



don't go round the houses

October 29 2000

DOORS



## Innovation news

### Nuclear cancer clues

A unique international partnership is to help scientists studying the consequences of the 1986 nuclear disaster at Chernobyl in Ukraine. Cambridge University scientists are co-ordinating a project to make samples of nucleic acid extracted from Chernobyl-related thyroid cancers available for study in laboratories worldwide. More than 4m children were exposed to radiation, and the project aims to develop better prevention and treatment strategies.

### Water safety

Infected drinking water is estimated to cause up to 5m child deaths per year in developing countries. Electronic water-testing incubators cost the equivalent of three years' local wages, but a young British inventor at the University of Newcastle upon Tyne believes he has the answer. By replacing the electronic incubator with a plastic box surrounded by warm water, Richard Brown claims it is possible to maintain the warmth required to test for bacteria in water samples.

### A sugary solution

Scientists have discovered that a simple sugar could prevent deadly bacterial infections in cystic-fibrosis sufferers. Our lungs contain substances to kill the airborne bacteria we constantly inhale, thus preventing lung infections. In CF sufferers, these substances are not always effective. Researchers at Iowa University have found that the sugar xylitol lowers the salt concentration of the airway-surface liquid that covers cells lining the lungs, enhancing the bacteria-killing activity of the body's natural antibiotics.

### Shrinking chips

Scientists from the University of Wales and Nasa's Jet Propulsion Laboratory may have found a new route to building smaller and faster computers. Microchip manufacturers currently use light particles to etch features onto chips, but there are physical limits on how much can be etched. The new technique "entangles" two light particles, or photons, so they act as one unit with a higher combined energy. The technique is untested, but could be used to produce patterns half the size of those currently possible on each side of a chip.

### Dyslexia study



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test

The hunt is on for genes involved in dyslexia and another learning disorder called specific language impairment, which affect 5% of schoolchildren. Scientists at Oxford University's Wellcome Trust Centre for Human Genetics have been awarded almost £2m to investigate what causes these disorders. The study aims to identify which genes place a child at risk from learning disorders, by recruiting 300 families where one or more children have a language impairment and comparing their genetic make-up with that of their brothers and sisters.

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