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University of Sydney Biosecurity Program (USBP)

Biosecurity News 01

Contents

1. Welcome and Introduction
2. Conferences and Seminars
3. News and Articles
 - Avian Influenza
 - Emerging Infectious Diseases
 - Biological Weapons
 - Biosecurity Policy and Ethics
 - Global Health Governance
4. Special Topic: Emerging Infectious Disease and Mapping

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1. Welcome

Welcome to the first Biosecurity News. This email is intended as a summary of news, seminars and publications relevant to members of the Biosecurity Program. Each issue I will endeavour to provide a summary on a 'special topic' of relevance to biosecurity – if you would like to see a specific topic covered please don't hesitate to suggest it. This is a work-in-progress, so please feel free to provide comments back to me about these news updates.

Jon Herington

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2. Conferences and Seminars

The 3rd Annual Conference of the **Australian and New Zealand Chapter of the Society for Risk Analysis** is being held at the Australian National University from September 30 to October 1. Our partner organisation at ANU, the National Centre for Biosecurity, is co-sponsoring the event. Abstract submissions are being called for, with a deadline of **July 4th**. See http://www.acera.unimelb.edu.au/sra/news.html for more info.

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3. News and Articles

This will be a bit of a catch-up edition with mostly recent news, but including some notices from early 2008.

Avian Influenza

WHO meets to update the Global Pandemic Influenza Plan
1 May 08
http://www.who.int/mediacentre/events/meetings/influenza/en/index.html

WHO standardises AI clade nomenclature
23 April 08
http://www.nature.com/news/2008/080423/full/452923a.html

Toll-like Receptor 4 has key role in 'cytokine storming' in AI and SARS
18 April 08
http://www.cell.com/content/article/fulltext?uid=PIIS0092867408003401

Japan vaccinates bird-flu workers
16 April 08
http://news.bbc.co.uk/2/hi/asia-pacific/7349904.stm

Limited person to person (son-father) transmission in China
8 April 08
http://news.bbc.co.uk/2/hi/health/7335986.stm
and the original article from the Lancet:
http://www.thelancet.com/journals/lancet/article/PIIS0140673608604936/abstract?isEOP=true

Why there may not have been more person to person
25 January 08
http://news.bbc.co.uk/2/hi/health/7170365.stm
and a commentary article from Nature Biotech (with cite to original):
http://www.nature.com/nbt/journal/v26/n1/full/nbt0108-60.html

Emerging Infectious Diseases

Chinese local officials cover-up Hand, Foot and Mouth outbreak
28 April 08

http://www.reuters.com/article/latestCrisis/idUSPEK5657

New viral haemorrhagic fever: Chapare virus
28 April 08
http://www.plospathogens.org/article/info:doi%2F10.1371%2Fjournal.ppat.1000047

2007 Foot and Mouth Outbreak Transmission Dynamics
28 April 08
http://www.plospathogens.org/article/info:doi%2F10.1371%2Fjournal.ppat.1000047
'Drug-resistant tuberculosis on the rise'
27 February 08
http://www.nature.com/news/2008/080227/full/news.2008.627.html

‘Map pinpoints disease hotspots’
20 February 08
http://news.bbc.co.uk/2/hi/science/nature/7252923.stm
and the original Nature article:
http://www.nature.com/nature/journal/v451/n7181/full/nature06536.html

‘Plague: past, present and future’
16 January 08
http://medicine.plosjournals.org/perlserv/?request=get-document&doi=10.1371%2Fjournal.pmed.0050003

Biological Weapons
Jakarta, US at odds over 'spy' lab (NAMRU-2)
3 May 08
http://www.theaustralian.news.com.au/story/0,25197,23635645-25837,00.html
also see the article in *Science*:
http://www.sciencemag.org/cgi/content/summary/320/5876/598a

US State Department releases ‘Country Reports on Terrorism 2007’ (chapter on current WMD terrorism linked below)
1 May 08
http://www.state.gov/s/ct/rls/crt/2007/103712.htm

An analysis of persistence of *Yersinia pestis* in soil - apparently up to 24 days after exposure
1 May 08
http://www.cdc.gov/eid/content/14/6/pdfs/08-0029.pdf

US CDC signs contract for 9 million doses of smallpox vaccine annually
24 April 08
http://www.investmentmarkets.co.uk/20080424-1934.html

'US biodefence agency appoints first director'
23 April 08
http://www.nature.com/news/2008/080423/full/452925b.html

Ricin found in Las Vegas hotel room, man charged (now on trial)
17 April 08
http://www.nytimes.com/2008/04/17/us/17vegas.html

Testimony of US Dept. of Homeland Security's Chief Medical Officer
1 April 08
http://www.dhs.gov/xnews/testimony/testimony_1207069086551.shtm

'Nukes main danger, but biological threats loom, official says'
13 March 08
http://www.nti.org/d_newswire/issues/2008_3_13.html#3DE82AF2

'US Health Agency seeks $4.3 billion for biodefense'
http://www.nti.org/d_newswire/issues/2008/2/5/C9FEE78D-2615-4AED-93AE-6290540E3957.html

Biosecurity Policy and Ethics
BSL-3 lab opens at Royal Darwin Hospital
23 April 08
http://www.ntnews.com.au/article/2008/04/23/3945_ntnews.html

'Biologists initiate plan to map human proteome'
23 April 08
http://www.nature.com/news/2008/080423/full/452920a.html

'In pursuit of international biosecurity oversight' - Laura Kahn
16 April 08
http://www.thebulletin.org/web-edition/columnists/laura-h-kahn/in-pursuit-of-international-biosecurity-oversight

'Getting scientists involved in arms control' – Malcolm Dando
16 April 08
http://www.thebulletin.org/web-edition/columnists/malcolm-dando/getting-scientists-involved-arms-control

'Improving infectious disease surveillance'
16 April 08
http://www.thebulletin.org/web-edition/features/improving-infectious-disease-surveillance

'James Watson's genome sequenced in less than 4 months'
16 April 08
http://www.nature.com/news/2008/080416/full/452788b.html

‘TB patient indicted as risk to public health’
24 March 08
http://www.azcentral.com/arizonarepublic/local/articles/0324daniels0324-ON.html

The Sunshine Project closes due to funding shortfall
13 February 08
http://www.nature.com/news/2008/080213/full/451759e.html

'No jail for geneticist who posted bacteria to artist'
2 February 08
http://www.nature.com/news/2008/080220/full/451879a.html

Global Health Governance
The Lancet comments on better coordination for global health aid
3 May 08
http://www.thelancet.com/journals/lancet/article/PIIS0140673608606340/

Health crises in conflict areas – Kenya and Eastern India
28 April 08
http://www.thelancet.com/journals/lancet/article/PIIS0140673608605759/
http://www.thelancet.com/journals/lancet/article/PIIS0140673608605772/

Vertical vs. horizontal health programs: A 'diagonal' proposal
25 April 08
http://www.globalizationandhealth.com/content/4/1/6/abstract'

Social networking site aims to help fight malaria'
22 April 08
http://www.nature.com/news/2008/080422/full/news.2008.768.html

‘US set to spend $50 billion against HIV’
3 April 08
http://news.bbc.co.uk/2/hi/americas/7327694.stm

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4. Special Topic: Emerging Infectious Diseases and Mapping

Disease mapping (aka. spatial epidemiology or ‘phylogeography’) is an emerging field, and has benefited enormously from recent information technologies. Detailed and readily accessible maps are now available for free over the internet, and these are being twinned with precise geographic data, case information and even sequence data (through GenBank). These have the potential to greatly assist research, response and education on key emerging disease threats. Some examples include:

ProMED's HealthMap: http://www.healthmap.org/promed

Created using ProMED's outbreak alerts, the data is usually only mapped to the country of origin but services a broad range of emerging and re-emerging diseases. The ability to call up the original alert straight off the map, as well as being able to see all recent alerts for a single country/region makes this, I think, a valuable tool.

Declan Butler's Time-lapse H5N1 Map: http://www.nature.com/avianflu/google-earth/index.html
A highly detailed map utilising Google Earth's basic interface. Butler is a senior reporter at Nature who twinned individual outbreaks (both human and avian) with sequence and phylogenetic data from GenBank (when available) which can be accessed by clicking on individual map plots. It also possesses a time-lapse function which allows you to track the spread of AI across the globe from 2003 to the end of 2006. Unfortunately, the map has not been updated since the end of 2006.

The Malaria Atlas Project (MAP): http://www.map.ox.ac.uk/MAP_data.html
A malaria-risk map which seeks to delineate the present limits of the 'malaria-zone'. The methodology and portions of the map have just been published in PLoS Medicine. For an interactive (and higher resolution) version, grab the Google Earth overlays which are found in the right hand sidebar at the link above.

Health Systems 20/20 Database: http://healthsystems2020.healthsystemsdatabase.org/Default.aspx
Produced by a grant funded by USAID, this isn't really spatial epidemiology - but it is a fast and effective way to look up data on health system performance across the globe. It uses a range of World Bank and WHO sources.

Best wishes and happy researching,

Jon

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