



In the pink: PPL Therapeutics says its pigs lack a sugar that causes human rejection of pig organs.

'Transplant-friendly' pigs stir up debate over peer review

London The birth of five genetically engineered piglets has raised hopes that organ transplants from pigs to humans could become a reality — and started up an argument about the use of peer review.

On 22 August, the Edinburgh-based company PPL Therapeutics announced the birth in July of piglets lacking both copies of a gene involved in pig-to-human organ rejection. The gene produces an enzyme responsible for adding a sugar known as alpha-gal to the surface of pig cells. The sugar triggers the immediate rejection of transplanted pig organs in humans.

The decision to press release the result has annoyed some scientists. "The scientific community will be sceptical about this so-called breakthrough until it has been subject to rigorous peer review," says Patrick Bateson, vice-president of the Royal Society.

PPL attracted similar criticism in January when it announced the birth of pigs in which a single copy of the gene had been knocked out, again without peer review (see *Nature* 415, 103; 2002). That announcement was made the day before another group published similar results.

NASA picks up the pieces of fragmented comet craft

San Francisco CONTOUR, NASA's ill-fated comet-hunting spacecraft, has broken into at least three pieces, telescope images from observatories in Arizona, California and Hawaii have confirmed.

The craft's launch on 3 July went as planned, but it broke up after an onboard rocket booster was fired on 15 August (see *Nature* 418, 806; 2002). The rocket should have propelled CONTOUR out of its Earth orbit and towards a rendezvous with Comet Enke in 2003. The observed fragments are travelling on CONTOUR's predicted trajectory but are now so far away that further observations are unlikely.

NASA officials say that CONTOUR may still be capable of operating, and intend to continue monitoring until early December,

when the spacecraft will come into a more favourable orientation for receiving signals from Earth.

Neutrino detector to recover from shock

Tokyo The Japanese government is set to approve a four-year plan to restore the Super-Kamiokande (Super-K) neutrino detector. Officials hope to have the detector back to full capacity by 2006.

Super-K uses around 11,000 light-sensitive detectors to spot light released from collisions between neutrinos and water molecules in its 50-million-litre tank. More than half were destroyed when a fault caused a shock wave to rip through the tank last November.

Some physicists have been concerned that the government might be reluctant to repair the detector at a time when many big Japanese science projects are being cut (see *Nature* 416, 118–119; 2002), but officials at the education ministry say that letters from high-profile overseas scientists helped to convince them of the need for refurbishment. The ministry has included the money needed for the first 1,000 replacement detectors in its budget request for the next financial year.

Super-K should begin taking readings in December using the sensors that were not damaged in the accident, but the project will restore the sensitivity needed for other studies, such as those of solar neutrinos.

DNA test could end the party for shady wine dealers

Paris Out with the gargle-and-spit approach; in with genetic fingerprinting. French researchers say that DNA analysis could be used to identify the grapes that have been used in a particular wine, and hence to combat wine and vine fraud.



Makes you spit: quality producers currently lose out to wine fraud.

A team at the Montpellier research centre of INRA, the French agronomic research institute, has found a way to trace molecular markers of individual grape varieties in any vine product that contains sufficient DNA. The technique has already been successfully used to trace the origin of grapes for eating. The researchers are now turning their attention to commercial wines, and are refining

their technique in the hope that it can eventually be used for purified wines, which contain extremely low levels of DNA.

France's anti-fraud agency carries out thousands of investigations each year to stamp out wine fraud. In May, a French wine dealer was given an 18-month prison sentence and a fine of 1.25 million euros (US\$1.2 million) for selling Bordeaux cut with a cheap table wine under a good-quality label.

Team to decipher frog genome hops to it

San Francisco The genome sequence of the African frog *Xenopus tropicalis* will soon be available, courtesy of researchers at the US Department of Energy (DOE)'s Joint Genome Institute (JGI) in Walnut Creek, California. The team announced on 20 August that it will receive funding from the DOE, effectively giving the project the green light. The researchers hope to publish a draft sequence by the end of 2004 and a full version, in which each base will have been checked eight times, about six months later.

X. tropicalis was chosen, rather than the more commonly used *X. laevis*, because it has a much smaller genome and shorter life cycle. Researchers use *Xenopus* to study cell and organ development, including fundamental processes such as cell communication and division. The JGI team says that the genome sequence will shed light on how these can go wrong, providing insights into human health issues.

♦ www.jgi.doe.gov

Word wizard creates a font of knowledge for physicists

Washington High-energy physicists may be able to create exotic subatomic particles, but it took an English professor to help them conquer Microsoft Word.

University of Mississippi physicist James Reidy was frustrated at the cumbersome software needed to generate symbols for antimatter particles, which have a line over the corresponding matter symbol. He teamed up with campus Macintosh guru T. J. Ray of the English department to create LinguistA, a new font that allows easy overscoring of letters, numbers and Greek symbols when using Word on a Mac. Users simply press shift-5 and type in the 'normal' character to generate an overscore.

"It has saved me an awful lot of time," says Reidy. He posted the font on the Cornell University Library arXiv e-print server "as a lark", and was surprised at the response. Overscored symbols can, for example, also be used in biological equations and to denote chemical bonding. PC users will have to devise their own font, however, as Reidy says his department's loyalty lies with Macs.

♦ www.phy.olemiss.edu/HEP/LinguistA.sea.hqx