

# News bites

## International

### Childhood deafness gene uncovered

A new genetic fault that may account for some cases of inherited deafness has been revealed by Dutch researchers. It means that parents with the hereditary condition may be able to predict more accurately the chances of passing it on to their children.

The new find, documented in the *American Journal of Human Genetics*, could even one day contribute to treatments, say the scientists.

One child in 750 is born with severe hearing loss or profound deafness. The gene in question, labelled PTPRQ, appears to play a role in the development of the inner ear 'hair cell' before the birth of the child.

A genetic fault here means that these cells will not form properly or in sufficient numbers, leading to profound deafness or extremely poor hearing. This can lead to problems throughout childhood, including behavioural and developmental difficulties, and low academic achievement.

The latest gene was tracked down by scientists at Radboud University Nijmegen Medical Centre who looked closely at the DNA of families prone to the condition, looking for shared genetic traits. There are now more than 60 known locations in our DNA that can contain faulty genes contributing to this form of deafness, although only half the genes in these locations that actually cause the problem are yet to be identified.

### What's behind that tunnel of light

Some say their life flashed before their eyes, others talk of an out-of-body floating sensation or an intense feeling of peace.

Now scientists believe they can explain what causes the near-death experiences reported by thousands of patients on the operating table. A study of heart attack victims has found a link between them and high levels of carbon dioxide in the blood.

A fifth of those whose heart stopped during cardiac arrest claim to have had an unusual experience. These include feelings of calm, travelling down tunnels towards lights and encounters with dead people.

The explanation, according to researchers, may be that excess carbon dioxide alters the chemical balance of the brain – 'tricking' it into seeing things.

They studied 52 'flatliners' – people who were resuscitated after their heart stopped. Those with higher concentrations of the gas in their breath and arteries were more likely to have an unusual experience, the Slovenian scientists told the journal *Critical Care*.

Once someone's heart stops in cardiac arrest and they stop breathing, consciousness is lost within seconds. The brain, however, can survive unharmed for several minutes. It is during this that out-of-body experiences are thought to happen.

British expert Dr Sam Parnia, of Southampton University, said that high levels of carbon dioxide indicated a patient has had a 'good' resuscitation – meaning doctors had ensured a good flow of blood to the brain.

And if a patient's had a good resuscitation, then they may be more likely to remember their out-of-body experience, Dr Parnia said.

## Africa

### UN needs funds for measles campaign in Harare

The Zimbabwean government and United Nations officials have issued an international appeal for funds to help to contain an outbreak of measles that has killed many people – mainly unvaccinated children under 5 years old.

Dr Peter Salama, the Unicef director in Zimbabwe, told journalists in Harare that the outbreak was 'symbolic' of the weakened health system in the poverty-stricken nation.

'Measles in Zimbabwe is now out of control and is in all parts of the country,' he said. 'We can now say all children (in Zimbabwe) are at the risk to die of measles.'

Minister of Health and Child Welfare Henry Madzorera said R60 million was needed to fund a reinvigorated immunisation programme.

The disease had initially been mainly confined to families of some religious groups who refuse conventional medical treatment, but has since spread. Some 1 840 people have been affected countrywide.

Madzorera said the government is working on a law that would make immunisation compulsory, with parents facing prosecution if they fail to have their children vaccinated.

In 2008, a cholera outbreak claimed almost 5 000 lives in Zimbabwe after authorities failed to import adequate water-treating chemicals, forcing people to depend on unprotected water sources for drinking.

## South Africa

### SA trail-blazes with ambitious HIV testing campaign

On 15 April this year an ambitious HIV testing campaign was launched at all 4 300 health facilities in South Africa. According to national health minister, Dr Aaron Motsoaledi, all facilities had by then acquired the testing capacity, mainly via an innovative State campaign that netted an additional 4 000 professional volunteers.

Explaining how they garnered the vital extra human resources, Motsoaledi said his department issued about 9 000 letters using membership lists from various health care organisations, such as medical councils and nursing councils.

The new human resources strategy had several layers to it, including using volunteers or retired and/or any other cadre of the health workforce who would be 'up-skilled' or mentored where and if necessary.

'There is a dialogue with the relevant institutions and professional bodies on how we're going to deal with the legal issues of people who are on the register or off the register,' added Dr Nono Simelela, head of the South African National AIDS Council.

The campaign will include the new proactive 'opt-out' policy, where all patients are offered an HIV test (and can turn it down), instead of waiting for them to ask for a test ('opt-in'), a human rights-based approach that stirred prolonged controversy.

Of the 15 million people the department aims to have tested by the end of June 2011, at an estimated cost of R1.4 billion, about 1.5 million may test positive for HIV – and thousands will need treatment. Asked if the system was ready to absorb the extra pressure, Motsoaledi said the ARV AIDS budget had increased by 33%, the highest single unit increment of any department in government, with R5 billion budgeted over the next 3 years. PEPFAR had pledged to donate R840 million spread equally over this and next year to help to buy currently expensive ARVs.

He had met the Minister of Finance, the Minister of Trade and Industry and the

Minister of Economic Development to stop the 'madness of being charged 60% above' the necessary price by in future 'tendering to the whole world'.

Deputy chairperson of the South African National AIDS Council, Mark Heywood, described it as a 'dramatic scaling up of our country's response to the AIDS epidemic'.

### **No alternative hospital yet to relieve overcrowding at Baragwanath**

Soweto residents will have to cope with the overcrowded conditions at Chris Hani Baragwanath Hospital for at least 3 more years. The building at the Jabulani Hospital, supposed to have been completed in May 2008 to relieve pressure on the main facility, has been delayed until January 2012.

The projected cost of the new hospital is now almost double the original budget. Democratic Alliance spokesperson Jack Bloom blamed mismanagement in the provincial health department. 'I think this is unacceptable, there are about 900 workers who are currently idling around because the contractor has not been paid since December. So it is more delay,' said Bloom.

Health Minister Motsoaledi said last month that the rehabilitation of Chris Hani Baragwanath Hospital was only about 20% complete and 4 other state hospitals were also earmarked for extensive work.

Baragwanath is one of the biggest hospitals in the southern hemisphere but it is battling to provide sufficient care to a high number of patients. Gauteng Health MEC Dorothy Mahlangu admitted that infrastructure remained Baragwanath's 'biggest challenge'.

### **CSIR brings once-a-week treatment of TB one step closer**

Researchers at the CSIR are one step closer to providing tuberculosis (TB) sufferers with a once-a-week medicinal regimen rather than their current daily doses. A preclinical efficacy study demonstrated that TB drugs given once a week over

a 4-week period were just as effective as daily doses of the drug over the same period when the CSIR team's drug delivery technology is used.

'The biggest problem with the current therapeutic regimen for TB is that the drugs should be taken once a day for a period of 6 - 9 months in order to be effective. Also, according to the World Health Organization (WHO) direct observed treatment short course (DOTS) programme, the drugs need to be taken in the presence of a health care practitioner,' said Dr Boitumelo Semete, senior researcher in the drug delivery programme at the CSIR.

'Due to logistics, cost and other considerations, this is problematic for South African patients, especially in rural areas. As these drugs also have a number of nasty side-effects, many patients never complete their treatment course. This slims down their chances of recovery quite significantly,' added Semete.

She explained that to improve patient compliance with TB treatment, the CSIR team was developing a way that would ensure that the antibiotic drugs were released and taken up in the affected cells over a longer period of time, using nanoparticles.

### **Provinces face drug stock-outs owing to overspending**

Massive provincial overspendings have seen health facilities across South Africa running out of lifesaving drugs for anything from hypertension pills and paediatric vaccinations to tuberculosis and HIV treatment.

New budgets were expected to kick in on 1 April, but the situation is dire at many hospitals and clinics, especially in rural areas. Health-e News received stock-out reports from doctors, nurses and pharmacists in all provinces except the Northern Cape and Northwest (although this does not mean there are no shortages).

There was only one report of a looming stock-out in the Western Cape when details surfaced of a pending shortage of

dialysis tubes and filters at Groote Schuur Hospital's kidney dialysis unit.

It was thought to be because of budget constraints but it is understood that the problem was resolved before the stock ran out and was due to an administrative problem.

Provincial media representatives in the Eastern Cape, Free State, KwaZulu-Natal and Gauteng denied that there were any stock-outs.

Reports from the Eastern Cape detailed stock-outs at Thafalofefe, Mthatha General, Cecilia Makiwane, Zithulele and Madwaleni hospitals.

Speaking shortly after a recent visit to Thafalofefe Hospital near Lusikisiki, Thandeka Vinjwa of the Treatment Action Campaign confirmed that the hospital had run out of the antiretroviral tenofovir. She said the provincial depot had failed to process the order placed 3 weeks previously as they 'were busy with stocktaking'.

After the TAC intervened an emergency order was placed and the drugs were dispatched to the hospital.

A health worker posted at Mthatha General Hospital and surrounding health centres said the depot stock-out list was long, with drugs out of stock for long periods.

One patient's record revealed that she had elevated blood pressure and despite her punctual follow-ups had not received her hypertension medication since September last year.

More serious stock-outs in Mthatha involve psychiatric medications, blood pressure drugs for pregnant women, oral polio vaccines and a cream put in babies' eyes at birth to prevent eye infections (there is no substitute). One doctor reported seeing a baby with permanent damage to one eye, suspected to be linked to the stock-out of the cream.

The drug situation at Cecilia Makiwane, a referral hospital to many of the district clinics, was even more dire according to a report received last month.

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