

fertility expert attempts reproductive cloning

A fertility expert claims to have implanted cloned human embryos into the wombs of several women with the intention of producing live offspring.

Operating from a secret laboratory thought to be somewhere in the Middle-East, Dr Panayiotis Zavos also claims to have created clones of several dead people, including a ten month old baby killed in a car accident – not for implantation but for the purposes of study. None of the implanted embryos, created in a similar way to Dolly the sheep, produced viable pregnancies.

Scientists disputed Dr Zavos's claims, which are supported by an independent documentary maker. Lord Robert Winston of Imperial College London dismissed the reports as 'yet another one of his claims to get repeated publicity'. Studies in other species, including primates, suggest that producing live births is potentially feasible but difficult to achieve, and associated with major safety and ethical concerns; these concerns have also been expressed by scientists.

In the UK the Human Fertilisation and Embryology Act (2008) allows the creation of cloned embryos for therapeutic and research purposes only, not for the transfer into a woman's womb; such reproductive cloning remains illegal in most countries.

Dr Zavos's scientifically unsubstantiated claims may well prove to be a hoax but are a reminder that there remain individuals determined to break one of the greatest 'ethical taboos' in biology. (*independent.co.uk* 2009; 22 April, *guardian.co.uk* 2009; 22 April)

christian employee suspended

A support worker at a hostel for homeless people in Southampton was recently suspended for explaining his views on homosexuality during a conversation with a colleague.

David Booker, a committed Christian, maintains that he is not homophobic but expressed his opposition to both same-sex marriages and actively homosexual clergy during the conversation. He says that he was not aware of having caused any offence and was shocked to be suspended: 'Can I not have a private conversation with a colleague about my personal beliefs without getting suspended?'

'discussion on religion is being twisted to silence the Christian voice.'

The Society of St James, who run the hostel (and do not have a religious affiliation), wrote to Mr Booker to inform him that he was suspended ahead of an inquiry into gross misconduct. Their letter claimed that he had broken the charity's code of conduct by 'promoting your religious views which contained discriminatory comments regarding a person's sexual orientation'.

Andrea Minichiello Williams, director of the Christian Legal Centre who are advising Mr Booker, said: 'This case shows that in today's politically correct, increasingly secularised society, even consenting reasonable discussion on religion between two employees is being twisted by employers to discriminate and silence the Christian voice and freedom of expression'. (*ccfon.org* 2009; 11 April, *telegraph.co.uk* 2009; 11 April)

restoration of female fertility a possibility?

Research by scientists in China has suggested that the ovaries of female mice contain stem cells capable of growing into eggs that can be fertilised to produce healthy offspring.

The report in *Nature Cell Biology* states that female germline stem cells were isolated from mouse ovaries and grown in culture. Eggs in the ovaries of adult mice were killed, replaced with the cultured stem cells and tagged with green fluorescent protein (GFP) to allow their identification. The sterilised mice produced new eggs which were fertilised and gave rise to offspring, some of which carried GFP.

There have been suggestions that researchers failed to prove that the eggs used to produce offspring were grown from stem cells; it is possible that some of the endogenous eggs remained following sterilisation or that the GFP plasmid could have transfected these remaining eggs causing them to express GFP, resulting in its presence in some of the offspring.

At present it is unknown whether such stem cells are present in human ovaries. Their discovery would be highly significant and challenge the long-held principle of reproductive biology that women are born with their full complement of eggs. Moreover, isolation and culture of such cells would raise the possibility of prolonging female fertility and restoring it following the menopause.

The reported findings are, however, controversial and much more work will be required to understand the nature of these cells and to verify the researchers' claims. (*timesonline.co.uk* 2009; 13 April)

nurse struck off for secret filming

A nurse who secretly filmed the neglect of elderly patients in a hospital for a television documentary has been struck off.

Margaret Haywood, 58, was found guilty of misconduct at a Nursing and Midwifery Council (NMC) hearing for filming at the Royal Sussex Hospital for a BBC *Panorama* programme in 2005. The NMC's fitness to practise panel ruled that Mrs Haywood had prioritised filming over her obligations as a nurse and had breached patient confidentiality.

Mrs Haywood admitted to breaching patient confidentiality, although all patients had consented to appearing on the programme after they were filmed, but denied her fitness to practise had been impaired. She said she had agreed to film undercover to highlight conditions on the wards. The hospital had received a number of complaints before filming began and the programme's producer told the hearing there had been 'an over-arching public interest' to produce the footage.

Following the programme, concerns about standards of care were raised in the House of Commons and Sussex University Hospitals NHS Trust issued a public apology admitting 'serious lapses in the quality of care'.

Mrs Haywood's actions have been defended by representatives of the National Union of Journalists, Patient Concern and Action on Elder Abuse. (*timesonline.co.uk* 2009; 17 April, *bbc.co.uk* 2009; 16 April)

new diet pill no 'magic bullet'

The UK's first over-the-counter weight loss pill is now available at pharmacies around the country, but its makers warn that it may not be the 'magic bullet' for obesity that the public is hoping for.

Alli has been marketed as a weight loss capsule which, when added to a reduced fat diet, can help people lose 50% more weight than by dieting alone. It contains orlistat, a lipase inhibitor which until now was available by prescription only. The drug acts on the gastrointestinal tract to reduce absorption of dietary fat and so can cause unpleasant side effects such as flatulence, oily leakage from the rectum and liquid stools after a high-fat meal.

However, nutritional expert Dr Donald Hensrud from the Mayo Clinic warns that exciting results from tightly-controlled clinical trials on obese patients motivated to lose weight may not be predictive of the drug's efficacy in the real world. The pill will not work without accompanying lifestyle changes he says, and patients who are looking for a pill that will make them slimmer with minimal effort on their part will be sorely disappointed.

Alli is intended for over-18s with a BMI of 28 or more, requiring the individual first to consult a pharmacist who will confirm if the buyer is a suitable candidate for treatment; a two-week supply costs £32 (at Boots). (bbc.co.uk 2009; 21 April, timesonline.co.uk 2009; 20 April)

patients refused pre-implantation genetic tests

Couples at risk of passing on inheritable genetic diseases to their offspring are being denied funding

to screen their embryos, experts have claimed. Such individuals are eligible for IVF in order to produce embryos that can be tested for abnormalities via preimplantation genetic diagnosis (PGD). However, such procedures may cost a total of £7,000, which is not always funded by local Primary Care Trusts.

Guy's and St Thomas' NHS Foundation Trust have used the recent opening of a new Assisted Conception Unit, which will run the largest preimplantation genetic diagnosis (PGD) programme in the UK, to highlight these issues.

Alison Lashwood, consultant nurse in genetics and PGD at Guy's, gave examples of cases of couples affected by inheritable conditions who have had their applications for funding of PGD denied. Some of these cases choose not to have children, or conceive an affected foetus which is stillborn, aborted, or born with the disease.

Josephine Quintavalle, head of Comment on Reproductive Ethics, stated that since PGD ultimately involves the destruction of affected embryos it cannot be viewed as an alternative to abortion.

Each application for funding is judged on a case by case basis which can take up to a year. (bbc.co.uk 2009; 22 April, telegraph.co.uk 2009; 22 April, guysandstthomas.nhs.uk/news 2009, 23 April)

scientists compete with biological 'Lego'

Over 100 scientists from around the world are preparing to build machines out of microscopic biological components.

The teams, most of whom are students, will be competing against each other and have three months from June to build their machines. The competition, in its sixth year, is run by the Massachusetts Institute of Technology (MIT) in Boston, who will provide the registry from where teams will order components; the registry details 3,200 biological parts and is the equivalent of a hardware store. These parts are known as 'biobricks', hence the first prize trophy will be a metal Lego brick the size of a shoebox.

Competition organisers aim to accelerate progress in synthetic technology, and in previous years potentially useful machines have been created. However, critics have concerns that dangerous new organisms may be accidentally created, or that terrorists may pick up the knowledge to engineer deadly viral strains.

Meagan Lizarazo, assistant director of the International Genetically Engineered Machine Competition, said: 'Our mission has been to see if we can use biological parts to build things and operate them'.

One of Britain's best hopes this year is headed by Paul Freemont, co-founder of the Institute of Systems and Synthetic Biology at Imperial College London. They have yet to decide what to build, but one idea involves using vats of bacteria to make clothing. (*guardian.co.uk* 2009; 15 April)

every penny counts

During 2007-8 the NHS *underspent* by £1.7bn.

We are so used to hearing news of outrage at NHS deficits that you may have to read that line again in disbelief. Could it be that the NHS has actually

delivered on improving its economy?

It seems that the simple answer is yes.

As *The Times* commented: 'It does appear that the NHS surplus has been generated with no cost to service quality'. The Chairman of the parliamentary committee for public accounts, who published the financial report, also stated that the service quality actually improved.

The news demonstrates a rapid change in finances; just three years ago the NHS recorded a £500m deficit. The money has been saved in several areas including 'a fall in the price of generic medicines' and 'the underuse of contingency funds' according to *The Guardian*.

However, some suggest that such a surplus may negatively impact patient care and demonstrates a lack of financial planning.

The Department of Health has committed to putting some of the money back into the NHS in future years, suggesting that the unspent funds will still be used to benefit patients and may help provide cushioning in the current economic downturn. (*guardian.co.uk* 2009; 21 May, *BMJ* 2009;338:b2082, *timesonline.co.uk* 2009; 25 May)

catholicism, condoms and controversy over HIV

The Pope has outraged many in the international AIDS prevention community on a recent visit to Africa with the bold claim that HIV:

'Cannot be overcome through the distribution of condoms, which can even increase the problem'.

The president of the International AIDS Society labelled the Pope's words as 'irresponsible and

dangerous' and many have called for a retraction of the statement.

However, there are some experts who have, at least in part, supported the Pope's stance. This is not due to their own moral objection to contraception but because of evidence from areas like Uganda – where the HIV prevention campaign slogan was 'Zero grazing' to emphasise the importance of fewer sexual partners – showing greater success in reducing the spread of the virus than the distribution of condoms alone. Edward Green, director of the AIDS Prevention Center at the Harvard Center for Population and Development Studies said:

'We have found no consistent associations between condom use and lower HIV-infection rates'.

This does not, however, indicate that condom use *increases* the infection rates of HIV. One school of thought that *does* suggest that condoms may 'increase the problem' is that condom use encourages more risky sexual behaviour and thus an increase in the likelihood of infection transmission; a second theory is that condoms are not a barrier to viruses, since viruses may be able to pass through pores in the latex structure.

Whatever the truth, it seems many groups working in HIV prevention feel the Pope has been rather insensitive in his words; yet his comments do not appear to be entirely unsubstantiated. (bbc.co.uk 2009; 17 March, timesonline.co.uk 2009; 17 March, timesonline.co.uk 2009; 27 March, *The Lancet* 2009; 373(9669):1054)

non-invasive post-mortems for those with religious objections

The Government has announced that non-invasive post-mortems will be available to those who object to conventional post-mortems on religious grounds.

The announcement is part of an overhaul in the Coroners and Justice Bill and has arisen after the success of a pilot scheme in Salford and Bolton, where individuals could opt for an MRI post-mortem to determine cause of death. Coroner Jennifer Leeming, in charge of overseeing the project, concluded that the results with MRI have been 'more than 99%' accurate.

The Bill does, however, give coroners the right to switch to the conventional method should there be difficulty determining the cause of death.

The scheme is open to members of all faiths, but at £500 per scan, patients' families are currently asked to foot the bill. Nationwide funding has not yet been decided upon.

Muslims and Jews object to invasive post-mortem procedures, as it conflicts with beliefs on sanctity of the body and teachings that the body should be buried as quickly as possible after death. The former general secretary of the Muslim Council of Britain, Sir Iqbal Sacranie, said: 'This announcement will certainly be welcomed in the Muslim community. It has always been an issue of some concern.' (timesonline.co.uk 2009; 21 April, telegraph.co.uk 2009; 21 April)

*Tracy de Castro, Sophie Hooper,
David Randall, Helen Reay, Rachel Taylor,
Stella Woodfield*