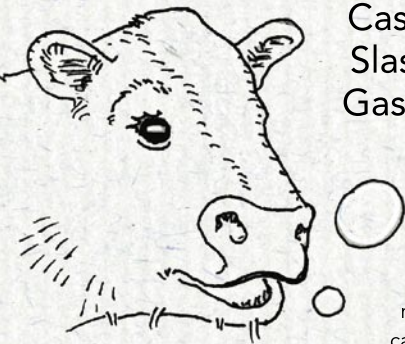


Points of Interest



Cashew Oil May Slash Greenhouse Gas Emissions from Belching Cattle by 90%

Tests have shown that oil produced from the shell of the cashew nut may slash the methane emissions from belching cattle by 90% when mixed as an additive to feed, says a spokesman for

oil refiner Idemitsu Kosan Co. Methane emissions from livestock in the field are a major factor in climate change.

National Post June 12, 2008 <http://www.nationalpost.com/arts/story.html?id=580660>

Solar Bra Gives Eco-friendly Charge

Triumph's latest solar bra aims to put a photovoltaic charge into undergarment demand – or at least a cell phone. Featuring a built-in solar panel, the bra captures and redistributes the sun's bounty and can generate enough energy to power a cell phone or an iPod.

Reuters May 14, 2008 <http://www.reuters.com/news/video?videoid=82391&videoChannel=4>



Monkey Mind over Matter

A monkey has successfully fed itself using a robotic arm controlled by signals from its brain. The researchers behind the device, from the University of Pittsburgh, say the breakthrough could lead to the development of brain-machine interfaces for people with spinal cord injuries and those with "locked-in" conditions such as Lou Gehrig's disease.

Kate Melville *Science a Go Go* May 29, 2008 http://www.sciencea-gogo.com/news/20080428181441data_trunc_sys.shtml

Microbubbles' Fantastic Voyage

Modern medicine has an elegant new tool: the bubble. It sounds crazy, but if you take an oily solution, froth it into a bunch of tiny bubbles and inject those into your bloodstream, when you hit them with ultrasound waves, a nearly perfect image of your internal

organs bounces back. And that's just the beginning. "I expect microbubbles to revolutionize medical treatment across a wide array of fields, from gene therapy to chemotherapy," says Mark Borden, a biomedical engineer at UC Davis.

Joshua Davis *Wired* Issue 14.11 November 2006 <http://www.wired.com/wired/archive/14.11/start.html?pg=3>

Pay Dirt: Martian Soil Fit for Earthly Life

Martian soil around NASA's Phoenix Lander is slightly alkaline and has enough different minerals that it could support earthly plants and – more to the point – microbes beneath the Martian surface, according to the first results from the probe's wet chemistry experiment.

Mission scientists say the soil has a pH between 8 and 9, which places it somewhere around seawater or baking soda in alkalinity. It also contains the minerals magnesium, sodium, potassium and chloride. Further analysis is expected to reveal whether it contains other chemicals such as nitrogen and sulfates. The finding implies that life could indeed survive below the surface, where it would be protected from harmful ultraviolet rays and harsh oxidants that might accumulate on the top layer of soil.

J.R. Minkel *Scientific American* June 26, 2008 <http://www.sciam.com/article.cfm?id=martian-soil-fit-for-earthly-life>

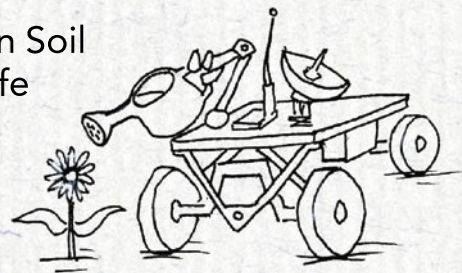
Cancer Patient Cured with His Own Immune System

A cure for cancer teems through our veins, but the trick is harnessing the immune system's tumour-destroying cells, say doctors. Now, a US team has developed a new way to turn a patient's T cells against a deadly, metastasized skin cancer. A 55-year-old man who received the immune boost lives tumour free, more than two years after treatment.

"He had a remarkable response," says Cassian Yee, an immunologist at Fred Hutchinson Cancer Research Center in Seattle, Washington, who developed the new treatment. Yee's team treated eight other melanoma patients, but he says it is too early to tell whether their tumours have vanished as well.

Other cancer experts say the results could pave the road for a cancer vaccine, but more proof with additional patients is needed.

Ewen Callaway *NewScientist* June 19, 2008 <http://www.newscientist.com/article/dn14168-cancer-patient-cured-with-his-own-immune-system.html>





Fly Me to the Moon: Japan Firm Offers Weddings in Space

The Japanese firm First Advantage is now offering weddings in space. Each happy couple will spend 240 million yen (\$2.3 million) for the ceremony in a small space vessel, which will shoot up 100 kilometres into the sky.

During the hour-long flight, the couple will spend several minutes in zero gravity, during which they will exchange their vows with up to three guests present, said Taro Katsura, a spokesman for Japanese firm. The couple would perform most of the ceremony before takeoff "so that they can say their vows and look out the window," Katsura said.

The firm is offering the space marriages in a tie-up with US-based Rocket Plane, which will conduct the flights from a private airport in Oklahoma. From the spaceship, the couple will probably be able to see the outline of the Earth, although they will not be far enough into space to allow complete floating, said Katsura.

PhysOrg July 1, 2008 <http://www.physorg.com/news134110127.html>

Bacterial Resistance Is Futile against Wound-Cleaning Laser

A laser-activated antimicrobial offers hope for new treatments of bacterial infections, even those that are resistant to current drugs. Research published in the open-access journal *BMC Microbiology* describes the use of a dye, indocyanine green, that produces bacteria-killing chemicals when lit by a specific kind of laser light. Michael Wilson led a team from University College London that carried out experiments showing that activated indocyanine green is capable of killing a wide range of bacteria, including *Staphylococcus aureus*, *Streptococcus pyogenes* and *Pseudomonas aeruginosa*.

e! Science News June 30, 2008 <http://esciencenews.com/articles/2008/06/30/bacterial.resistance.futile.against.wound.cleaning.laser>

Bandages Electrocute Infections Away

Silverleaf Medical Products Inc., out of Tempe, Arizona, manufactures electrically activated wound dressings. The firm's proprietary material allows an electrical current to flow through the wet parts of the fabric. From the product page:

CMB™ Antimicrobial Wound Dressing with PROSIT™ is a single layer dressing consisting of a polyester fabric layer containing biocompatible, proprietary formulas which are held in position on the polyester with a biocompatible binder. The polyester fabric is single ply and is made from multi-filament spun threads woven together.

PROSIT™ activates and generates a voltage at the surface when moistened. When active, PROSIT™ prevents microbial penetra-

tion. Present device can be left on for three days. Other indications are currently being applied for.

medGadget July 1, 2008 http://www.medgadget.com/archives/2008/07/bandages_electrocute_infections_away.html

Smart Girls Eat Fish

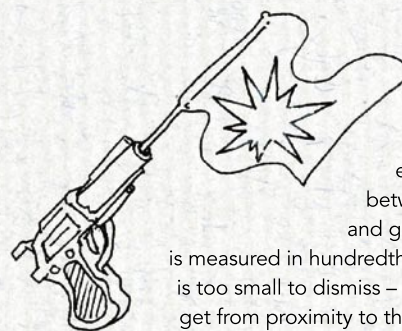
Girls who eat more omega-3 fatty acids outsmart those who eat higher amounts of omega-6 fatty acids, according to new research. As a result of this and other studies, government dietary recommendations – especially those aimed at pregnant women – should emphasize fish over soy and corn oils, which are respectively high in these fatty acids, says Joseph Hibbeln, a psychiatrist and lipid biochemist at the National Institute on Alcohol Abuse and Alcoholism in Bethesda, Maryland. "We don't want the brain to be deficient in its critical nutrients during development."

Ann Gibbons *ScienceNOW Daily News* June 20, 2008 <http://scienow.sciencemag.org/cgi/content/full/2008/620/3>

A Surprisingly Potent Placebo: Face Time with Me

A recent study in the *British Medical Journal* led by Ted Kaptchuk found that patients who received better communication and more attention from their doctors saw a more dramatic improvement in their medical condition than those who had a "colder" relationship and little face time with their physician.

Dr. Michael Evans *Globe and Mail* July 1, 2008 <http://www.theglobeandmail.com/servlet/story/RTGAM.20080701.wlevans01/BNStory/specialScienceandHealth/home>



On Your Mark, Get Set ...

In Olympic track events, the difference between winning a medal and going home empty handed is measured in hundredths of a second, so no edge is too small to dismiss – even the advantage you get from proximity to the starter's pistol, which, it turns out, is greater than anyone realized.

According to new research, runners in the inside lanes have an advantage: because they are closest to the gun, they hear the sound more loudly than do runners in outside lanes, and louder sounds make runners react more quickly, leaving the starting blocks sooner than if they heard a quieter sound.

Sharon Begley *Newsweek* June 24, 2008 <http://blog.newsweek.com/blogs/labnotes/archive/2008/06/24/on-your-mark-get-set.aspx>