

In brief

Reuters/Jesse Kato



Snails crawl on the face of a woman during a demonstration of a new beauty treatment at Clinical-Salon Ci:z. Labo in central Tokyo. The beauty salon, which began the unique facial last month, offers the 10 500 yen (A\$110) 5-minute session with the snails as an optional add-on for customers who apply for a "Celeb Escargot Course", an hour-long treatment routine of massages and facials based on products made from snail slime. According to a beautician at the salon, the snail slime is believed to make one's skin supple as well as remove dry and scaly patches.

From CSIRO Materials Science and Engineering Research Division

New drug developed to combat influenza

A new drug designed to protect against epidemic and pandemic influenza has proven effective in laboratory models in preventing the spread of different influenza strains. Scientists from the Commonwealth Scientific and Industrial Research Organisation (CSIRO) collaborated with colleagues from the University of British Columbia in Canada and the University of Bath in the United Kingdom to achieve this breakthrough.

The World Health Organization reports that up to 500 000 people globally die from influenza each year (<http://www.who.int/mediacentre/factsheets/fs211>), including around 2500 deaths in Australia.

Influenza viruses use neuraminidase to remove sialic acids

on cell surfaces, allowing release and spread of new viruses. The newly developed drug works as a sialic acid analogue that covalently binds a site on neuraminidase, thereby inhibiting its activity and virus release from the cell.

Some strains of influenza have become resistant to currently available treatments through genetic mutation. Understanding influenza viruses' mechanism of resistance to antiviral agents helped the research team design a drug that is also effective against strains resistant to current antiviral agents. The new drug is a modified sialic acid, with two fluorine groups (2,3-difluorosialic acid [DFSA]). The neuraminidase tries to break down the DFSA, but this leads to the formation of a covalent link



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with an amino acid in the enzyme active site. Altering the orientation of the 3-fluorine group further enhances binding, even to viruses resistant to the other neuraminidase inhibitors.

The binding site for this drug is found in all known neuraminidase variants in influenza, so the drug is expected to also be effective against strains that may evolve in the future.

Leader of the research team for the past 7 years Professor Steve Withers, from the University of British Columbia, says that although further studies to determine efficacy against a broader range of influenza strains need to be conducted, the findings so far are very positive.

The research findings were published earlier this year (doi: 10.1126/science.1232552).

News

Electronic records reduce cost when used effectively

A statistically non-significant but favourable association has been found between the implementation of electronic health records (EHRs) for ambulatory patients and a reduction in their associated health care costs, according to research published in the *Annals of Internal Medicine*. The researchers compared three communities which deployed EHRs with six control communities who did not, using monthly standardised health care costs from commercial claims data between January 2005 and June 2009 — 15 months before implementation to 18 months after. The authors found that ambulatory EHR adoption did not impact total cost, but the results favoured savings. At the start of implementation, costs per member per month were \$158 for both intervention and control groups. By the end of the postimplementation period, costs had increased to \$173 (intervention) and \$179 (control) per member per month — a slower cost increase for the group using EHRs. "Our failure to find a statistically significant reduction in total cost may be explained by providers not using EHRs in more advanced ways that would improve patient health status, thereby avoiding hospitalisations and other high-cost episodes", the authors wrote.

Ann Intern Med 2013; 15 July (online). doi: 10.7326/0003-4819-159-2-201307160-00004

Good news on UK dementia rates

The prevalence of dementia in the UK appears to have decreased since 1989, according to research published recently in *The Lancet*. Between 1989 and 1994, the Medical Research Council Cognitive Function and Ageing Study (MRC CFAS) conducted baseline interviews with 7635 people aged 65 years or more in six geographically defined areas in England and Wales. It found that the prevalence of dementia ranged from 1.7% in men aged 65–69 years to 68.2% in those aged 90 years or more, and from 2.0% in women aged 65–69 to 32.3% in women aged 90 or more. A recent study, CFAS II, replicated the method of CFAS I and interviewed 7796 individuals between 2008 and 2011. "Using CFAS I age and sex specific estimates of prevalence in individuals aged 65 years or older, standardised to the 2011 population, 8.3% (884 000) of this population would be expected to have dementia in 2011", the authors wrote. "However, CFAS II shows that the prevalence is lower (6.5%; 670 000), a decrease of 1.8%."

The Lancet 2013; 16 July (online). doi: 10.1016/S0140-6736(13)61570-6

From the MJA archives

MJA 1978; 14 January (edited extract)

Our new look

You have possibly been a little startled by the appearance of this issue of the Journal. The leading article is not at the front, where it "ought" to be; somebody has dipped the middle pages in blue ink; and what about this page — is it an advertisement, or what? In fact, in 1978 the Journal will be different in a number of ways. It will appear not weekly, but fortnightly, not folded inside a wrapper, but flat inside an envelope. It will have a middle section (the pages edged with blue) containing those features to which most people

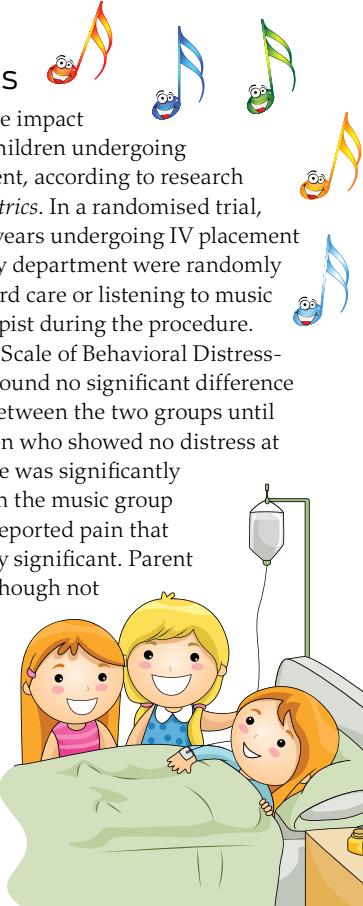
turn their attention first — the leading article, comments, correspondence, didactic material, obituaries and special features. This section can be easily detached from the rest of the Journal if you care to file any of the special features for future reference. Should your Journal reading time be limited to a few frantic moments over coffee between surgery and calls, perhaps you will begin with "Here and Now", which gives at a glance the highlights of the current issue. This will help you to decide which article to read in tomorrow's coffee break, and which the next day, and so on, till fortnight comes round again.

Editorial

Music soothes IV distress in kids

Music may have a positive impact on pain and distress in children undergoing intravenous (IV) placement, according to research published in *JAMA Pediatrics*. In a randomised trial, 42 children aged 3 to 11 years undergoing IV placement in a paediatric emergency department were randomly assigned to either standard care or listening to music selected by a music therapist during the procedure. Using the Observational Scale of Behavioral Distress-Revised the researchers found no significant difference in behavioural distress between the two groups until they excluded the children who showed no distress at all. They then found there was significantly less increase in distress in the music group and reductions in child-reported pain that were considered clinically significant. Parent satisfaction was higher, though not significantly so in the music group, and health care providers found the procedure easier and more satisfactory.

JAMA Pediatr 2013; 15 July (online)
doi: 10.1001/jamapediatrics.2013.200



Sodium ups blood pressure in kids

The prevalence of elevated blood pressure (BP) in children aged 8 to 17 years has increased between 1988 and 2008, according to new US research published in *Hypertension*. Researchers analysed a population-based sample of 3248 children in the National Health and Nutrition Examination Survey (NHANES) III (1988–1994) and 8388 children in the continuous NHANES (1999–2008). They found the prevalence of elevated systolic and/or diastolic BP increased over this time (boys: 15.8% to 19.2%; girls: 8.2% to 12.6%). Body mass index, waist circumference and sodium (Na) intake were independently associated with the prevalence of elevated systolic and/or diastolic BP. "We observed that the odds of elevated BP in children increased an estimated 27% between [the two studies]", the authors wrote. Overall, more than 80% of children consumed Na in excess of the recommended daily intake, and high Na intake was independently associated with elevated BP, particularly increased systolic BP (OR 1.36 for Na intake ≥ 3450 mg per day v < 2300 mg per day).

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