

## News in Brief

### The Nobel Prize for Medicine

The Nobel Prize in Medicine this year is being touted as the fastest one in recent years. Just 8 years after their work was published in Nature, Andrew Fire (Stanford University, San Francisco) and Craig Mello (Massachusetts Medical School) have scooped up this years Nobel Prize for their work in RNA interference.

The central dogma of molecular biology, as Francis Craig called it, was that DNA made RNA which in turn made protein. But Fire and Mello's work have shown that there is significant control of DNA by RNA. They injected the nematode *Caenorhabditis elegans* with various types of RNA and studied the function of the corresponding DNA. To their surprise when they injected single stranded RNA whether it was identical to the one in the cell (sense RNA) or complimentary to that strand (antisense RNA), the DNA functions were not interfered with. However when they injected double stranded RNA the corresponding DNA stopped functioning. This brilliant discovery had many fallouts. It immediately became a powerful tool in the laboratory to silence any particular gene, researchers wanted to study. Its potential clinical uses are obvious - we can use it to silence various potentially harmful or disease related genes.

RNA interference or RNAi as it is called is widely prevalent in nature in plants and animals. When viruses incorporate their genetic material into DNA to produce various proteins, the cell

uses RNAi to block that DNA. Nature also uses it to control the effect of jumping genes in which fragments of the host DNA replicate and insinuate themselves all over the genome. Animal trials in which RNAi was used to suppress a gene causing high cholesterol levels has shown promising results. But other animal studies using RNAi to silence pathological genes have been fatal. But the value of Craig and Mello's research lies in the fact that RNAi is now a basic genetic tool used all over the world and it has opened up avenues of therapy for many illnesses.

So this years Nobel Prize is a tribute to mans eternal quest to control his destiny (read DNA if you must).

(eBMJ.com 7th October 2006, www.nature.com 2nd October 2006, Fire et al, Nature 1998 391:806 )

### Death Penalty

Five Bulgarian nurses and 1 Palestinian doctor are in a Libyan prison since 1999 on charges of deliberately infecting hundreds of Libyan children with HIV infection by using unsterile needles. They may receive the death penalty unless international pressure mounts to save them. While most human rights groups are supporting the nurses and doctors saying unhygienic medical practices fuelled the outbreak, others argue that it was a plot by the CIA and Mossad to intentionally murder the children. A documentary "Injection" recently released free on the internet by famous movie maker Mickey Grant has moving accounts of rampant practices of usage of unsterile needles in Africa and the plight of the 5 nurses and doctors. The WHO says around 2.5% of HIV transmissions in Sub Saharan Africa are via

unsterile needles but unofficial sources place it much higher at 40%. A deeper and more honest look at the problem is definitely warranted in all developing countries (www.nature.com 2nd October 2006).

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## Pedscapes

### Chikungunya Virus Infection

A large number of websites on the Chikungunya virus have come up recently. Some of the prominent ones are listed below.

**CHIKV** - <http://www.chikungunya.ca/>

This Canada based website is a comprehensive source of information on the virus. Disease information and news items from the various sources are listed in this website including WHO, CDC and Reuters.

**CDC Fact Sheet** - <http://www.cdc.gov/ncidod/dvbid/Chikungunya/chickvfact.htm>

The CDC website has a concise one-page fact sheet about the disease. The fact sheets are available for download in .doc and pdf format.

**Histopathology** - net -<http://www.histopathology-india.net/CHIKV.htm>

This is an India based website that displays a collection of links and abstracts of articles from various databases on chikungunya virus.

**Wikipedia** - <http://en.wikipedia.org/wiki/Chikungunya>

The wikipedia is an editable online encyclopedia. The Chikungunya page contains information about the disease and links to news items about the disease. The section on the disease origins is interesting. The contents of the website can be modified by users, but requires registration.

**European center for Disease prevention and control (ECDC)** - [http://www.ecdc.eu.int/outbreaks/Chikungunya\\_reunion.php](http://www.ecdc.eu.int/outbreaks/Chikungunya_reunion.php)

The ECDC website contains information for travellers on prevention of the chikungunya virus disease.

**Flu Trackers** - [www.flutrackers.com](http://www.flutrackers.com)

Flutrackers is an online forum on various emerging viral infections. The Chikungunya page has a large collection of posts about the disease. Participating in the discussions requires registration.

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