMP. The subject of its latest, and little discussed, report to Congress is the effect an EMP attack could have on civilian infrastructure. If you're prone to nightmares, don't read it before bedtime. An EMP attack occurs when a nuclear bomb explodes high in the Earth's atmosphere. The electromagnetic pulse generated by the blast destroys all the electronics in its line of sight. For a bomb detonated over the Midwest, that includes most of the continental U.S. Few, if any, people die in the blast. It's what comes next that has the potential to be catastrophic. Since an EMP surge wipes out electronics, virtually every aspect of modern American life would come to a standstill. The commission's list of horrors is 181 pages long. The chapter on food, for instance, catalogs the disruptions up and down the production chain as food spoils or has no way to get to market. Many families have food supplies of several days or more. But after that, and without refrigeration, what? The U.S. also has 75,000 dams and reservoirs, 168,000 drinking

water-treatment facilities, and 19,000-wastewater treatment centers -- all with pumps, valves and filters run by electricity. Getting everything up and running again is not merely a matter of flipping a switch, and the commission estimates that many systems could be out of service for months or a year or more -- far longer than emergency stockpiles or batteries could cover. The large transformers used in electrical



transmission are no longer built in the U.S. and delivery time is typically three years. "Lack of high voltage equipment manufacturing capacity represents a glaring weakness in our survival and recovery," the commission notes. Many industries rely on automated control systems maintained by small work forces. In emergencies -- say, during a blackout -- companies often have arrangements in place to borrow

workers from outside the affected area to augment the locals and help with manual repairs. After an EMP attack, those workers would be busy in their home regions -- or foraging for food and water for their families. The commission offers extensive recommendations for how industry and government can protect against the effects of an EMP attack and ensure a quicker recovery. They include "hardening" more equipment to withstand an electromagnetic pulse; making sure replacement equipment is on hand; training recovery personnel; increasing federal food stockpiles; and many others. If not, our vulnerability "can both invite and reward attack," the commission's chairman, William Graham, told Congress last month. Iran's military writings "explicitly discuss a nuclear EMP attack that would gravely harm the United States," he said. James Shinn, an assistant secretary of defense, has said that China is developing EMP weapons. The commission calls an EMP attack "one of a small number of threats that can hold our society at risk of catastrophic consequences." The threat is real. It's past time to address it.

Υπό διωγμόν η al Qaeda

Τι συμβαίνει με την al Qaeda; Σύνηθες ερώτημα αντιπαράθεσης καθώς ουδείς γνωρίζει την πλέον κατάλληλη απάντηση. Ποια είναι η τρέχουσα πραγματική κατάσταση της al Qaeda; Οι απώλειες της οργάνωσης στο Ιράκ έχουν αποδυναμώσει σημαντικά την al Qaeda; Εξακολουθεί να είναι το ίδιο θανατηφόρα επικίνδυνη για το μέλλον;

Al Qaeda on the Run

As we left the seventh anniversary of the 9/11 attacks behind us, a debate is raging among counterterrorism experts: what is the current state of al Qaeda? Have the group's serious losses in Iraq left it fatally weakened? Or do one safe haven and several new fronts make it as dangerous as ever? Let's begin this discussion by examining the state of al Qaeda in what the Bush administration considers the central front in the War on Terror: Iraq. Al-Qaeda had made Iraq the centerpiece of its mission to establish a global Islamic caliphate. The group's master plan called for victory in Iraq, followed by similar conquests in Jordan, Egypt, and the Levant region, with Jerusalem as the final prize. But the script hasn't gone according to plan. The

security situation in Iraq has improved dramatically over the past year-and-a-half, with the U.S. troop surge and Sunni tribal awakening combining to leave al Qaeda's Iraq franchise in tatters. "Al Qaeda in Iraq, in some ways, is a victim of its own success," former CIA officer Bruce Riedel told CBN News. "It was so bloody, so violent, it was so nihilistic in its approach, that it was bound to create some kind of counterreaction." Riedel has advised three U.S. presidents. Now at the Brookings Institution in Washington, he's the author of the new book, *The Search for al-Qaeda*. He says the organization has taken a beating in Iraq--but is far from dead there and elsewhere. "In my judgment, al Qaeda is at least as dangerous as it was in 2001 because it survived a global counterterrorism offensive by every intelligence service in the world," Riedel said. "And it's still standing, and it's still issuing orders to its followers, and it's still engaging in terrorism on a global stage." "Bin Laden in particular has become a symbol of this group's ability to survive despite everything that has been thrown against it," he continued. "The fact that he is still out there almost 7 years after September 11th is a powerful rallying cry for this organization." "Now, the loss of al Qaeda in Iraq as an effective organization has definitely hurt al Qaeda. But I don't think it's a deadly blow because the al Qaeda core is still rebuilding, operating with virtual impunity in Pakistan," he said. The 9/11 Commission Report said that terrorist groups need safe havens from which to operate and plan attacks. Al Qaeda has found just that in the tribal regions of Pakistan. Experts say al Qaeda's core leadership--including Osama bin Laden and Ayman al-Zawahiri--is based in this lawless area. They fled here from Afghanistan after the U.S. toppled the Taliban in late 2001. "A number of al Qaeda senior leaders went to the Pakistani tribal areas and went about embedding themselves in tribal society," said terrorism expert Daveed Gartenstein-Ross. "Several major plots against the West have been planned in Pakistan." "Militants are again being trained in Pakistan's tribal areas," he added. "Some of these militants are being trained for missions against the West. Last year, there were 29 training camps in Pakistan. This year, it's about 100." The deadly London and Madrid transit bombings were both traced back to Pakistan's tribal region. So was a foiled 2006 plot to blow up 10 transatlantic airliners traveling from Britain to the United States. "It would have outdone September 11th, if not in terms of total casualties, certainly in terms of total terror," Riedel said of that 2006 plot. But al-Qaeda's sphere of influence extends far beyond Pakistan. "Think of al Qaeda as if it was a global business organization," Riedel stated. "You have the CEO and the headquarters based in Pakistan. Then you have franchises based around the Muslim world." In addition to Pakistan, the group is currently active in Somalia, Yemen, and the Islamic Maghreb of North Africa. Its franchises in Iraq, Saudi Arabia, and Indonesia, once strong, have been weakened significantly but are still active. Lebanon and the Gaza Strip have been targeted for new al-Qaeda "startups," and western Europe--particularly Britain--has served as an al-Qaeda base for several years now. Indeed, several key ingredients seem to be in place for a renewed al-Qaeda offensive against the West: global reach, a safe haven from which to operate and a steady flow of cash from the so-called "Golden Chain" of terrorist financiers in the Persian Gulf region. But terrorism expert Marc Sageman has a different view. He told CBN News that al Qaeda is clearly diminished as a global threat. Sageman, a scholar-in-residence with the New York City Police Department, believes the global movement of young jihadists that al-Qaeda has inspired is the greatest danger the West faces today - not the group itself. "They're not strictly al Qaeda," he said. "But they do things on behalf of this whole al Qaeda social movement that's kind of linked up by a very simple ideology--namely, that the West is at war against Islam."

Sageman's book, *Leaderless Jihad*, argues that local, loose-knit cells of young Muslims pose a bigger threat today than international terror networks like al Qaeda. "The social movement that the old al-Qaeda has been able to inspire has increased dramatically. And that movement is fairly disconnected," he said. "It's a self-generating group of wannabes who want to do things on behalf of al Qaeda but have not been able to link up." Since 9/11, several terrorist plots in the West have involved homegrown terrorists. Some, like in London and Madrid, have been successful. Others, like a 2007 plot to attack New Jersey's Fort Dix, have been narrowly averted by authorities. "A lot of the interactivity takes place in chat rooms or in forums on the Internet," said Sageman. "What you have are really these spontaneous, self-organizing groups everywhere in the world that are kind of disconnected from al-Qaeda central. But it doesn't matter, because they get the message over the Internet." As the global jihad has evolved, however, one thing has remained consistent: a local cell's success rate increases dramatically when it has the world's most notorious terror group behind it. "It has to have some sort of central glue. It has to have somebody that can connect operatives from Morocco to financiers from Saudi Arabia with ideologues in other countries with other capabilities," Gartenstein-Ross said. "And al Qaeda's central leadership is the only terrorist organization out there that's shown the capability to be the kind of glue that connects these disparate elements," he said. So where does al-Qaeda go from here? The failure in Iraq has momentarily hurt the group's brand. But deep within the tribal regions of northwest Pakistan, al-Qaeda's hierarchy is recharging. The group is currently making a concerted effort to recruit white Europeans who can blend more easily in the West. It also remains committed to acquiring weapons of mass destruction - chemical, biological, radiological or nuclear. "Al Qaeda, as it thinks about attacking America, wants to be even more spectacular than either September 11th or the failed plot in August of 2006," said Riedel. "They're not going to do something like shooting up a mall in the United States because they know that wouldn't be seen as of the same magnitude." In other words, the bar has been set very high.

Σύλληψη κορυφαίας γυναίκας τρομοκράτη

Πρόκειται για την Aafia Siddiqui που συνελήφθη στις αρχές του χειμώνα στο Αφγανιστάν και ήταν η μόνη γυναίκα που συμπεριλαμβανόταν στον κατάλογο των πλέον καταζητούμενων ατόμων από το FBI. Η συλληφθείσα ήταν νευρολόγος με σπουδές στο αμερικανικό MIT πριν επιστρέψει στο Πακιστάν. Κατά τη σύλληψη της βρέθηκαν πληροφορίες σχετικές με XBP όπλα καθώς και χάρτες της Ν Υόρκης και του μετρό της πόλης, της πλατείας Times και του Αγάλματος της Ελευθερίας καθώς και του γειτονικού Plum Island Animal Disease Center (όπου «φιλοξενούνται» πολλοί παθογόνοι μικροοργανισμοί).

U.S. Captures Top Female Terrorist Suspect



The U.S. may have captured one of the most important terrorism suspects yet -- a mother of three with a degree from one of the top universities in the nation, and ties to al Qaeda. Until her capture last month in Afghanistan, Aafia Siddiqui was the only woman on the FBI's list of most wanted terrorists. She is believed to be a top agent of al Qaeda. "We've been looking for her for a long time, and we knew she's been involved in a variety of nefarious

activities," former CIA officer John Kiriakou explained. Siddiqui was a neuroscientist, schooled in America at MIT before her return to Pakistan. Her captors found on her information on chemical, biological and radioactive weapons. She was also carrying maps of New York City and its subway system, Times Square and the Statue of Liberty, as well as the nearby Plum Island Animal Disease Center, home to many lethal pathogens. "They found someone who is highly educated, who's very capable and who's willing to do the research," Kiriakou said. The FBI said Siddiqui also possessed a computer thumb-drive storage device loaded with emails to potential terrorists. They hope it's a roadmap to terror plots in the works. Siddiqui is now in custody in New York City, where friends and family have been protesting her innocence. She's charged with trying to shoot the agents and soldiers who captured her, a fight in which she was shot. The FBI is now trying to track down some of Siddiqui's classmates from MIT. CBN News Terror Analyst, Erick Stakelbeck, says it's very significant that she was educated in the U.S. "This is exactly what al-Qaeda wants. They want to place operatives in the U.S. who are westernized, who are fluent in English," he said. "Aafia Siddiqui fits both of those qualifications. And not only that, she's very, very intelligent."

Εγκέφαλος: το πεδίο μάχης του μέλλοντος

Σύμφωνα με αξιωματούχους της αμερικανικής DIA, η ταχεία εξέλιξη του τομέα των νευροεπιστημών θα έχει δραματική επίπτωση στην εθνική ασφάλεια και τον τρόπο διεξαγωγής των μελλοντικών πολέμων. Ενδεικτικά γίνεται αναφορά σε φάρμακα που θα τροποποιούν τη συμπεριφορά, σε ανιχνευτές που θα καθορίζουν την ψυχική κατάσταση του ατόμου, σε φαρμακολογικές νάρκες ή σε ουσίες που θα αυξάνουν την απόδοση των αισθήσεων. *Ας έχουμε πάντα κατά νουν ότι το αύριο είναι συνήθως εδώ σήμερα – για να μην εκπλαγούμε δυσάρεστα.*

Brain will be battlefield of future, warns US intelligence report

Rapid advances in neuroscience could have a dramatic impact on national security and the way in which future wars are fought, US intelligence officials have been told. In a report commissioned by the Defense Intelligence Agency, leading scientists were asked to examine how a greater understanding of the brain over the next 20 years is likely to drive the development of new medicines and technologies. They found several areas in which progress could have a profound impact, including behaviour-altering drugs, scanners that can interpret a person's state of mind and devices capable



of boosting senses such as hearing and vision. On the battlefield, bullets may be replaced with "pharmacological land mines" that release drugs to incapacitate soldiers on contact, while scanners and other electronic devices could be developed to identify suspects from their brain activity and even disrupt their ability to tell lies when questioned, the report says. "The

concept of torture could also be altered by products in this market. It is possible that some day there could be a technique developed to extract information from a prisoner that does not have any lasting side effects," the report states. The report highlights one

electronic technique, called transcranial direct current stimulation, which involves using electrical pulses to interfere with the firing of neurons in the brain and has been shown to delay a person's ability to tell a lie. Drugs could also be used to enhance the performance of military personnel. There is already anecdotal evidence of troops using the narcolepsy drug modafinil, and ritalin, which is prescribed for attention deficit disorder, to boost their performance. Future drugs, developed to boost the cognitive faculties of people with dementia, are likely to be used in a similar way, the report adds. Greater understanding of the brain's workings is also expected to usher in new devices that link directly to the brain, either to allow operators to control machinery with their minds, such as flying unmanned reconnaissance drones, or to boost their natural senses. For example, video from a person's glasses, or audio recorded from a headset, could be processed by a computer to help search for relevant information. "Experiments indicate that the advantages of these devices are such that human operators will be greatly enhanced for things like photo reconnaissance and so on," Kit Green, who chaired the report committee, said. The report warns that while the US and other western nations might now consider themselves at the forefront of neuroscience, that is likely to change as other countries ramp up their computing capabilities. Unless security services can monitor progress internationally, they risk "major, even catastrophic, intelligence failures in the years ahead", the report warns. "In the intelligence community, there is an extremely small number of people who understand the science and without that it's going to be impossible to predict surprises. This is a black hole that needs to be filled with light," Green told the Guardian. The technologies will one day have applications in counter-terrorism and crime-fighting. The report says brain imaging will not improve sufficiently in the next 20 years to read peoples' intentions from afar and spot criminals before they act, but it might be good enough to help identify people at a checkpoint or counter who are afraid or anxious. "We're not going to be reading minds at a distance, but that doesn't mean we can't detect gross changes in anxiety or fear, and then subsequently talk to those individuals to see what's upsetting them," Green said. The development of advanced surveillance techniques, such as cameras that can spot fearful expressions on people's faces, could lead to some inventive ways to fool them, the report adds, such as Botox injections to relax facial muscles.

Νέο σύστημα ασφαλείας φωτογραφίζει πινακίδες κυκλοφορίας

Είναι πολύ πιθανόν εάν κάποιος επισκεφτεί το Manhattan με αυτοκίνητο να καταγραφεί με ηλεκτρο-οπτικό τρόπο η πινακίδα κυκλοφορίας του αυτοκινήτου του στα πλαίσια της επιχείρησης Sentinel της αστυνομίας της Ν Υόρκης



New Terror Security Plan Would Photograph License Plates

Tracking terrorists in New York City could involve your car if you drive into Manhattan. The NYPD is considering taking photographs of every license plate and scanning the information. An NYPD official tells Fox 5 News that the focus of Operation Sentinel is primarily for dirty bomb detection. The official also

says there will be a way for drivers to register their cars so they won't be screened all the time. The license plate information would reportedly be stored for at least one month in a lower Manhattan facility. Included in the plan is the use of radiation detectors at crossings into Manhattan. Also, lower Manhattan could see even more security changes that include movable roadblocks and thousands more public and private cameras. The New York City Police Department is working on a plan to photograph the license plates of every vehicle entering Manhattan in an effort to guard against a terrorist attack. The plan, called Operation Sentinel, calls for photographing and scanning the license plates of cars and trucks at all bridges and tunnels, and using sensors to detect the presence of radioactivity, The New York Times reports. Data on each vehicle would be sent to a command center in Lower Manhattan, where it would be stored for at least a month and then eliminated if it were not linked to a law enforcement investigation, according to Paul Browne, deputy police commissioner for public information. Our main objective would be to find out about a plot before it ever got to a stage where a nuclear device or a dirty bomb was coming our way, Browne told The Times. This provides for our defense after a plot has already been launched and a device is on its way. Steven Emerson, executive director of the Investigative Project on Terrorism in Washington, said: The bottom line is they can't frisk everybody coming into Manhattan. They can't wand everyone as they do at airports. The plan is one tool of ensuring that if there is somebody on a terrorist watch list or someone driving erratically, or if a pattern develops that raises suspicions, it gives them an opportunity to investigate further and if need be, track down the drivers or the passengers, he told The Times. Police also have revealed a proposal to further safeguard Lower Manhattan, America's financial heartland. The plan would place the entire 16-acre World Trade Center site within a security zone, in which only specially screened taxis, limousines or cars would be allowed to enter past barriers staffed by police. All service and delivery trucks for the site would be directed to an underground bomb screening center near ground zero. As Newsmax reported in March 2006, police in New York disclosed plans to create a ring of steel around Manhattan's financial district, limiting access and monitoring hundreds of thousands of people and cars a day. In London, a ring of steel features 16 entry and 12 exit points where the roads have been narrowed and marked with iron posts to force drivers to slow down. At each entry point, a camera scans license plates and sends the data to a computerized system that can flag wanted vehicles and notify a control room at police headquarters within seconds. In 2004, New York began installing 1,000 closed-circuit cameras with 3,000 sensors in the city's subway system. Security officials in the U.S. are particularly concerned that New York could again become the target of a terrorist attack. FBI Director Robert S. Mueller told Newsmax in May 2007 that Osama bin Laden and his terrorist group desperately want to obtain nuclear devices and explode them in American cities, especially New York and Washington, D.C., in an effort to kill hundreds of thousands of Americans. He said ominously: We are going to be hit at some point. It's just a question of when and to what extent. Mueller said the nuclear threat is so real that he sometimes wakes up in the middle of the night worrying about that possibility.

Ειδική μελέτη: Ο πόλεμος ήταν πάντα μια βρώμικη «βιολογική» μάχη

Ενδιαφέρουσα μελέτη-ιστορική αναδρομή των μέσων που οι άνθρωποι χρησιμοποίησαν διαχρονικά στους μεταξύ τους πολέμους και μια μικρή «παρηγοριά» ότι τα σημερινά τεκταινόμενα δεν αποτελούν πρωτοποριακές δικές μας ιδέες.

Special report: War has always been a dirty 'biological' battle

Biological warfare is loosely defined as the application of a pathogen as a weapon of war. Whilst many consider 'biowarfare' as a recent development we shall see that it has been in existence in some form or another since the earliest days of recorded history. It stands as testimony to the remarkable ability of mankind to discover new ways of inflicting suffering upon one another. The earliest known application goes as far back as 600BC, when Assyrians poisoned enemy wells with Ergot. In 400BC, Scythian archers used to dip their arrows into a mixture of blood and manure. These archers were highly skilled and had a range of 500 metres and could fire at a rate of about 20 per minute. It comes therefore as little surprise that the English word 'toxin' is derived from the Greek word 'toxikon', meaning 'arrow'. The ancient Roman and Greek armies threw dead bodies into the wells of their enemies to compromise their water supply.

Barbarossa

In the naval battle of Eurymedon, Hannibal fired earthen jars filled with poisonous snakes into the ships of his enemy. The chaos that followed meant that he had an easy victory. The 'Dark Ages' that followed saw little or no use of biowarfare tactics. Europe in the Middle Ages saw a great spread in the use of this style of warfare. In 1495, Spanish agents used blood taken from lepers to contaminate French wine. The German warrior Barbarossa, whose name was later used for the Nazi invasion of the Soviet Union, also threw dead bodies into his enemies' wells. In 1422, the German town of Karlstein was laid siege to. The invaders took great pleasure in catapulting dead bodies over the town's walls, causing infections to spread. They are also recorded as catapulting over 2,000 carriages of dung over the walls, with the same intended effect. In spite of these methods, the defenders held out and their enemy gave up the assault.

Catapulted over the city walls

One of the most famous incidents was the siege of the then Genoese city of Kaffa in the Crimea by invading Tartars. The bodies of plague victims were catapulted over the city walls. The siege lasted for several months and many of the inhabitants became infected. Eventually the Tartars retreated and normal trading resumed at the town. Many historians have argued that this siege was critical in the spread of plague to Europe in the Middle Ages, especially as most of the trading was done by ship and these ships usually contained significant rat populations, which would have carried the disease. The conquest of the Americas by European powers is marked by multiple allegations of biowarfare. The Europeans themselves carried with them diseases that the native tribes had never encountered; smallpox is a prime example of this. In the Eighteenth Century the British officer Jeffrey Amhurst ordered that the blankets and handkerchiefs of those suffering from smallpox in the infirmaries be handed over to representatives of the nearby Native American tribes whilst peace talks were ongoing. A devastating epidemic spread through their population not long after. The Spanish conquistador Pizarro was also accused of using contaminated clothing to spread

disease. In the American Civil War Dr Luke Blackburn, a future mayor of Kentucky, allegedly gave Union soldiers blankets deliberately contaminated with smallpox.

Plague epidemic

During the First World War, the German army had a small biowarfare project in operation that produced anthrax. Accusations were made at the time that the Germans were responsible for a plague epidemic in St Petersburg. In 1915, a German agent called Anton Dilger operated a laboratory in Washington DC that produced glanders. This agent was then used to infect nearly 3,000 horses and other animals that were being sent to Europe to assist in the Allied war effort. German agents in Romania deliberately infected sheep that were due to be sent to Russia with anthrax.

Geneva protocol

1925 saw the first of two attempts by world powers to limit the use of biological agents. A world conference saw the 'Geneva protocol for the prohibition of the use in war of asphyxiating, poisonous or other gases and bacteriological methods of warfare'. Whilst over a hundred countries signed, Japan refused and the United States of America would not ratify the treaty until 1975. Many of the participants in the Second World War either employed or experimented with biological agents. The most infamous of these was the Japanese Army's Unit 731. This group of some 3,000 scientists operated in Japan-controlled Manchuria and murdered ten of thousands with anthrax, syphilis and the plague. The US Army began its own research programme in 1942. In 1943, the British Army tested anthrax on the island of Gruinard off the coast of Scotland. These tests had to be called off as sheep on the nearby mainland became infected.

Coated with faeces

The period after World War II had its fair share of biowarfare. The Vietcong used sharpened 'Punji' sticks that were coated with faeces. The enemy soldier would fall into a pit containing many of these razor sharp sticks and, if he managed to extricate himself from his unfortunate situation, would die from widespread infection days or weeks later. In 1966, the US Army conducted a highly controversial experiment in the New York subway system. *Bacillus Subtilis*, a bacteria that is believed to be harmless, was released into one subway station. Within hours every station was contaminated. Trains, air conditioning and commuters no doubt contributed to the spread. In 1969, Richard Nixon ordered that all production and stockpiling of these agents cease. In 1972, there was a second attempt to limit biowarfare. At a world summit over 100 countries agreed that the 'creation and storage' of such agents be banned. The actual deployment was not prohibited. Those that signed up included the USA and the Soviet Union.

Dart contained ricin

In 1978, Georgi Markov, a Bulgarian defector working in London for the BBC, was shot with a dart from a modified umbrella. This dart contained ricin, and Georgi Markov died in hospital three days afterward. The following year, anthrax was accidentally released into the atmosphere at a secret plant in Sverdlovsk. At least 66 people were killed but a large cover-up has meant that the true number may never be known. In 1989, Vladimir Pasechnik, a Russian defector, described to US officials the stockpiles that the Soviet Union had of biological agents. He alleged that they had 'super plagues', antibiotic-resistant anthrax and had specially designed long-range

missiles for the deployment of these weapons. Subsequent defectors supported his claims. In 1984, a terrorist group in Oregon deliberately infected salad with salmonella, with over 700 people becoming infected.

Most recent incident

Ten years later members of the Aum Shinrikyo cult in Japan targeted the Tokyo underground with anthrax. The most recent incident occurred in 2001, when anthrax was sent in the mail to members of the US media and the office of Senator Tom Daschle. Four people subsequently died. Many military figures argue that these agents have little practical usage. For one thing they are slow and very difficult to deploy undetected. The opposing army has a large window for retaliation. They are unsuitable for battlefield use. An enduring problem is that they are difficult to eradicate afterward; Gruinard Island, for example, is still heavily contaminated despite repeated attempts to clean it up. Nevertheless, after four millennia there is persistent interest in their application. They have developed from arrows to catapults to long-range missiles. Prohibitions placed upon their use have not hindered their development. We should be in no doubt that we will see them used again in conflicts around the world.

Όταν η γάτα στριμώνεται στη γωνία

Πρώην ηγέτης των Tamil (LTTE) δήλωσε ότι πλέον η ήττα των ανταρτών/τρομοκρατών είναι αναπόφευκτη γεγονός που επισύρει τον κίνδυνο να γίνει χρήση χημικών όπλων κατά των κυβερνητικών δυνάμεων και του πληθυσμού. Η λήξη κάθε ένοπλης αντιπαράθεσης που αναμένεται να καθορίσει νικητές και ηττημένους αποτελεί το πλέον λεπτό αλλά και το πλέον επικίνδυνο σημείο της μάχης – ιδίως όταν ο ηττημένος αντιμετωπίζει το φάσμα της ολοκληρωτικής καταστροφής και της εξαφάνισης.

LTTE may use chemical weapons as last resort

Former leader of the Liberation Tigers of Tamil Eelam (LTTE) in the Eastern Province and the current leader of the political party TMVP, Vinayagamoorthy Muralitharan alias Karuna Amman yesterday said that military defeat is inevitable for the LTTE as it does not have a proper commander. Speaking at a media briefing in Welikanda, he said the Tigers had lost 60% of their power after his split with them. He added that this is the main reason that the Sri Lankan security forces can now achieve success in the North, and the present trend will not be stopped until the fall of the LTTE. Speaking further, he argued it was he who had commanded all successful battles fought by the LTTE, and its chief V. Prabhakaran had never faced a single battle during his time in the outfit. Karuna Amman added that Prabhakaran would not be able to come before the public but is now planning to use civilians in the Wannu region as a human shield to save his life. During the briefing, he also warned that the Tigers may use chemical weapons as their last resort. He confirmed that the Tigers have the weapons but said he was not aware about the exact substance used. He confidently said that Prabhakaran would choose to use the chemical weapons as the last measure to avoid defeat.

Ζωντανά ψάρια – το νέο εργαλείο κατά της περιβαλλοντικής μόλυνσης

Γόνοι ψαριών ηλικίας μιας ημέρας μπορούν να χρησιμοποιηθούν για την ανίχνευση ποικιλίας επικίνδυνων χημικών ουσιών και ως συστήματα πρόωμης προειδοποίησης έναντι βιο-χημικών όπλων. Ερευνητές από το Purdue University χρησιμοποιούν οπτικές ίνες για να καταγράψουν την κατανάλωση από τα ψάρια οξυγόνου προς παραγωγή ενέργειας. Κάθε διαταραχή του συσχετισμού αυτού υποδηλώνει επικείμενη μόλυνση του οργανισμού.

Using live fish, new tool a sentinel for environmental contamination

Researchers have harnessed the sensitivity of days-old fish embryos to create a tool capable of detecting a range of harmful chemicals. By measuring rates of oxygen use in developing fish, which are sensitive to contaminants and stressful conditions, the technology could reveal the presence of minute levels of toxic substances before they cause more obvious and substantial harm. It could be used as an early warning system against environmental contamination or even biological weapons, said Purdue University researcher Marshall Porterfield, an associate professor of agricultural and biological engineering. Respiration, the process wherein animals and other organisms burn oxygen to produce energy, is often the first of a fish's bodily functions affected by contaminants. The technology uses fiber optics to quickly monitor this activity and produce results within minutes, Porterfield said. "Say you are exposed to the common cold virus," he said. "Before symptoms develop and you become aware of the bug's presence, it has already begun to attack your cells. Similarly, fish and other organisms are affected by contaminants before behavioral changes appear. Our technology detects heretofore undetectable changes to act as an early warning system." In a study published online last week in the journal *Environmental Science and Technology*, the system detected the presence of several common pollutants such as the widely-used herbicide atrazine - even at levels near or below those that the U.S. Environmental Protection Agency deems acceptable for drinking water. "This means the technology could not only help monitor environmental quality but may be used to enforce important water quality standards," said Marisol Sepulveda, lead author and assistant professor of forestry and natural resources at Purdue. Testing also registered noticeable changes in the respiratory activity of fish embryos when the heavy metal cadmium was present at levels 60 times lower than the EPA limit, she said. Throughout the study, contaminants did not destroy the eggs of laboratory-raised fathead minnows, a commonly studied fish species. This further demonstrates the tool's ability to discern subtle changes before they become fatal, Sepulveda said. In the laboratory, researchers first manually positioned a tiny optical electrode, or optrode just outside individual embryos of two-day-old fathead minnows. At 1.5 millimeters in diameter, they were slightly smaller than the head of a pin, said primary author and Purdue doctoral student Brian Sanchez. A fluorescent substance coated the electrode tip, its optical properties varying predictably with oxygen concentration. This allowed researchers to take quick measurements at locations only micrometers apart, moving the electrode via a computer-driven motor, Sanchez said. These readings then allowed researchers to calculate respiration rates within the eggs, he said. Using a self-referencing technique Porterfield developed over the last decade, he and the team measured each egg with and without contaminants present. This allowed each embryo to serve as its own control, he said, providing more reliable results. Porterfield said the technology could be used on other organisms. Study co-author and Purdue researcher Hugo Ochoa-Acua has begun adjusting it to work with a type of

crustacean. A prototype could be ready to test in the field in four years if improvements continue, said Porterfield, a corresponding author. The technology currently tests immobilized eggs in a laboratory setting but there are plans to make the tool more versatile. Porterfield also said he thinks the technology could have diverse uses. He imagines it could be conjugated with tumor cells to screen potential cancer drugs or help find new therapeutic targets. During the study the technology detected four of five common pollutants tested, all known to act upon organisms in different ways: atrazine, cadmium, pentachlorophenol - an antifungal - and cyanide. It didn't register low levels of the insecticide malathion, possibly because fathead minnow embryos require more time to elapse for effects to become evident, Sanchez said. Toxins can slow respiration by directly impeding it or they may stress the organism and cause it to burn more oxygen to provide energy for fighting the stressor, he said. The most widely used analogous technology monitors gill movements and other activities of bluegill fish with electrodes secured to the fish's bodies, Sepulveda said. The Purdue system could be advantageous as it records respiration in a sensitive life-stage and the optical equipment doesn't consume oxygen or require the same degree of calibration, Porterfield said. The study, funded by Purdue's Center for the Environment and the U.S. Department of Education, was different from Sanchez's other research, which is primarily focused upon finding genes and proteins to serve as biomarkers for contaminant exposure in fish. "This study was all the more exciting to be a part of due to its potential applications in protecting human health," he said.

Φαινόμενο θερμοκηπίου και ασφάλεια

Η μεταβολές του περιβάλλοντος και ιδιαίτερα το φαινόμενο του θερμοκηπίου μπορεί να αποσταθεροποιήσει τις πτωχές χώρες και να οδηγήσει σε μαζική μετανάστευση ή στροφή σε τρομοκρατικές πράξεις ή κοινωνικές συγκρούσεις.

Global Warming as Security Issue

Climate change has become an important issue in recent years, but rarely has it received as much attention as a security issue as it did last week. Dr. Thomas Fingar, Deputy Director of National Intelligence for Analysis, delivered a briefing to the US Congress on the security issues associated with climate change. As reported by CNN: "Global warming could destabilize "struggling and poor" countries around the world, prompting mass migrations and creating breeding grounds for terrorists, the chairman of the National Intelligence Council told Congress on Wednesday." It is expected that with a rising average temperature, we may see more extremes in weather conditions: floods and droughts, stronger storm surges and longer hotter summers. The implications of more extreme weather conditions are dramatic: think of Burma or New Orleans. Events like these exacerbate the social, economic and governmental issues in the countries where they happen. As per Dr. Fingar's report: climate change "will aggravate existing problems such as poverty, social tensions, environmental degradation, ineffectual leadership and weak political institutions (...) People are likely to flee destabilized countries, and some may turn to terrorism" The recognition of these potential changes and the need to plan for them opens a host of new issues in homeland security. What role can emerging technologies play here?

Αποθήκευση αντιβιοτικών: Είναι η ασφαλής λύση για τη βιοτρομοκρατία;

Η εκ των προτέρω διανομή αντιβιοτικών στους πολίτες για την αντιμετώπιση ενδεχόμενης βιοτρομοκρατικής επίθεσης μπορεί να μην αποτελεί καλή ιδέα σύμφωνα με το National Biodefense Science Board καθώς μπορεί να γίνει «μη ασφαλής» χρήση τους. Πρόκειται για θέμα που έχει αναδειχθεί και στο παρελθόν χωρίς να απαντηθεί πλήρως κυρίως γιατί οι αποδέκτες των φαρμακευτικών πακέτων δεν διαθέτουν τις ανάλογες γνώσεις για να τα χρησιμοποιήσουν με τον σωστό τρόπο. Όμως πώς να ενημερωθούν οι πολίτες όταν κάθε απόπειρα έχει να αντιμετωπίσει κρατικούς υπεύθυνους που το μόνο που τους απασχολεί είναι «να μην προκληθεί πανικός στους πολίτες» ξεχνώντας ή μη αντιλαμβανόμενοι τον «πραγματικό» πανικό που θα σαρώσει τους πολίτες μόλις η επιδημία ή η πανδημία είναι και στην πόλη τους. Μια ζωή τα ίδια...

Stockpiling Antibioterror Drugs May Be Unsafe

Public health experts are warning senior U.S. officials against moving ahead with a plan to give the public advice on how to stockpile antibiotics against a bioterror attack. The move would be "unwise" because it could promote unsafe uses of the drugs, says the National Biodefense Science Board (NBSB), a panel of independent experts that advises the government. The warning, included in a letter soon to be sent to Michael Leavitt, the secretary of the Department of Health and Human Services (HHS), was prompted by the circulation late last month of a draft HHS fact sheet. It answers 16 questions about stockpiling drugs that could be used after an attack with the deadly bacteria that cause anthrax. Although the document warns that "home storage of antibiotics involves risks that you should consider very seriously," members of the science board fear it would be seen as government endorsement of stockpiling--which some critics say may not work and could create other problems. "The board isn't saying this should never be done, but we are saying you need to sit down and understand all the ramifications before you go any further," NBSB head M. Patricia Quinlisk told *ScienceNOW*. Quinlisk, a physician, is medical director of Iowa's public health department. HHS officials were not available for comment as *ScienceNOW* went to press. Since the 2001 anthrax attacks, federal officials have been making preparations to defend the public against a similar bacterial onslaught. They've stockpiled huge caches of antibiotics near major cities, for instance, so that they can be distributed quickly during a crisis. They have also begun to develop prepackaged emergency packets of drugs--called "MedKits"--that families could buy and store. And some officials have argued that people should go to a doctor, get a prescription for antibiotics, and then tuck them away at home. That strategy "could reduce your need to depend upon public health agencies as they try to get antibiotics to everyone at risk during an anthrax emergency," the fact sheet, dated 31 July, states. It also specifies which drugs work against anthrax and warns that giving them to children can be dangerous. But the board believes the government is moving too fast. At a meeting on 18 June, several board members--and officials from the Centers for Disease Control and Prevention and the U.S. Food and Drug Administration--raised serious concerns about stockpiling after HHS officials described their work on the issue. According to meeting minutes, one concern was that people wouldn't understand how to properly store or use the drugs, potentially leading to greater antibiotic resistance, possibly dangerous side effects, and a false sense of security. Another was that doctors and public health officials hadn't been fully consulted. Quinlisk says that some of those concerns were reflected in the draft fact sheet that

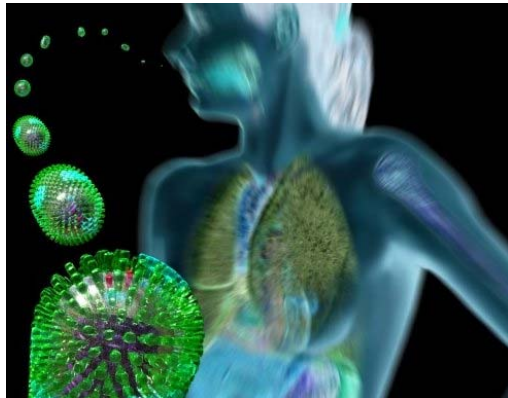
HHS staff produced last month but that it still isn't ready for public release. "We urge you not to move precipitously to promote home stockpiling before the scientific questions can be answered," their current letter concludes. "There is a high risk of providing a confusing message that does not have the endorsement of experts in public health, biodefense, and infectious disease, nor of the majority of medical practitioners." Other experts agree. "The board does raise some very good points," says Brooke Courtney, who analyzes biodefense policy for the Center for Biosecurity at the University of Pittsburgh Medical Center in Pennsylvania. The draft fact sheet, she says, "could be very confusing for the general public." And she says the dangers of trying to properly use antibiotics "when you are scared and under a lot of stress" shouldn't be underestimated, especially given the often confusing directions on pill bottles. Still, Courtney says that the government needs to be looking at creative ways of preparing the public for a bioterror attack. For instance, she says the carefully packaged MedKits that the government is developing "could be a really useful approach." But she notes that it could be several years before the kits are available, because they need to undergo careful testing and government approval.

Ελπίζω να μην ξεχάσετε τον ιό της γρίπης των πτηνών!

Πρόσφατη μελέτη από το College Park του University of Maryland δείχνει ότι το στέλεχος H9N2 του ιού της γρίπης των πτηνών έχει τις προδιαγραφές να αποτελέσει το αίτιο της επόμενης παγκόσμιας επιδημίας γρίπης καθώς απαιτούνται ελάχιστες μεταβολές στο γενετικό του υλικό ώστε να μπορεί να μεταδίδεται από άνθρωπο σε άνθρωπο.

H9N2 avian flu strain has pandemic potential

New study shows small changes make the subtype more transmissible. Pandemic planners may have been looking at the wrong avian influenza virus as the source of the next worldwide flu epidemic. A type of avian flu virus known as H9N2 could become transmissible in humans with just a few changes, a new study shows. "The



H9 may be a silent virus that doesn't get noticed until it's too late," says Daniel Perez, a virologist at the University of Maryland, College Park. Perez and his colleagues analyzed the pandemic potential of the H9 flu viruses in ferrets, a model for human disease transmission. The team found that changing a single chemical building block in the hemagglutinin protein that helps the virus latch onto cells can make the virus more transmissible in ferrets. Mixing the

avian virus's genes with those from human flu viruses also increases transmission and may make the virus more virulent, the researchers report online August 13 in *PLoS ONE*. Though the virus did not become airborne in ferrets, it may have the potential to do so in the future. Much attention has been focused on the H5N1 bird flu virus and H7 avian flu viruses as candidates for the next pandemic, says Chang-Won Lee, a molecular virologist at the Ohio State University in Wooster. But there is plenty of circumstantial evidence that the H9 viruses could also cause a future pandemic, Lee says. H9 avian influenza is widespread among birds in Asia, the Middle East, Europe and Africa. It doesn't make birds sick, so it often goes unnoticed. Some people and

pigs have also been infected, but the virus causes only a mild illness in people and, so far, has not been known to spread from person to person. But Perez's results could indicate that the H9 viruses may begin spreading among people with just minor changes. "Transmission is really the cardinal property a virus has to have in order to cause a pandemic in humans," says Peter Palese, a virologist at Mount Sinai School of Medicine in New York City. Still airborne transmission is a condition that would be necessary for a human pandemic, so the new results are a "half-full, half-empty glass," Palese says. Even if the H9 viruses do acquire the ability to spread in people, at first the infection is likely to cause minor illness. "You're going to have a bunch of people who don't feel very well, as opposed to dropping off the face of the Earth," says Raymond Pickles, a cell biologist at the University of North Carolina at Chapel Hill. But the new data indicate that if the H9 viruses mix with other human viruses as commonly happens in nature, it could become more potent. While many pandemic planners put the deadly H5N1 virus at the top of their list of concerns, Robert G. Webster, a leading influenza researcher at St. Jude Children's Research Hospital in Memphis, Tenn., says H9N2 tops his "influenza hit list." The H9 virus is an "influenza sleeper," Webster says. "It could cause many more problems than we realize."

Σημαντική αύξηση των εργαστηρίων βιοτρομοκρατικής έρευνας

Ο αριθμός των εργαστηρίων στις ΗΠΑ που διεξάγουν βιοτρομοκρατική έρευνα με θανατηφόρα παθογόνα πλησιάζει τις 15.000 και 326 εξ αυτών είναι εξουσιοδοτημένα από το CDC να εργάζονται με άνθρακα (324) και δείγματα βιολογικών όπλων. Το ίδιο ισχύει και για τα 73 εξουσιοδοτημένα από το USDA εργαστήρια.

Labs That Perform Bioterrorism Research Proliferating

The number of individuals performing bioterrorism research on deadly pathogens across the country has jumped to nearly 15,000, and most of them are authorized to work with anthrax, federal records obtained by The Courant reveal. The proliferation of labs working on vaccines for potential biological weapons — which started after the Sept. 11 terrorist attacks and subsequent anthrax mailings — has drawn heavy criticism from experts worried that too many people have access to dangerous materials. The recent revelation that an American scientist, Bruce Ivins, was about to be charged as the anthrax mailer has only increased those concerns. "We just went tearing down this road without thinking about the potential risks, including who was going to have access to all of these biological weapons," said Elisa Harris, a senior research scholar at the Center for International and Security Studies at the University of Maryland. Authorities initially thought the anthrax mailings, which killed an Oxford woman and four others, were the work of foreign terrorists. Shortly afterward, Congress provided millions of dollars for work on finding an anthrax vaccine. Two federal agencies, the Centers for Disease Control and Prevention and the U.S. Department of Agriculture, began keeping track of who was researching biological agents in 2003, under federal legislation known as the select-agent rules. Records obtained by The Courant show that the number of individuals registered with the CDC to work with biological agents jumped from 9,840 in 2006 to 10,461 in 2008. The USDA has 4,336 currently registered, although figures from previous years were not available. There are 326 laboratories authorized by the CDC to work with biological agents, an increase from 194 in 2003. Another 73 are authorized by the USDA. Among the concerns is that background checks conducted by the federal

government before lab workers are allowed to work with substances such as anthrax aren't thorough enough, said Gigi Kwik Gronvall, a senior associate at the Center for Biosecurity at the University of Pittsburgh Medical Center. The criteria include that the individual have no convictions of a crime punishable by imprisonment exceeding one year, not be a fugitive from justice or an illegal alien, and that the individual not have been dishonorably discharged from the Army. Gronvall said there are other concerns in addition to inadequate background checks. "Nobody is checking to see if people being approved to work with anthrax or other biological agents actually have the scientific skills to work with it," Gronvall said. Of the 399 institutions registered to work with biological agents, 234 are working with anthrax the records show. Many of them are working with, or at least storing, the "Ames strain," which was used in the anthrax mailings. Martin Hugh-Jones, a professor at Louisiana State University, said obtaining permission to work with that strain has become almost like a status symbol for labs. LSU was one of 16 laboratories identified by the FBI as working with the Ames strain of anthrax before the letters were mailed. Those labs were a mix of private companies that do work for the federal government, such as Battelle Memorial Institute, based in Columbus, Ohio, and universities, such as LSU and the University of Scranton. One of the USDA-registered labs is on Plum Island in New York, 8 miles off Connecticut's coast. The U.S. Department of Homeland Security plans to upgrade the security level of the lab and the research conducted there, although the lab is likely to be moved from the island to some other location, most likely in Mississippi. Also in New England, Boston University is building a level 4 lab. Federal officials will not release a list of the institutions registered with either the CDC or USDA to work with biological agents, citing security concerns. "There is clearly greater access to virulent anthrax strains today, simply based on the fact that much more money is being spent on anthrax research and many more papers are being published. But it is difficult to say more precisely how the numbers compare to pre-2001 levels," said Alan Pearson, executive director of the Center for Arms Control and Non-Proliferation. Pearson said there are other strains of anthrax besides Ames used in research, and it is unclear how many of the institutions possessed those strains before the select-agent rule took effect. Before the 2001 attacks, there was little federal oversight over institutions that work with deadly pathogens. Now, the government tracks the use and transfers of those pathogens between labs. For instance, federal records show there were 469 transfers of registered pathogens in 2007, up from 178 in 2003. The number peaked at 611 in 2004, when much of the federal research money would have reached the labs. Transfers of anthrax also peaked in 2004 at 243. Anthrax transfers increased from 72 to 98 from 2006 to 2007. In the five-year period through the end of 2007, there have been 2,210 transfers of biological agents, and about 570 of them involved anthrax, records show. Following the 2001 attacks, many scientists said the government would have difficulty tracking the location and uses of the Ames strain of anthrax. They told stories of trading anthrax at conferences and carrying it on planes. Gronvall has testified before Congress as it prepares to extend the regulations on tracking pathogen use with an eye toward possibly tightening them. Some members of Congress had started to question whether expansion of vaccine research programs was happening too fast well before Ivins was identified as the anthrax mailer. Even so, the federal government plans to increase by nearly threefold the number of "biosafety level 4" labs, places allowed to study lethal pathogens, such as Ebola, which have no known human treatment or vaccine. Before the anthrax attacks, there were five level 4 labs. At least 12 are now planned across the country, according to federal officials. There hasn't been a major disaster at a biological laboratory, but there have been recent

dangerous incidents. Three researchers at Boston University developed tularemia after being exposed to the bacteria, while in 2004 live anthrax was accidentally shipped to a children's hospital research lab in Oakland, Calif.

Τουλαρεμία στην Ισπανία

Μελέτη του European Center for Disease Control έδειξαν ότι ¼ των περιπτώσεων τουλαρεμίας που καταγράφηκαν κατά την περίοδο Ιουν-Δεκ 2007 στην Ισπανία οφείλονται σε άμεση επαφή με τρωκτικά (κατά τη διάρκεια αγροτικών εργασιών) και οδήγησαν 507 σε νοσοκομεία κυρίως με την τυφοειδή μορφή της νόσου (59%). Η μεγαλύτερη επιδημία καταγράφηκε το 1997 με 534 περιστατικά μόλυνσης.

Tulararemia in Spain

A study performed by the European Center for Disease Control confirmed that a quarter of the cases of tularemia detected during the outbreak that affected 5 provinces, between June and December 2007, was caused by direct contact with rodents. The report places the 2007 outbreak as the greatest during the last decade in Castilla and Leon. Data from the European institution roughly coincide with the latest studies elaborated by the Board, and they calculated that the number of affected persons is 507, 3 times more compared to the figure reported by the Regional Authority in Leon, Palencia, Burgos, Valladolid, and Zamora provinces. This figure was outnumbered in 1997, with 534 cases treated, while some outbreaks were much less prominent, such as 2004 when 13 cases were reported. Features of patients infected with *Francisella tularensis*, the causative agent of tularemia, include being male (80.1 percent), between 41 and 70 years of age. The great majority of affected persons lived in rural areas or had frequent contact with this environment. The study points out that 34.9 percent of infected persons were farmers or field-related workers, or people who enjoyed natural environments who "frequently took long walks" in these areas. All of these persons acquired the disease by dust inhaling during agricultural activities or the like. With respect to the "live foci" in this outbreak, the reservoir is the vole (*Microtus duodecimcostatus*), which in 2007 severely affected most fields in the region. 24.3 percent of infections were caused by the rodents, while domestic animals, particularly dogs and cats, caused 19.7 percent of infections and water crabs were associated with 13.2 percent. The remaining cases were caused by mosquito bites (10.9 percent), contact with other animals (9.5 percent), using non-potable water (8.1 percent), hare manipulation (6.5 percent), manipulating straw and alfalfa (4.9 percent), and a minimal percentage (0.2 percent) was attributed to eating raw meat. The initial cases occurred during 1st half of May 2007 and they reached a maximum between 18 Jun 2008 and 22 Oct 2008, when 90 percent of the infections were concentrated. Patients had a mean incubation time for the infection between 1 to 14 days, and they took between 3 and 6 weeks to recover. They had the following clinical symptoms: typhoidal form (59 percent), ulceroglandular (14.6 percent), glandular (12.6 percent) and pneumonic (7.9 percent).

Πόσοι θα αρρωστήσουν σε μια επιδημία;

Ο ερευνητής Jaideep Ray των Sandia National Laboratories/California έχει επικεντρώσει την προσπάθεια του στον υπολογισμό των ατόμων που θα αρρωστήσουν σε περίπτωση επιδημίας. Πρόκειται για εξαιρετικά σύνθετο πρόβλημα που απαιτεί λεπτομερή γνώση και ανάλυση παρόμοιων περιστατικών του παρελθόντος (επιδημίας SARS, επιδημία άνθρακα στο Sverdlovsk της πρώην

Σοβιετικής Ένωσης και επιδημίας ευλογίας από την αίρεση Faith Tabernacle Church στην πόλη Abakaliki της Νιγηρίας) προκειμένου να καθοριστούν τα ανεξάρτητα μοντέλα υπολογισμού μελλοντικών απωλειών υγείας.

How Many People Will Fall Sick In An Epidemic?

Imagine an outbreak of a disease like SARS (severe acute respiratory syndrome) that could become an epidemic affecting thousands of people. Wouldn't it be helpful to know early in the epidemic how fast the disease would spread and how many people may be infected so that the medical community could be prepared to treat them? Sandia National Laboratories/California researcher Jaideep Ray has developed a computer model that can do just that. In his third year of internal Laboratory Directed Research & Development (LDRD) funding, Ray has figured out a way to determine the number of people likely to be infected and die from noncommunicable illnesses like anthrax — ailments that could be caused by a potential bioterrorist attack — as well as communicable diseases like smallpox. “In the past decision makers were only able to observe — watch people get sick, go to the hospital, and maybe die,” Ray says. “They had no idea how many people would get sick tomorrow or two days from now.” He came to this realization in 2004 when he was working on a project for the Department of Defense where he developed a computer model that had decision makers responding to an epidemic at a naval base. “It struck me that we were going about this completely backwards,” Ray says. He proposed an LDRD project where he would develop mathematical tools that, using information from the first days of an epidemic, would estimate how many people were going to get sick during the course of the epidemic. He spent the next three years working on the software and in the middle of 2007 successfully developed a model that could infer the characteristics of a bioterrorism-related epidemic of a noncommunicable disease like anthrax. These inferences were drawn from observations of people with symptoms of anthrax exposure collected over the first three to five days of an epidemic. He is within a few months of refining a computer model that would do the same for communicable diseases. Ray says that characterizing diseases requires observations of real outbreaks and then building computer models around them. He did this for a 1979 anthrax outbreak in Sverdlovsk (called Yekaterinburg, after the fall of the Soviet Union), a city of about 1.2 million people in central Russia. Initially the Soviets said the victims contracted the disease by eating anthrax-contaminated meat or having contact with dead animals. At the end of the Cold War American physicians reviewed documents published by pathologists who performed autopsies during the epidemic, confirming the pathogen was airborne. Records showed that 80 humans were infected, most of them by inhaling the pathogen. A total of 68 died of the disease. Using the computer program, Ray ran the data obtained from hospital records of people who became sick in the early days of the epidemic. The program automatically tried many combinations of the unknown number of infected people, time and dose of anthrax exposure until it got as close to the real observation as possible. In the final runs, using data from the first nine days of the 42-day outbreak, the model inferred that almost certainly less than 100 people had been infected, with the most probable number around 55. That was “pretty close,” to the real event, he says. The program, which also estimated the time of the release and the dose of anthrax inhaled, took 10 minutes to run. “If they had had this program in 1979 the Soviet officials would have known that this was going to be a small outbreak,” Ray says. “Instead they got into a panic and vaccinated 50,000 to 60,000 people — the whole southern end of the city.”

After proving the software actually works, he turned his attention to communicable diseases, specifically smallpox. He modeled a documented smallpox outbreak in Nigeria in 1967, which broke out in a fundamentalist sect (Faith Tabernacle Church, FTC) in the town of Abakaliki. The sect consisted of 120 people who lived in nine different compounds, along with 177 of their nonsectarian brethren. The FTC members mixed strongly in their compounds and across compounds at church four times a week and social visits. A small girl first introduced the disease into the population. It spread rapidly in her compound and jumped to other compounds via the church and social visits. The sect members refused medical treatment and did not quarantine the sick and contagious members. While the World Health Organization (WHO) monitored the outbreak and kept records of who got sick and when, it did not record the dates of recovery or deaths of the infected people. Of the 32 people who became infected during the epidemic, 30 were FTC members. Differentiating the communicable disease model from the noncommunicable disease model is the importance of social networks. Communicable diseases spread faster through people in closer proximity. For example, close family members of an infected small child would have a higher probability of contracting the disease than someone who lives in another compound or house. Ray says the challenge is that making inferences about social networks is hard. There is a tendency for the inference mechanism to quickly “settle down” into one of a few possible network configurations. He estimates that it will take about four to six months to overcome this “stickiness” of the inference mechanism. As of today, these inference techniques can work with incomplete observations. Using data from the first 40 days of the three-month epidemic, Ray was able to develop “true” characterizations. “These preliminary results are useful and encouraging,” Ray says. “Within a few months we should be able to remove the simplifications and perform inferences with models which are even more reflective of the actual spread of the disease.”

Γαλλία – Μελέτη θρησκευτικού προσανατολισμού

Μελέτη του Γαλλικού ερευνητικού ινστιτούτου INED σε δείγμα 10.079 ατόμων διερεύνησε τον θρησκευτικό προσανατολισμό των Γάλλων. Σύμφωνα με τα αποτελέσματα ποσοστό 80% είναι καθολικοί, 5% μουσουλμάνοι, 2% προτεστάντες. Γενική διαπίστωση είναι η αύξηση του μουσουλμανισμού και η πτωτική πορεία του καθολικισμού.

France: Religion survey

A study by the French INED research institute asked 10,079 people "What is your religious affiliation, or origin?"

The responses: 80% - Catholic 5% - Muslim 2% - Protestant 2% - other 11% - no religion 7% refused to answer. An increasing part of the population, 11%, declared itself without religion. 5% of the men and 3% of women 65-79 said they have no religion, compared with 27% of men and 23% of women in the 18-24 age group who said so. Catholicism is still in decline, while by Muslims the reverse is true. Less than 2% of 65-79 said they were Muslim, compared to 7% among 18-24 year old. Among Catholics, young people are less practicing. Over 80% of 18-24 year old said they never attend in a religious service (not including marriages, baptism and funerals). Even among the most religious attendance is dwindling: 20% of women above 65 go to mass more than twice a month, compared with 4% of practicing 18-24 year old.

Among Muslims, 34% of men and 14% of women said they visit the mosque twice a month.

XBPII και Ουγκάντα

Υπάρχει καπνός χωρίς φωτιά; Μια απίστευτη διαπλεκόμενη ιστορία με βρετανική εταιρεία XBPII εκπαίδευσης (The CBRN Team Ltd), μια διεθνή συνάντηση τον Νοε 2008 (Commonwealth Heads of Government Meeting), το XBPII πρόγραμμα μια αφρικανικής χώρας, τη βύθιση τοξικών ανοικτά της Σομαλίας από την ιταλική μαφία, δικαστικές διώξεις, φόβοι για δολοφονίες πολιτικών και αξιωματούχων με τοξίνες και ατέλειωτα ερωτήματα χωρίς απαντήσεις. *Ομορφος κόσμος αγγελικά πλασμένος...*

Nuke Trainer Says He Taught Uganda Only “Defense”

More information continues to emerge about Uganda’s chemical and biological weapons operation--the U.K. expert who provided the training to top Ugandans insists in an exclusive interview with *The Black Star News* that the East Africans were trained only on “defensive” and not “offensive” capabilities. “There is a big difference between defense and attack—huge difference,” says Ian Day, Operations Director at U.K.-based The CBRN Team Ltd (an acronym referring to Chemical, Biological, Radiological, and Nuclear), who provided the training to the Ugandans. Day says his company was not involved in teaching Ugandans on any offensive chemical and biological weapons capability. Day says he was contacted by Uganda



officials to provide specialized training as the country prepared to host last November’s Commonwealth Heads of Government Meeting (CHOGM). “I train people in how to protect people against terrorist attacks in chemical and biological weapons,” Day says, about his expertise. Day says Uganda was supplied “defense equipment” for protection and detection. “They are detectors and protective equipment. Detectors would tell if there are chemical agents in the air—if it has

been released it would tell you it’s in the air.” He declines to say precisely how many such equipment were shipped to Uganda’s notorious Presidential Guard Brigade. “The minimum amount to do the job--let’s put it this way; no more than 10,” he says. “Everything was cleared by the British government.” He says no testing was conducted in Uganda. “They did all the training in England, like everyone else does.” Asked whether Uganda had returned the equipment after the completion of CHOGM, Day says, “I don’t actually know that; but I don’t think they are in the country.” He says he first went to Uganda about one year ago to do reconnaissance of the problems. He says the Uganda government told him it feared terrorists might launch an attack during CHOGM using chemical and biological weapons. He wouldn’t elaborate on the nature of intelligence the Ugandans offered on which to base their concerns. Ironically, Day contradicts himself; he says no African country has the capacity to produce and store chemical and biological weapons, raising questions about why Uganda would fear such an attack in the first place. Day also claims it’s also impossible to secretly spirit weapons or live agents to Uganda. His explanations challenge the rationale for the purpose for which the Uganda authorities told him they needed the expertise. “No Third World country uses chemical weapons,” he says.

Day's company, The CBRN Team, has been in the news lately. Niels Tobiasen, a Danish national employed by the company was recently arrested and faces various U.K. court charges together with two top individuals who were involved in Uganda's "defensive" chemical and biological weapons program established by CBRN. A trial date on that case has been scheduled for September 22 and U.K. Police have also interrogated Day on the matter. Day says police cleared him of involvement: *The Black Star* could not confirm this as Day wouldn't provide the name or unit involved in the investigation. He says he told U.K. police "exactly what we did for Uganda." He adds: "I showed them that I have been inspected—I have lesson plans. I have all the data sealed. I have the software--I have it all labeled." "I have a government license saying I have done everything clear," Day says, insisting that all his dealings with the Ugandans were approved by U.K. authorities. "I don't have the United Nations on my back because I do everything by the letter-- by the book." Arrested and also facing charges with Tobiasen is Ananias Tumukunde, Uganda president Yoweri K. Museveni's Special Advisor on Science and Technology. Day says Tumukunde was the top Ugandan on the chemical and biological program. Also charged but believed to be at large is Rusoke Tagaswire, a lieutenant in the Uganda army who was also involved in the program that Day helped the Ugandans with, he says. Day says Tobiasen's alleged transgression "had to do with money" and nothing to do with chemical or biological weapons—police also questioned him only about money, he says. Day insists Tobiasen "has nothing to do with operations—he is a financial guy; he's a money man." He adds: "He couldn't spell CBRN let alone do it. He's not an expert in the field." Day in the interview says he trained Tumukunde in "defensive" capabilities only. He says Tagaswire "handled the grunt work" on the ground, taking care of security. Tagaswire is reported to be a bio-chemist with Masters degree in toxicology. Day says Uganda's "smartest" people were sent to be trained in the U.K.; he says he provided additional training in Uganda. Now that CHOGM was long over, what were the students of his expertise engaged in? Day says beneficiaries of his teaching are back at their "regular government jobs," but he would not name the departments or ministries. He also declined to name others he had trained. He says some of his students have recently contacted him seeking help on how to manage what they say was possible repercussion on Uganda of radioactive contamination in neighboring Democratic Republic of Congo. He says the Congo contamination comes from toxic waste dumped by Chinese companies there. He says the Ugandans are also concerned for the safety of its peace keeping troops in Somalia because the Italian mafia was dumping hazardous waste on the Somali coast. Throughout the interview Day insists Uganda doesn't have the technological or financial wherewithal to maintain a chemical or biological weapons program, whose cost would run in "billions of dollars." "Their technology level is very low. You are talking to an expert about chemical and biological weapons," he says, referring to himself. "I have seen these people. I have seen them up close. I have seen their capability—it is s a wild dream to think they can do this." There have been widespread speculation that biological agents or toxins have been used to kill prominent Ugandans. Last year, when a top Uganda military official, Brigadier Noble Mayombo, permanent secretary at the Ministry of Defense died suddenly, there was speculation that some type of toxins could have caused his demise. Some prominent Ugandans are now even known to carry their own food with them when they travel. At Mayombo's funeral, President Yoweri Museveni announced that he had appointed a three-man team to "probe into the death of Brigadier Mayombo. The team that includes Col. James Mugira, Lt. Tagaswire Rusoke and a senior medical doctor..." according to the official Uganda

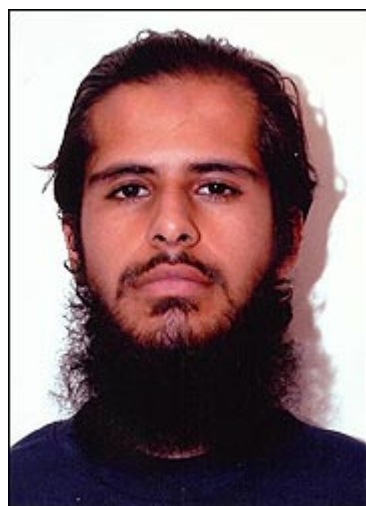
State House government website. The use of toxins in the poisoning of political figures gained global attention with the 2004 spectacular attempt on the life of Ukrainian opposition leader Victor Yushenko. After he became ill and his face was severely swollen and pock-marked, it was discovered that he had been poisoned with TCDD dioxin---there had been more than 6,000 times the usual concentration in his body.

Ο νεαρότερος τρομοκράτης της Βρετανίας

Ο ηλικίας 15 ετών Hammad Munshi συνελήφθη, προ 3ετίας, έχοντας στην κατοχή του εγχειρίδιο κατασκευής γιλέκου αυτοκτονίας και πλήρη κατάλογο των μελών της βασιλικής οικογένειας της Βρετανίας, αντιμετωπίζει ποινή φυλάκισης 10 ετών

Britain's youngest terrorist

Hamaad Munshi was only 15 and studying for his GCSEs when first recruited into Osama Bin Laden's army of fanatics via the internet. Henchman ... Muhammed was found with a bomb vest guide British-born Munshi now faces up to ten years in jail after being convicted of making a record of information likely to be useful in terrorism. It related to notes on the preparation of the lethal chemical weapon napalm. Munshi – now 18 – belonged to a three-man gang which had assembled a dossier on all the most senior members of the Royal Family. A spokesman for the Crown Prosecution Service last night said: "I can confirm Munshi is Britain's



youngest terrorist." Cell leader Aabid Hussain Khan and henchman Sultan Muhammed – both 23 – who were also British born, had amassed information from the internet about the Royals. Cell chief ... Khan had groomed Munshi online Khan also stored instructions on the manufacture of bombs and chemicals. He was regarded as an internet terrorist svengali, who groomed would-be recruits in chatrooms and by email. Munshi was first lured by him when he was a schoolboy. But by then he had already been downloading instructions on how to manufacture napalm – the petroleum jelly used for fire attacks by America during the Vietnam war. Munshi – who also operated his own extremist website – was traced by cops through his online conversations with Khan. Munshi's family is well known among

Muslims in Dewsbury, West Yorks, where his grandad Yakub runs the town's Sharia court. Khan, of Bradford, West Yorks, was also in regular contact with two other convicted British al-Qaeda terrorists. After his arrest on June 6, 2006, at Manchester Airport, inquiries showed he communicated with fanatic Waseem Mughal, 25 – jailed last year for inciting terrorism. Khan also groomed would-be suicide bomber Mohammed Atif Siddique, 21, who is now serving eight years. Muhammed, from Bradford, was found with a step-by-step guide for the making of a suicide bombing vest. A jury at London's Blackfriars Crown Court convicted him and Khan on three

charges each of possessing an article for a terrorist purpose. Khan and Muhammed will be sentenced today. Munshi will be dealt with at the Old Bailey on September 19.

Άσκηση – Επίθεση με άνυδρη αμμωνία εναντίον σχολείου

Στην πολιτεία Μινεσότα έλαβε χώρα άσκηση χημικής επίθεσης κατά σχολείου. Η επιλογή του χημικού βασίστηκε στο γεγονός ότι πρόκειται για το πιο συχνά κλεμμένο βιομηχανικό χημικό στις Ηνωμένες Πολιτείες. Χρησιμοποιείται στην παρασκευή της μεθαμφεταμίνης, υπάρχει σε δεξαμενές σε αγροκτήματα, σε κέντρα πωλήσεων ή σε εγκαταστάσεις καταψύξεως. Οι περισσότεροι άνθρωποι μπορούν να μυρίσουν την αμμωνία σε συγκεντρώσεις περίπου 25 ppm. Σε υψηλότερες συγκεντρώσεις εκδηλώνονται συμπτώματα από τα μάτια, τη μύτη και τους πνεύμονες. Όμως ο πανικός που προκαλείται είναι σημαντικός και όλοι μπορούν να φανταστούν το σκηνικό στο σχολείο που δέχτηκε την επίθεση. *Διαβάστε τις τελευταίες σειρές του άρθρου για να μην έχετε ότι ο εκδότης είναι ο μόνον που γκρινιάζει για την αδιαφορία των «ειδικών» και των «υπευθύνων».*

Anhydrous Ammonia Drill

A full-scale drill was conducted in Corunna, Mi simulating a chemical attack on a school. The scenario wasn't a typical terrorist attack. According to the Argus-Press.com article the scenario was two "disgruntled students" releasing all-too available poison-inhalation-hazard (PIH) chemical, anhydrous ammonia. A vacant building was used to simulate the school and a smoke generator with lemon extract was used to simulate the chemical release. The entire county emergency services apparatus, including volunteer auxiliaries, was involved in the exercise. Anhydrous Ammonia is probably one of the most commonly stolen industrial chemicals in the United States. Used in the manufacture of methamphetamines, it is commonly taken from tanks at farms, agricultural supply centers or commercial refrigeration facilities. A pressurized gas, it is often transferred into portable propane tanks for transportation to, and use in, illegal meth labs. Anhydrous ammonia is a toxic gas. Fortunately, at much less than lethal levels it is an irritant that 'encourages' evacuation or avoiding higher concentrations. Most people can smell ammonia at concentrations of about 25 ppm and OSHA has set a 50 ppm TWA (Time Weighted Average for an eight hour working day) exposure limit. At higher concentrations it will burn the skin, eyes, nose and lungs. Severe chemical burns of the lung tissue can easily cause a painful, agonizing death. Temporary blindness is not unusual at significantly less than lethal concentrations. Small scale attacks like that envisioned in this drill is not likely to cause wide spread deaths. The limited amount of ammonia contained in a propane tank like those found on gas grills is not likely to form killing clouds in an open area. Injuries and panic are likely, but not death. Introducing anhydrous ammonia into a closed classroom, with blocked doors and no working ventilation increases the probability of fatalities quickly. The panic associated with burning eyes, temporary blindness, and difficulty breathing would cause additional casualties and fatalities. Prompt decontamination and treatment of internal and external chemical burns for twenty to thirty students and teachers would quickly overwhelm all but the largest trauma centers. DHS lists anhydrous ammonia as a toxic-release COI (Appendix A, 6 CFR 27). Facilities that have more than 10,000 lbs of anhydrous ammonia on hand are required to complete a Top-Screen submission to allow DHS to determine if they are a high-risk chemical facility that would be governed under the Chemical Facility Anti-Terrorism Standards (CFATS). Facilities

with smaller quantities are not regulated by the Federal Government for the security of that material, though the recent Farm Bill did authorize \$60.00 per tank grants for



locks on agricultural anhydrous ammonia tanks. Chlorine, another PIH, is listed as both a toxic-release and a theft/diversion COI. That means that facilities with as little as 500 pounds of chlorine on-hand have to submit a Top-Screen and may be regulated under CFATS. Many states (Michigan and Illinois for example) require minimal security protections for anhydrous ammonia. These regulations typically require locks on valves and periodic visual checks of the tanks. These are certainly not comprehensive security procedures. The attachment of small cylinders of chlorine to vehicle born improvised explosive devices (VBIEDs) to make a 'dirty bomb' has been seen in Iraq where chlorine is much more readily available than anhydrous ammonia. Those dirty

bombs have not been very successful in increasing the casualty count of the attacks. They may have reduced the speed of rescue personnel and increased initial panic when people realized that chemicals were involved in the attack. But, small amounts of toxic gas disperse too quickly in the open to be very effective weapons. The closest that I have seen to a confined space attack with a toxic gas was the Sarin attacks in the Japanese subways a number of years ago. Sarin is much more toxic than anhydrous ammonia or chlorine, but those attacks still had relatively low casualty rates. The reason was the lack of control of the ventilation system and the very small amounts of toxin used. A full 5-gallon pressure container of anhydrous ammonia could certainly contain enough material for near lethal concentrations of ammonia in a classroom, if the ventilation system was shut down and the exits were blocked. This would not be the type attack expected of al Qaeda, but many 'wanna be' groups would find this well within their capabilities and it would certainly attract media attention. Due to the possible terrorist attack potential and the certain, wide-spread use in the manufacture of illicit drugs, there should be an increased appreciation of the community threats associated with small amounts of anhydrous ammonia. While the farm lobby would certainly object (see what they did with propane) it is clear that there needs to be increased security controls on the storage of anhydrous ammonia. The simplest thing that could be done would be for DHS to add anhydrous ammonia to the list of theft/diversion COI with a reasonable STQ. No new legislation would be required. All that would be necessary would be a notice in the Federal Register (and hiring a couple dozen people to answer the indignant calls from farm state delegations). Oh well, its not going to happen. Not unless the smoke generator in the empty building becomes an actual cylinder of anhydrous ammonia in a real school. [Then those farm state senators and congress people will be crying bloody murder, asking why something hadn't been done.](#)

Ανιχνευτής ανιχνεύει sarin και μουστάρδα σε εξαιρετικά χαμηλές ποσότητες
 Ο ανιχνευτής zNose δοκιμάστηκε σε περιβάλλον με πραγματικές ΧΠΟ σε στρατιωτική εγκατάσταση στην Κίνα και μπόρεσε επιτυχώς να ανιχνεύσει sarin (85 parts per trillion – ppt) και μουστάρδα (100 ppt)

zNose® Detects Sarin and Mustard Gas at Part Per Trillion Level

Electronic Sensor Technology (EST) (OTCBB:ESNR), a leading provider of innovative homeland security and environmental solutions, announces excellent results of real nerve agent testing in China. The experiment was performed by EST's



distributor in China, Beijing R&D Technology, using a military facility in China. This is the first time the zNose® has actually measured real nerve agents, simulants were used in prior testing. Sarin and Mustard Gas were detected at very low concentrations levels. The minimum detection level (MDL) for Sarin is 85 parts per trillion (ppt) and the MDL for Mustard Gas is 100 ppt. These levels are well below the concentrations that begin to cause effects in an exposed population. The IDLH (Immediately Dangerous to Life and Health) level is the concentration of a nerve agent that would cause immediate or delayed permanent adverse effects after 30 minutes of unprotected exposure. The IDLH value for Sarin is 30 parts per billion. (1 part per billion is 1000 times larger than 1 part per trillion) Based on the above data, the zNose would give an indication of a Sarin attack at levels 350 times lower than the IDLH concentration. Mustard gas is less hazardous than Sarin (a higher IDLH) and thus would also be easily detectable before it poses a serious threat. Some nerve agents such as Sarin are odorless and cause permanent adverse effects or even death well before exposure is realized. In order to save human lives, it is critical to have a detection system in place that can detect these gases at very low concentrations. This makes the zNose a great sensory tool in the fight to protect lives from nerve agent attack.

Βρετανική θεώρηση τρομοκρατικού προτύπου

Σύμφωνα με μελέτη της MI5 που διέρευσε στην εφημερίδα *Guardian* η πλειονότητα των ατόμων που εμπλέκονται στην τρομοκρατία στη Μ Βρετανία δεν είναι μοναχικά άτομα ή φανατισμένοι πιστοί ενώ δεν υπάρχει απλή μέθοδος πρόβλεψης και εντοπισμού των μελλοντικών τρομοκρατών.

UK intelligence report: Terror stereotype wrong

MI5 has concluded that there is no easy way to identify those who become involved in terrorism in Britain, according to a classified internal research document on

radicalisation seen by the Guardian. The sophisticated analysis, based on hundreds of case studies by the security service, says there is no single pathway to violent extremism. Alan Travis discusses the MI5 report into terrorism in Britain. It concludes that it is not possible to draw up a typical profile of the "British terrorist" as most are "demographically unremarkable" and simply reflect the communities in which they live. The "restricted" MI5 report takes apart many of the common stereotypes about those involved in British terrorism. They are mostly British nationals, not illegal immigrants and, far from being Islamist fundamentalists, most are religious novices. Nor, the analysis says, are they "mad and bad". Those over 30 are just as likely to have a wife and children as to be loners with no ties, the research shows. The security service also plays down the importance of radical extremist clerics, saying their influence in radicalising British terrorists has moved into the background in recent years. The research, carried out by MI5's behavioural science unit, is based on in-depth case studies on "several hundred individuals known to be involved in, or closely associated with, violent extremist activity" ranging from fundraising to planning suicide bombings in Britain.

The main findings include:

- *The majority are British nationals and the remainder, with a few exceptions, are here legally. Around half were born in the UK, with others migrating here later in life. Some of these fled traumatic experiences and oppressive regimes and claimed UK asylum, but more came to Britain to study or for family or economic reasons and became radicalised many years after arriving.*

- *Far from being religious zealots, a large number of those involved in terrorism do not practise their faith regularly. Many lack religious literacy and could actually be regarded as religious novices. Very few have been brought up in strongly religious households, and there is a higher than average proportion of converts. Some are involved in drug-taking, drinking alcohol and visiting prostitutes. MI5 says there is evidence that a well-established religious identity actually protects against violent radicalisation.*

- *The "mad and bad" theory to explain why people turn to terrorism does not stand up, with no more evidence of mental illness or pathological personality traits found among British terrorists than is found in the general population.*

- *British-based terrorists are as ethnically diverse as the UK Muslim population, with individuals from Pakistani, Middle Eastern and Caucasian backgrounds. MI5 says assumptions cannot be made about suspects based on skin colour, ethnic heritage or nationality.*

- *Most UK terrorists are male, but women also play an important role. Sometimes they are aware of their husbands', brothers' or sons' activities, but do not object or try to stop them.*

- *While the majority are in their early to mid-20s when they become radicalised, a small but not insignificant minority first become involved in violent extremism at over the age of 30.*

- *Far from being lone individuals with no ties, the majority of those over 30 have steady relationships, and most have children. MI5 says this challenges the idea that terrorists are young men driven by sexual frustration and lured to "martyrdom" by the promise of beautiful virgins waiting for them in paradise. It is wrong to assume that someone with a wife and children is less likely to commit acts of terrorism.*

- *Those involved in British terrorism are not unintelligent or gullible, and nor are they more likely to be well-educated; their educational achievement ranges from*

total lack of qualifications to degree-level education. However, they are almost all employed in low-grade jobs.

The researchers conclude that the results of their work "challenge many of the stereotypes that are held about who becomes a terrorist and why". Crucially, the research has revealed that those who become terrorists "are a diverse collection of individuals, fitting no single demographic profile, nor do they all follow a typical pathway to violent extremism". The security service believes the terrorist groups operating in Britain today are different in many important respects both from Islamist extremist activity in other parts of the world and from historical terrorist movements such as the IRA or the Red Army Faction. The "UK restricted" MI5 "operational briefing note", circulated within the security services in June, warns that, unless they understand the varied backgrounds of those drawn to terrorism in Britain, the security services will fail to counter their activities in the short term and fail to prevent violent radicalisation continuing in the long term. It also concludes that the research results have important lessons for the government's programme to tackle the spread of violent extremism, underlining the need for "attractive alternatives" to terrorist involvement but also warning that traditional law enforcement tactics could backfire if handled badly or used against people who are not seen as legitimate targets. The MI5 authors stress that the most pressing current threat is from Islamist extremist groups who justify the use of violence "in defence of Islam", but that there are also violent extremists involved in non-Islamist movements. They say that they are concerned with those who use violence or actively support the use of violence and not those who simply hold politically extreme views.

Οικονομική τρομοκρατία

Η al Qaeda δαπάνησε 500.000 δολάρια για την εκτέλεση της επίθεσης της 11^{ης} Σεπτ 2001. Εκτοτε οι επιθέσεις είναι εξαιρετικά χαμηλού κόστους εξαιτίας της οικονομικής δυσπραγίας λόγω του πολέμου κατά της τρομοκρατίας και του γεγονότος ότι διενεργούνται από αυτοχρηματοδοτούμενους τοπικούς πυρήνες. Έτσι, η επίθεση στο μετρό του Λονδίνου κόστισε περίπου 15.000 δολάρια συμπεριλαμβανομένων και των εισητηρίων μέχρι το Πακιστάν για συμβουλευτικές συναντήσεις με ηγετικά στελέχη της al Qaeda. Στην Ισπανία, η επίθεση κατά των τραίνων στην ισπανική πρωτεύουσα είχε προϋπολογισμό 80.000 δολαρίων (αν και η οργάνωση είχε πρόσβαση σε λογαριασμούς 2.3 εκατομμυρίων δολαρίων από λαθρεμπόριο ναρκωτικών – κυρίως χασίς). Σε όλη την Ευρώπη και την Αμερική, οι επίδοξοι τρομοκράτες χρησιμοποιούν μεθοδολογίες κοινού εγκλήματος για τη συγκέντρωση χρημάτων που στη συνέχεια θα χρηματοδοτήσουν την επιχείρησή τους. *Είναι αυτή η στροφή και συνεργασία με στοιχεία του κοινού ποινικού δικαίου που δίνει νέα μορφή στην τρομοκρατία καθώς επιλύει το πολύ σημαντικό εμπόδιο της χρηματοδότησης – το Internet αναλαμβάνει τα υπόλοιπα!*

Al-Qaeda Masters Terrorism On the Cheap

Since the Sept. 11, 2001, attacks, al-Qaeda has increasingly turned to local cells that run extremely low-cost operations and generate cash through criminal scams, bypassing the global financial dragnet set up by the United States and Europe. Although al-Qaeda spent an estimated \$500,000 to plan and execute the Sept. 11 attacks, many of the group's bombings and assaults since then in Europe, North Africa and Southeast Asia have cost one-tenth as much, or less. The cheap plots are evidence that the U.S. government and its allies fundamentally miscalculated in assuming they

could defeat the network by hunting for wealthy financiers and freezing bank accounts, according to many U.S. and European counterterrorism officials. In an ongoing trial here of eight men accused of planning to blow up airliners bound for the United States two years ago, jurors have been told how the accused shopped at drugstores for ingredients to build bombs that would have cost \$15 apiece to assemble. Similarly, the cell responsible for the July 7, 2005, transit bombings in London needed only about \$15,000 to finance the entire conspiracy, including the cost of airfare to Pakistan to consult with al-Qaeda supervisors, according to official British government probes. Investigations into several plots in Europe have shown that operatives were often flush with cash, raising far more than necessary through common criminal rackets such as drug dealing and credit card theft. Testimony in the trial of the accused airliner plotters has shown that the defendants had enough money to buy a northeast London apartment for \$260,000 shortly before their arrest, allegedly so they would have a safe place to mix liquid explosives for their bombs. One of the July 2005 suicide bombers, a 22-year-old part-time worker at a fish-and-chips shop, left an estate worth \$240,000 after he blew up a subway train. Neither his family nor authorities have explained where he got the money. In Spain, the cell responsible for the March 2004 train bombings in Madrid needed \$80,000 to finance the plot, according to Spanish court documents. But they had access to more than \$2.3 million worth of hashish and other illegal drugs that they could have sold to raise more money, the documents showed. Even the 9/11 hijackers wired back about \$26,000 in surplus funds to accounts in the Persian Gulf area a few days before the attacks. Authorities said it is often impossible to monitor fundraising by such cells because they generally keep so little in the bank. Instead of receiving wire transfers or making large deposits that would trigger automatic alerts, they move cash in person and are discreet about how they spend it. "The groups operating in Europe don't need a lot of money. The cost of operations is very low," said Jean-Louis Bruguière, a former senior anti-terrorism judge in France who now works as an adviser to the European Union on terrorism financing. "But they are very skilled at obtaining money and using criminal systems to do it. They can collect thousands and thousands of dollars or euros in a few weeks. It is beyond our control." Law enforcement officials in London said al-Qaeda cells are trained to plot and live on the cheap. Operatives lead ascetic lives, often keeping their day jobs or depending on their families to cover expenses. Above all, they are taught to build bombs that are lethal but crude and inexpensive. Almost every terrorist plot in Europe in recent years has followed a simple formula: homemade explosives stuffed into backpacks, shoes, suitcases or car trunks. Thirteen days after the Sept. 11 hijackings, President Bush launched what the White House later described as the "first strike in the war on terrorism." He signed an executive order freezing the assets of 27 individuals and groups suspected of terrorism and forbidding anyone from doing business with them. "Money is the lifeblood of terrorist operations," Bush said in the Rose Garden. "Today we're asking the world to stop payment." A month later, Congress and Bush went further by adopting the USA Patriot Act, which required banks to report transactions larger than \$10,000 to the Treasury and to check if any of their customers were on a database of suspected terrorists. By December 2001, the government had frozen \$33 million in assets and expanded its terrorism-financing blacklist to 153 names. In a report assessing its progress in the fight against al-Qaeda, the White House declared, "The United States and its allies have been winning the war on the financial front." The measures, however, have failed to dry up the supply of money available to al-Qaeda and have had no discernible effect in preventing the network from carrying out attacks,

according to several counterterrorism officials and experts in the United States and Europe. Before Sept. 11, 2001, al-Qaeda and its affiliates rarely used the banking system in a manner that might arouse suspicion, officials and experts said. In response to the new anti-terrorism financing laws, the network has become even more cautious, relying on couriers to carry money across borders when necessary, authorities said. Ibrahim Warde, an adjunct professor at Tufts University and an expert on financial systems in Islamic countries, said the Bush administration and its allies falsely assumed that al-Qaeda had stashed large sums in secret bank accounts. "It got the entire financial bureaucracy started on a wild-goose chase," Warde said. "There's a complete disconnect between this approach and the underlying reality of how terrorism is funded." Dennis M. Lormel, a former head of the FBI's Terrorist Financing Operations section, said the laws passed since 2001 have closed some gaps and addressed vulnerabilities that made it easy for al-Qaeda to raise and transfer money. But he said the network has responded quickly. Its cells in Europe and elsewhere now raise money on their own instead of relying on financial transfers from external sources that could be tracked by law enforcement officials. "Clearly, when you're dealing with groups that are self-funded, you're dealing with a different set of circumstances from when they put these laws in place," said Lormel, now a senior vice president at Corporate Risk International, a Reston-based firm. "The bad guys, after a while, they realize what we're doing, so they're going to alter how they do business," he added. "Obviously, you're not going to stop them from getting money, and they're going to be able to adapt." Al-Qaeda's self-financing cells in Europe have become increasingly creative in their fundraising methods, officials said. After the July 2005 London transit bombings, police knocked on the door of a sheep farmer in Scotland to inquire about a livestock deal gone sour. The farmer, Blair Duffton, confirmed that he had lost more than \$200,000 when he sent several truckloads of sheep to a slaughterhouse in Leeds, England, but never received payment. The slaughterhouse specialized in halal meat, or food prepared according to Islamic law. Detectives informed Duffton that the person who had stiffed him for the sheep was an associate of Shehzad Tanweer, one of three bombers who had lived in Leeds. "I almost went bankrupt," Duffton recalled in a telephone interview. "I couldn't believe it when they told me that this might have been connected to terrorism." British authorities have not commented publicly on the sheep scam or said if any of the proceeds were used to finance the attacks. Three men accused of providing support to the suicide bombers are currently on trial in London. In Germany, three Arab men were convicted in December on charges of attempting to raise \$6.3 million for al-Qaeda by faking a death to collect on nine life insurance policies. In Switzerland and Spain in 2006, authorities broke up a cell that had stolen \$2 million worth of computers, cars and home furnishings. Police said the group sold the goods on the black market and had couriers carry the cash, in \$2,000 increments, to an al-Qaeda-affiliated network in Algeria. In Britain, an al-Qaeda operative, Omar Khyam, was caught on a surveillance tape urging some of the July 2005 London suicide bombers to defraud banks and hardware stores by defaulting on loans of less than \$25,000. Khyam said the goal was not just to raise money for operations but to "rip the country apart economically, as well," according to court testimony in April at the trial of the three men accused of providing support to the bombers. Acting on Khyam's advice, one of the bombers obtained and then defaulted on a \$20,000 loan from HSBC Bank. Another secured a \$14,000 line of credit from a building supply company. Given the small scale of such transactions, banks or police would have had little reason to suspect the involvement of terrorists, officials said. "That's the cleverness of these

schemes -- to keep it under the radar," said Stephen Swain, former head of Scotland Yard's international counterterrorism unit. "By doing this, they can raise significant amounts of money, fairly quickly, and there's no real way to detect it." A few weeks after the Sept. 11 attacks, Gordon Brown, then Britain's chancellor of the exchequer, or finance minister, announced a major effort to "crack the code" of terrorist financing. He said Britain would press the entire European Union to hunt for al-Qaeda by combing through the international banking system. "If fanaticism is the heart of modern terrorism, then finance is its lifeblood," said Brown, who is now Britain's prime minister. In response to the July 2005 London transit bombings, Brown said the government would freeze the suspects' bank accounts and place additional controls on international financial transfers, even though there was no evidence the cell had received any money from outside sources. "There will be no hiding place for those who finance terrorism," he promised. Two months after authorities broke up what they said was the plot to bomb transatlantic airliners in August 2006, Brown reiterated that the key to fighting terrorism was to disrupt al-Qaeda's bank accounts. He said Britain would use classified intelligence to freeze assets of people suspected of having links to terrorist groups and would exercise greater control over Islamic charities. "We will take any necessary steps and find all necessary resources to ensure whether in Iraq, Afghanistan or anywhere else there is no safe haven for terrorists and no hiding place for terrorist finance," Brown said, echoing his 2005 comments. Britain has frozen assets belonging to 359 individuals and 126 organizations suspected of assisting al-Qaeda, according to a Treasury report released last year. All told, about \$2 million has been seized, the Treasury reported. But the government's efforts have had little practical effect, several current and former British counterterrorism officials said. For instance, Britain froze the accounts of 19 suspects in the 2006 transatlantic airliner plot -- but only after they were arrested. Officials said most of the accounts contained negligible amounts.

Πυραυλικές δυνατότητες Hamas

Σύμφωνα με δημοσιεύματα ισραηλινών εφημερίδων, η Hamas και η Islamic Jihad μπορούν να εκτοξεύουν 100 ρουκέτες ημερησίως κατά του Ισραήλ. Πρόκειται για ρουκέτες που φέρουν εκρηκτική κεφαλή 90 mm και μπορούν να μεταφέρουν προηγμένα εκρηκτικά υλικά σε απόσταση 22 χλμ. Πρόσφατα η Hamas κατάφερε να εισάγει λαθραία 8.000 σιδηρο-σωλήνες καθώς και πολυχλωρίδιο που αποτελεί βασικό συστατικό κατασκευής εκρηκτικών. Η Islamic Jihad έχει προχωρήσει ένα βήμα παραπέρα κατασκευάζοντας κεφαλή 115 mm που μπορεί να μεταφέρει 6 κιλά εκρηκτικών. Πιθανόν η διακίνηση των υλικών να γίνεται μέσω των εκατοντάδων τούνελ που επίσημα υπάρχουν και ανεφοδιάζουν την θεωρητικά αποκλεισμένη περιοχή.

Hamas can fire 100 missiles daily

Israeli newspaper, Yedioth Ahronoth, reported on Friday that Hamas and the Islamic Jihad in Gaza are continuing to develop their missile capabilities and are manufacturing explosives that could be stored for extended periods. The paper also said that Hamas is now capable of firing 100 homemade shells on daily basis. The paper also reported that Israel will eventually find itself facing a developed missile system in Gaza, and that this system is not much different that the missiles of Hezbollah. Israeli security sources stated that the military power of Hamas developed after the current truce was reached, and that Hamas is ongoing with the development

of more accurate missiles. According to the paper, Hamas managed to develop an advanced missile which carries a 90 millimeter explosive head and is capable of carrying advanced explosive materials. Israel said that similar missiles were



previously fired from the Gaza Strip and that Hamas continued to train its fighters by firing missile towards the sea. These missiles could hit a targeted as far as 22 kilometers away. Yedioth Ahronoth also reported that Hamas managed to smuggle 8000 iron pipes into the Gaza Strip, and that these pipes are the main component of homemade shells. It also said that Hamas obtained polychloride which is used in manufacturing explosives. The

Israeli security services said that Hamas wants to be able to fire 100 missiles or more each day. Moreover, the paper said in its report that the Islamic Jihad managed to developed a 115 millimeter shell which carries 6 kilograms of explosives. Regarding talks on the release of the captured soldier, Gilad Shalit, the paper said that Egypt informed Israel that a development could be achieved in November this year. The paper also said that Hamas is not showing any flexibility in its position and that Egypt is practicing pressure on the movement by detaining Hamas members in Egypt and closing the border terminal. Israel is practicing pressure on Egypt to increase the border security in order to stop the smuggling of weapons and ammunition into the Gaza Strip. Israeli security sources said that Egypt uncovered 138 tunnels since the truce was declared; the tunnels were closed and detonated.

Τεχνολογία και ανίχνευση εκρηκτικών και βρώμικων βομβών

Η σύγχρονη τεχνολογία προσπαθεί να συνδυαστεί με καθημερινές συσκευές όπως οι φορητοί υπολογιστές, τα iPods ή τα κινητά τηλέφωνα για να καταστεί εφικτός ο εντοπισμός εκρηκτικών ή βρώμικων βομβών σε αστικό περιβάλλον.

Using Personal Technologies To Detect Explosives, Dirty Bombs and More

As science races to confront terrorism with new technology, researchers are unveiling



a new generation of devices featuring ever-more sophisticated sensors to quickly detect explosives, radiation, chemicals and biological agents. Most share the promise of doing more with far less bulk, suggesting a future in which radiation from a dirty bomb is detected by a commuter's iPhone, a laptop warns of explosives more than a football field's length away, a hand-held unit spots airborne anthrax spores within seconds and a device no bigger

than a matchbox sniffs out a tiny release of hazardous chemicals. "We'd all like to have the tricorder on 'Star Trek' where you point it at something and it says, 'Oh, it's this,'" said Larry Senesac, a physicist at Oak Ridge National Laboratory in Oak

Ridge, Tenn. If science isn't quite ready to "boldly go where no man has gone before," he agrees that researchers have made huge strides from the days of relatively immobile sensors. And as the devices have shrunk in size, costs have dropped as well. For detecting explosives, "you'd like to screen people, you'd like to screen their luggage, you'd like to screen packages and ship containers," Senesac said. "You'd also like to detect these improvised explosive devices that have been showing up all over, but particularly in Iraq." Oak Ridge National Laboratory's new technology, known as standoff photoacoustic spectroscopy, allows people to literally stand off at a distance and detect hazards, suggesting a not-too-distant scenario "where vehicles could drive down the street at a reasonable speed and screen for these explosives," Senesac said. In a lab setting, he and colleagues detected residue from TNT and two other types of explosives more than 20 yards away — "not just explosives, but we can tell which explosives they are."

Ταχεία ανίχνευση βιοτρομοκρατικών παραγόντων

Ερευνητές του Kansas State University ανέπτυξαν δοκιμασία (DNA spotted microarray) που μέσα σε λίγες ώρες μπορεί να δώσει διάγνωση επικίνδυνων παθήσεων (φυσικών ή βιοτρομοκρατικών) καθώς και την ανθεκτικότητά τους στα αντιβιοτικά. Μέχρι σήμερα η μεθοδολογία μπορεί να ανιχνεύσει έως και 557 γονίδια παθογόνων και πιθανή αντίσταση σε 45 αντιβιοτικά.

Rapid Test for Pathogens Could Be Used to Detect Diseases Used By Bioterrorists

Dangerous disease often spreads faster than it takes to diagnose it in the lab. To remedy that, researchers at Kansas State University have developed a test to bring that time from days down to hours. Sanjeev Narayanan, assistant professor, and Greg Peterson, research microbiologist, both in the department of diagnostic medicine and pathobiology, use a device called a DNA spotted microarray to seek out the specific genetic markers that set one pathogen apart from another and determine antibiotic resistance. Traditionally, it takes days and multiple lab workers to screen a sample of soil, water or feces for just one pathogen. Additional time is then needed to look for resistance to antibiotics. The new test developed at K-State simultaneously looks for multiple diseases and antibiotic resistance, reducing the time it takes from sampling to diagnosis to about 24 hours. "We needed a mass, high through-put system," Narayanan said. "The longer a serious disease goes undiagnosed, the harder it is to treat and the further it can spread." Narayanan and Peterson have analyzed DNA of hundreds of pathogens and synthesized DNA probes for the specific genetic sequences that set each pathogen apart. So far they can detect as many as 557 genes, making it possible for them to screen for 40 different species of bacteria, 1,200 serotypes of Salmonella, five common serotypes of E. coli, and resistance to the 45 most common antibiotics used to treat human and animal illnesses caused by these pathogens. When a sample is submitted, technicians extract and fluorescently label total DNA, and run a microarray to check whether a particular gene is present. Narayanan said the next step will be to develop a test that indicates how much of a pathogen is present, or rather how bad an infection is. Narayanan said that he and Peterson developed the test because most human and animal infections are caused by a mixture of pathogens. Under the current practice, it literally takes days to isolate and identify each individual pathogen and generate their antimicrobial resistance profiles. This means physicians and veterinarians often start antibiotic treatment before

knowing exactly what they're up against. "This new test will eliminate a lot of the guesswork," Narayanan said. It will tell the doctor how many different kinds of pathogens are in a sample and which antibiotics won't work, all in a shorter time frame. The test's efficiencies also translate into lower cost, he said. Should the U.S. ever be attacked with biological weapons, Narayanan said the new test also will help in quickly identifying all of the bacterial pathogens used. "Being able to get such quick results for so many pathogens at once will become critical in case of bioterrorism," he said. "Under that scenario, every minute counts in providing treatment or preventing disease spread." Also, such pathogens would likely be engineered for resistance to common drug treatment and the new test would determine such resistance rapidly, Narayanan said. The test is currently being used in research labs at K-State's College of Veterinary Medicine to detect animal and zoonotic pathogens; zoonotic pathogens can be transmitted between humans and animals. The test also is being used to monitor the flow of genetic elements in food production systems, such as feedlots. However, Narayanan hopes the test one day will be used to enhance the clinical diagnosis of animal and human infections. The quick test was developed out of research work funded by a \$100,000 K-State Targeted Excellence grant.

Αποτελεσματικό το βιετναμέζικο εμβόλιο κατά της γρίπης των πτηνών

Το βιετναμέζικο εμβόλιο *Fluvax*TM της εταιρείας VabioTech αποδείχτηκε ότι είναι αποτελεσματικό και θα διατίθεται στην προσιτή τιμή των 30.000 VND. Το χαμηλότερο κόστος του οφείλεται στο γεγονός ότι το εμβόλιο αναπτύχθηκε χρησιμοποιώντας νεφρικά κύτταρα πιθήκων που είναι φθηνότερα από τα εμβρυικά κύτταρα κότας

Vietnam-made bird flu vaccine proves effective

The first human testing stage has proven the effectiveness of a locally-produced H5N1 influenza vaccine. The result was reported at a working session between the Health Ministry's Science and Training Department and the Military Medical Institute 103 on August 21. Head of the institute's Epidemiology Department Doan Huy Hau said that 30 volunteer students



from the institute had been reported having no serious side-effects three months after they received the second shot of Fluvax vaccine, made by the Vaccine and Biotechnology Products Company No. 1 (VABIOTECH). The students have also developed good immunity, he added. Fluvax vaccine is expected to be put into mass production by late 2009 at a cost of around VND 30,000 per dose. VABIOTECH has

developed the vaccine using monkey kidney cells which, its Director Professor Nguyen Thu Van says, are cheaper and safer than similar vaccines using the culture on embryonic chicken eggs currently being developed by other countries. VABIOTECH commenced its study in 2004 as avian flu began to spread throughout Vietnam. After the successful tests on animals in 2007, the company was permitted to conduct human tests in 2008.

DIA και όπλα εγκεφαλικού ελέγχου

Σε πρόσφατη μελέτη της αμερικανικής υπηρεσίας DIA αναγράφονται ορισμένες ενδιαφέρουσες προοπτικές για το μέλλον: νευροφυσιολογική ανίχνευση και μέτρηση δεικτών ψυχολογικής κατάστασης και προθέσεων, ανάπτυξη φαρμάκων ή τεχνολογιών που μπορούν να βελτιώσουν τις σωματικές και ψυχικές επιδόσεις των ανθρώπων, πρόοδοι στη χαρτογράφηση του εγκεφάλου σε πραγματικό χρόνο, ηλεκτρονική μίμηση λειτουργίας ανθρώπινων συστημάτων με ιδιαίτερη επικέντρωση στην ανθρώπινη ικανότητα οργάνωσης ανάμοιων πληροφοριών.

Defense Intelligence Agency Seeking “Mind Control” Weapons

A new report from the National Academy of Sciences’ National Research Council (NRC) argues that the Pentagon should harvest the fruits of neuroscientific research in order to enhance the “warfighting” capabilities of U.S. soldiers while diminishing those of enemy personnel. The 151-page report issued by a 16-member blue ribbon commission, “Cognitive Neuroscience Research and National Security,” was quietly announced in an August 13 National Academy of Sciences. Commissioned by the Defense Intelligence Agency (DIA), the Pentagon spy shop, the study asserts that the U.S. intelligence “community” must do a better job following cutting-edge research in neuroscience or as is more likely, steering it along paths useful to the Defense Department. According to the NRC, *A 2005 National Research Council report described a methodology for gauging the implications of new technologies and assessing whether they pose a threat to national security. In this new report, the committee applied the methodology to the neuroscience field and identified several research areas that could be of interest to the intelligence community: neurophysiological advances in detecting and measuring indicators of psychological states and intentions of individuals, the development of drugs or technologies that can alter human physical or cognitive abilities, advances in real-time brain imaging, and breakthroughs in high-performance computing and neuronal modeling that could allow researchers to develop systems which mimic functions of the human brain, particularly the ability to organize disparate forms of data.* (“National Security Intelligence Organizations should Monitor Advances in Cognitive Neuroscience Research,” National Academy of Sciences, Press Release, August 13, 2008) Unlocking the secrets of the brain is projected as the next growth industry for the military, academia and corporate grifters hoping to land huge Pentagon contracts. As defense analyst Noah Shachtman reported in Wired, the “Army has given a team of University of California researchers a \$4 million grant to study the foundations of “synthetic telepathy.” Unlike “remote viewing” research funded by the CIA and the Defense Intelligence Agency between 1972 and 1996, variously known as “Grill Flame,” “Sun Streak” and finally, “Star Gate” before the plug was pulled, the Army-U.C. Irvine joint venture are exploring thought transmission via a brain-computer mediated interface. Recently *New Scientist* reported on a series of bizarre experiments at the University of Reading in the UK. Researchers there have connected 300,000

disembodied rat neurons suspended in “a pink broth of nutrients and antibiotics” to 80 electrodes at the base of the growth medium. As journalist Paul Marks informs us, the “rat neurons have made—and continue to make—connections with each other.” The voltages sparked by the firing cells are displayed on a computer screen. Welcome to the “brave new world” of neural prosthetics and the militarists who are exploiting science and technology for new weapons applications. Declaring that emerging technologies such as brain imaging and cognitive and physical enhancers are “desired by the public,” NRC avers “such forces act as strong market incentives for development.” But as Rick Weiss cautions on the *Science Progress* blog, *But even more interesting to me is the report’s discussion of the emerging market in brain-targeted, performance-degrading techniques. Some experiments, it turns out, suggest that magnetic beams can be used to induce seizures in people, a tempting addition to the military’s armamentarium. More conventionally, as scientists discover new chemicals that can blur thinking or undermine an enemy’s willpower, and as engineers design aerosolized delivery systems that can deliver these chemicals directly to the lungs (and from there, the brains) of large groups of people, the prospect of influencing the behavior of entire enemy regiments becomes real.* (“Minding Mental Minefields,” *Science Progress*, August 15, 2008) The use of so-called calmativ agents as non-lethal weapons are already under development. As *Antifascist Calling* reported last month in “The Calmativ Before the Storm,” the



Pentagon’s Joint Non-Lethal Weapons Directorate (JNLWD) are carrying out experiments into what it euphemistically calls “Human Effects Research” and developing an “Advanced Total Body Model for predicting the effects of non-lethal impacts.” Apparently the DIA has taken this a step further and will now explore the possibility of creating aerosolized pharmacological agents that can disrupt and perhaps influence, the mental functioning of targeted populations abroad, enemy soldiers or dissenting citizens here in the United States. Neil Davison, a researcher with the Bradford Disarmament

Research Centre (BDRC) at Bradford University in the UK, wrote an important 2007 study, “‘Off the Rocker’ and ‘On the Floor’: The Continued Development of Biochemical Incapacitating Weapons.” Davison examined the historical differentiation made by weaponeers between “off the rocker” agents such as LSD, PCP and psilocybin in their allegedly weaponized forms versus “on the floor” agents such as sedatives, opiate analgesics and anesthetic chemicals. During the “golden age” of the CIA and U.S. Army’s quixotic search for “mind control” agents during the 1950s and 1960s, researchers were seeking a reliable mechanism that would unlock the secrets of the mind—and gain control over witting or unwitting subjects—for

intelligence and counterintelligence purposes. Hundreds, if not thousands, of unethical experiments were carried out on psychiatric patients, civilians and soldiers. The results were subsequently suppressed on grounds on “national security.” While the majority of CIA MKULTRA files were ordered destroyed by former Agency Director Richard Helms in 1973, the Senate Select Committee on Intelligence held landmark 1977 hearings and issued a report, “Project MKULTRA, The CIA’s Program of Research in Behavioral Modification.” As Senator Ted Kennedy discussed in his opening remarks. *Some 2 years ago, the Senate Health Subcommittee heard chilling testimony about the human experimentation activities of the Central Intelligence Agency. The Deputy Director of the CIA revealed that over 30 universities and institutions were involved in an “extensive testing and experimentation” program which included covert drug tests on unwitting citizens “at all social levels, high and low, native Americans and foreign.” Several of these tests involved the administration of LSD to “unwitting subjects in social situations.” We believed that the record, incomplete as it was, was as complete as it was going to be. Then one individual, through a Freedom of Information request, accomplished what two U.S. Senate committees could not. He spurred the agency into finding additional records pertaining to the CIA’s program of experimentation with human subjects. ... The records reveal a far more extensive series of experiments than had previously been thought. Eighty-six universities or institutions were involved. New instances of unethical behavior were revealed. The Central Intelligence Agency drugged American citizens without their knowledge or consent. It used university facilities and personnel without their knowledge. It funded leading researchers, often without their knowledge.* (emphasis added) While the CIA’s MKULTRA project and related Army ventures carried out at the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID) at Ft. Detrick, Maryland, may have failed to develop specific agents that could be wielded as a “mind control” weapon, the research did result in the development of abusive interrogation techniques that can only be characterized as torture. As *Antifascist Calling* queried in “Neuroscience, National Security & the ‘War on Terror’,” “If behavioral psychology was handmaid to the horrors perpetrated at Guantánamo Bay, Abu Ghraib and CIA transnational ‘black sites,’ what new nightmares are in store for humanity when advances in neuroscience, complex computer algorithms and a secretive national security state enter stage (far) right?” Apparently horrors of the “mind control” variety, particularly when it comes to applications for ever-newer and more insidious interrogation/control techniques to be used on “enemy combatants” or dissenting malefactors in the *heimat*. According to the NRC and the corporate-academic grifters involved in the research, cognitive warfare should be sold as a “more humane” method of advancing imperialist objectives. As the report baldly states, the equation “pills instead of bullets” will be the preferred marketing technique employed for “selling” the program to the American people. As anthropologist Hugh Gusterson wrote, *The military and scientific leaders chartering neuroweapons research will argue that the United States is a uniquely noble country that can be trusted with such technologies, while other countries (except for a few allies) cannot. They will also argue that these technologies will save lives and that U.S. ingenuity will enable the United States to dominate other countries in a neuroweapons race. When it is too late to turn back the clock, they will profess amazement that other countries caught up so quickly and that an initiative intended to ensure American dominance instead led to a world where everyone is threatened by chemicalized soldiers and roboterrorists straight out of Blade Runner.* (The militarization of neuroscience,” *Bulletin of the Atomic Scientists*, 9 April 2007)

But as the world looked on in horror at Abu Ghraib and Guantánamo Bay, this “uniquely noble country” guided by “ethical principles,” resorted to repugnant methods such as sensory deprivation, near drowning and “self-inflicted pain” techniques (short-shackling and the like) to achieve control over defenseless prisoners. As the NRC would have it, academics in thrall to corporate funding and state agencies staffed by war criminals now expect us to believe that “ethics” will guide those exploring pharmacological methods to obtain more insidious means to subjugate humanity. Weiss reports that the NRC notes in its report, the motivation, or lack thereof, to fight, is of great concern to Pentagon bureaucrats and policy makers. “So one question,” for military-corporate-academic funded research “would be, ‘How can we disrupt the enemy’s motivation to fight?’ Other questions raised by controlling the mind: ‘How can we make people trust us more?’ ‘What if we could help the brain to remove fear or pain?’ ‘Is there a way to make the enemy obey our commands?’...As cognitive neuroscience and related technologies become more pervasive, using technology for nefarious purposes becomes easier.” But as is usual with all such screeds, the psychoanalytic theory of *projection* comes in handy when deciphering the monstrous intent of Pentagon weaponeers. It is all-too-clear whether we are discussing nuclear, biological, chemical or contemporaneously, cognitive weapons that Western proponents of preemptive war, always couch their acts of violent imperialist aggression in purely *defensive* terms. In this light, Freud and his followers have defined projection as a form of defense in which unwanted feelings are displaced onto another person, and where aggressive impulses then appear as a threat from the external world. In the case of corporate defense and security grifters, their militarist pit bulls and the academic sycophants who fuel their deranged “cognitive warfare” fantasies, the *other*—a nation, a dispossessed class or a bogeyman such as “international terrorism”—are *always* the *external* harbingers of apocalyptic death and destruction, when in reality such fantasies are wholly reflective of *their own desire* to aggressively dominate and plunder other nations. Therefore, the NRC maintains, and note the ideologically-skewed reference to the eternal verities of “the market,” the Holy Grail of capitalism in its hyperimperialist phase: *The fear that this approach to fighting war might be developed will be justification for developing countermeasures to possible cognitive weapons. This escalation might lead to innovations that could cause this market area to expand rapidly. Tests would need to be developed to determine if a soldier had been harmed by a cognitive weapon. And there would be a need for a prophylactic of some sort.* (NRC, op. cit.) Who, pray tell, is driving this “escalation” and counting on academia to produce “innovations” in “this market area”? One might also quite reasonably inquire: Who profits? As Christopher Green, the chairman of the NRC investigative panel championing neuroweapons research avers in a roundtable discussion sponsored by the *Bulletin of the Atomic Scientists*, *Big Pharma is global. Drug discovery research is both ponderous (not as much as arms control, however) and increasingly beyond the control of governments and the public. The development of cognitive enhancers and anti-aging aides during the next two decades (the time needed for drug discovery to become successful) will be...ethically worrisome. But it will be beyond opprobrium. Drugs will be developed and marketed, and not necessarily under the auspices of traditional Western controls and good laboratory practices.* (“The potential impact of neuroscience research is greater than previously thought,” *Bulletin of the Atomic Scientists*, 9 July 2008) [emphasis added] While Green claims he is opposed to developing drugs “with safe and efficacious properties for military use,” the NRC study, after all, was funded by the Defense Intelligence Agency, hardly a “neutral party” when it comes to “enhanced

interrogation techniques” and other horrors of this horrible system! One must also dissect the linguistic formulations and assumptions deployed by those advocating this line of research. By referring to neuroweapons production as a “market area,” those contemplating unleashing devilish pharmacological forms of warfare on unsuspecting populations behave, in you’ll pardon the pun, as if they were brainstorming the release of a new video game or suite of luxury condominiums in an American city “ethnically cleansed” of its urban poor! Green and his acolytes claim that “battlefield commanders of all nations hold sacrosanct the right to determine the applications” of weapon deployments that may cause “collateral damage” to civilian noncombatants. Therefore, Green argues that “if governments or scientists were to try to develop a system to pre-screen neuroscientific cognitive manipulators, which would be HIPAA approved and tested, and robust in its core science, success would be as likely as it was with mines and cluster-bombs—meaning not likely.” Translation: full-speed ahead! While the NRC allege that their approach to monitoring neuroweapons research is “ethical,” the committee ponders whether “the concept of torture could also be altered by products in this market. It is possible that someday there could be a technique developed to extract information from a prisoner that does not have any lasting side effects.” Other than the hollowing-out of one’s personality and the unique traits that make us human, that is. “Paging Winston Smith, white courtesy telephone!” While Nazi theories of Aryan superiority may have been displaced by a uniquely American ultranationalist, though no less predatory utilitarian praxis, behind the glittering technological promises trumpeted by today’s biotech weaponeers lurk the same murderous mental constructs that guided Indian hunters and slave traders of yore. Only this time, *we’re all Manchurian candidates*.

Σουηδική μελέτη σχετικά με το Ολοκαύτωμα

Ενδιαφέρουσες πληροφορίες μέσω του ερωτηματολογίου του Swedish Living History Forum με βασικό αντικείμενο τη διδασχία του Ολοκαυτώματος στη Σουηδία. Στο ερωτηματολόγιο υπήρχαν αρκετές ερωτήσεις που αφορούσαν μουσουλμάνους και μετανάστες. Τα δεδομένα αφορούν το 2007 ενώ εκείνα εντός των παρενθέσεων το 1998).

Sweden: Holocaust study questions on Muslims and immigrants

The Swedish Living History Forum recently published its report about the teaching of the Holocaust in Sweden. The survey included quite a few questions related to Muslims and immigrants. The data below is for the 2007 survey, data in parenthesis is from 1998.

What do you think of Muslim girls who want to wear a veil/scarf in school?

I accept it and think it's good - 14.04% (13.13%)

I accept it - 58.49% (28.47%)

I accept it but don't approve - 21.28% (44.87%)

It's unacceptable - 2.79% (5.97%)

Do you think it's good that non-Christian students have the following possibilities:

Q: To get food in accordance with their religious regulations

Yes - 94.09% (80.17%)

No - 3.22% (12.17%)

Q: To get time off on their religious holidays

Yes - 80.84% (77.39%)

No - 10.74% (14.49%)

Q: To be released from religious classes

Yes - 3.38% (20.90%)

No - 93.73% (69.26%)

Q: To be released from gymnastics, music, art or language classes

Yes - 82.77% (7.71%)

No - 96.61% (0.80%)

Q: To be released from sexual and anatomy classes

Yes - 1.19% (9.45%)

No - 94.93% (78.75%)

Q: There is a big problem in school that many students from certain cultures don't recognize the authority of female teachers.

Completely disagree - 11.63% (8.04%)

Partially disagree - 10.27% (7.85%)

Partially agree - 35.52% (37.36%)

Completely agree - 33.12% (23.03%)

Q: Immigrants in Sweden who come from non-European countries should return to their homelands.

Completely disagree - 86.56% (64.15%)

Partially disagree - 8.70% (17.22%)

Partially agree - 3.01% (9.49%)

Completely agree - 0.19% (1.41%)

Q: We should allow Jewish kosher slaughter or Muslim halal slaughter in Sweden

Completely disagree - 24.55% (35.33%)

Partially disagree - 12.72% (9.23%)

Partially agree - 18.55% (9.19%)

Completely agree - 19.23% (11.22%)

Q: Muslim immigrant parents in Sweden don't look after their children's best interests

Completely disagree - 64.70% (42.69%)
Partially disagree - 16.29% (12.70%)
Partially agree - 9.17% (11.56%)
Completely agree - 0.63% (1.64%)

Q: All immigrant children should from the beginning learn that Swedish is their mother tongue

Completely disagree - 63.64% (51.88 %)
Partially disagree - 19.62% (20.28%)
Partially agree - 11.81% (16.15%)
Completely agree - 2.82% (6.14%)

Q: Islam is a threat against the West's social and cultural advances

Completely disagree - 58.67% (32.40%)
Partially disagree - 19.30% (18.13%)
Partially agree - 12.95% (21.26%)
Completely agree - 2.31% (6.38%)

Q: Sweden's immigration and asylum policy should be more liberal than it is today

Completely disagree - 14.13% (18.85%)
Partially disagree - 23.36% (28.02%)
Partially agree - 33.83% (26.45%)
Completely agree - 13.18% (9.04%)

Q: There should be more people of immigrant background in political associations

Completely disagree - 3.16% (3.22%)
Partially disagree - 3.77% (7.67%)
Partially agree - 35.03% (37.75%)
Completely agree - 50.94% (39.07%)

Q: The authorities and the media often hide uncomfortable fact about the consequences of immigration and the costs for Swedish people.

Completely disagree - 43.67% (22.95%)
Partially disagree - 15.66% (16.16%)
Partially agree - 16.54% (26.12%)
Completely agree - 4.26% (10.01%)

Ανίχνευση βρώμικων βομβών μέσω κινητών τηλεφώνων

Μελετητές από το Purdue University in West Lafayette, Indiana προσπαθούν μέσω του προγράμματος Distributed Nuclear Detection by Ubiquitous Cell Phone να

ανιχνεύσουν την παρουσία βρώμικης βόμβας με τη βοήθεια τριγωνομετρίας δια των κινητών τηλεφώνων.

Using cells to sniff out bombs

Post the 9/11 tragedy all efforts to prevent the detonation of a dirty bomb—an explosive device designed to spread harmful or lethal radiation, as well as panic have been threatened by the risk of false alarms, known as false positives. When 350,000 or so radiation-therapy patients in Europe and the US can conceivably cause detectors to light up, you know a solution is not going to be easy to find. And it hasn't been. The current state of the art, "spectroscopic" detectors, can distinguish between the harmless beta rays given off by the potassium 40 in bananas and the very dangerous gamma rays given off by uranium and plutonium, which are used to produce nuclear fuel and nuclear weapons. But they're expensive, *Newsweek* reported. Technologists at Purdue University in West Lafayette, Indiana, are now designing a detection system that's so small it could fit into cellphones. The project, known as Distributed Nuclear Detection by Ubiquitous Cell Phone, would help locate dirty bombs or nuclear weapons by "triangulating" the source of radiation when people carrying mobile phones pass by. (The more the equipped cellphones, the greater the precision: phones closest to radioactive material will register stronger signals.) The Purdue project and others like it represent a "major shift" in combating radiation terrorism, says Rita Colwell, a former director of the National Science Foundation and now a professor working at the University of Maryland. The Purdue team is lobbying Congress to require cellphone users and telecoms, who will have to collect the data, to participate, reported *Newsweek*. Yet legislation mandating participation would not be necessary. Government agencies could simply pay mobile owners and telecoms that agree to opt in.

Βιο-ανιχνευτής για παθογόνα αίματος και πολεμικές απειλές

Η εταιρεία Fairway Medical Technologies, Inc. κέρδισε 3ετές συμβόλαιο 900,000 δολαρίων για την ταχεία ανίχνευση παθογόνων παραγόντων σε βιολογικά δείγματα με τη βοήθεια οπτικοακουστικής τεχνολογίας (pulsed laser optoacoustic spectroscopy) με στοχοποιημένους νανο-σκιαγραφικούς παράγοντες (nanoparticle contrast agents).

Biosensor For Blood Pathogens And Warfare Threats

Fairway Medical Technologies, Inc. has received a \$900,000, 3-year contract from the Department of the Navy to apply its optoacoustic technology to the real-time detection of blood borne pathogens and biological warfare agents under battlefield conditions. This grant is part of a larger, \$3 million project led by Prof. Randolph Glickman, Principal Investigator from the University of Texas Health Science Center (UTHSC) at San Antonio. The grant, entitled "Rapid identification of pathogenic agents in biological samples using pulsed laser optoacoustic spectroscopy with targeted nanoparticle contrast agents," will be carried out as a collaborative project between UTHSC, Fairway Medical Technologies and the Naval Health Research Center Detachment Directed Energy Bioeffects Laboratory at Brooks City-Base. "This research is intended to develop a rugged battlefield instrument capable of detecting chemical and biological agents such as anthrax, plague, smallpox, and others with the speed, accuracy, sensitivity and reliability of analytical techniques and

instruments found in the state-of-the-art laboratory today," said Dr. Glickman. The optoacoustic biosensor tests samples of blood plasma or other liquids by using monoclonal antibodies (MAB) targeted to specific pathogens. "Elongated gold nanoparticles designed to strongly absorb near-infrared laser pulses can be conjugated to each type of MAB to create a specificity mechanism that will signal the presence of targeted pathogens," explained Dr. Alexander Oraevsky, VP of Research and Development at Fairway and an inventor of this nano-biosensor. "When the nanoparticles produce an acoustic response to laser pulses, the presence and concentration of the pathogens is established." Unique ultrawide-band transducers developed by Fairway for medical imaging and other analytical optoacoustic systems fit the signal acquisition needs of this application, he added. "This is an important continuation of Fairway's current government and industry-sponsored research. When the R&D part of this project is over, Fairway will manufacture the devices for the Navy and other DoD customers," said Fairway president James Meador. "Early front-line detection of biological threats using this kind of rugged battlefield system will provide critical information that can save Navy sailors and lives of other US military personnel, as well as support fast, well-informed command decision-making," commented Norman Barsalou, project co-investigator from the Navy Bioeffects lab. "We are proud that this collaboration between the UT Health Science Center San Antonio, the Naval Health Research Center Detachment at Brooks and Fairway Medical Technologies can move this important work ahead."

Τρομοκρατικές ομάδες αναπτύσσουν βρώμικη βόμβα

Τρομοκρατικές ομάδες στο Πακιστάν προσπαθούν να εκμεταλλευτούν τη χαώδη πολιτική και κοινωνική κατάσταση για να αποκτήσουν πυρηνικό υλικό για μια «φαντασμογορική» επίθεση εναντίον σημαντικού Ευρωπαϊκού στόχου.

Terror groups developing 'dirty bomb', say security chiefs

They are exploiting the political chaos in Pakistan in a bid to acquire nuclear material for a 'spectacular' attack. At least one plot has been uncovered involving Pakistani-based terrorists planning to use nuclear material against a major European target. Osama bin Laden's al-Qa'eda terror group, whose terrorist infrastructure is based in the province of Waziristan in northwest Pakistan, is known to be trying to acquire nuclear technology to use in terror attacks against the West. Other militant Islamist groups in Pakistan, such as the newly formed Pakistani Taliban, have also shown an interest in developing weapons with a nuclear capability, according to Western security officials. Security chiefs fear the mounting political instability in Pakistan will make it easier for militant Islamist groups to develop a primitive nuclear device. Pakistan is the world's only Muslim country with a nuclear weapons arsenal, which was developed during the 1990s by the rogue Pakistani nuclear scientist Dr Abdul Qadir (AQ) Khan. Dr Khan was placed under house arrest after he was accused of selling the blueprint for Pakistan's atom bomb to rogue states such as Libya, North Korea and Iran. But the restrictions on Dr Khan's detention have been eased since President Pervez Musharraf was forced from power. Pakistan's nuclear arsenal is subject to stringent security safeguards put in place with the help of the American military when Mr Musharraf was in office. But there is mounting concern within Western security circles that Islamic terror groups will gain access to Pakistan's expertise in developing terrorist weapons containing nuclear material. "Islamist militant groups want to carry out terror attacks on a massive scale, and there is no

better way for them to achieve that objective than to develop some form of primitive nuclear device," said a senior U.S. security official. The most likely terror device using nuclear material is a "dirty bomb", where conventional explosives are fitted with radioactive material. Security experts believe the detonation of such a device in a city like London would provoke widespread panic and chaos, even though the area of contamination would be relatively small. Western security officials say they have uncovered evidence that a Pakistani based group was planning to attack a European target with such a device, although details of the planned attack have not been made public. The sweeping victory of Asif Ali Zardari, the widower of murdered Pakistani leader Benazir Bhutto, in the presidential election at the weekend, has done little to reassure Western diplomats that the security situation in Pakistan is about to improve. Mr Zardari was jailed for nine years on corruption charges, and Western diplomats have little confidence in his ability to provide strong leadership. "Pakistan is in danger of becoming a failed state, and Mr Zardari's election victory is unlikely to improve the situation," said a Western diplomat. Tensions grew last week when American special forces staged a cross-border incursion from Afghanistan into Pakistan's lawless tribal regions. They were targeting suspected al-Qaeda operatives, signalling a possible intensification of US efforts to disrupt militant safe havens in Pakistan. Despite fury in Pakistan, US defence officials have said that the number of cross-border missions might grow in coming months in response to the growing militancy. But there are fears this could but this could provoke an Islamist backlash throughout Pakistan that could play into the terrorists' hands. Most of the recent Islamist terror plots against Britain – including the July 7 attacks in London in 2005 – had links with Pakistan, and British security officials say groups based in Pakistan continue to pose the greatest terrorist threat to Britain. British security officials recently confirmed that they were investigating at least 30 terror plots that originated in Pakistan. "In the past many of the plots have been fairly primitive, but we are seeing a growing level of sophistication. We fear it is only a question of time before the groups based in Pakistan develop some form of nuclear capability."

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