**Good news for lab animals**

The US National Institute of Environmental Health Sciences (NIEHS) predicts that the use of human and animal cell lines could lead to a 30% decrease in the number of animals used in chemical toxicity testing (ScienceDaily.com, 5 October). The old LD₅₀ test typically used 50–200 animals per test. The recent introduction of assays that do not use the death of the animal as an endpoint has reduced this figure to between 8 and 12. NIEHS believes that using cell lines to test for toxicity effects will reduce this number further. **MJ D**

**Rabbit stem cells**

Chinese scientists have revealed that they have transferred nuclei from human cells into enucleated rabbit eggs (Nature, 27 September). They hope to use the resulting embryos to generate ES cells for research into regenerative medicine. Chen Xigu (SunYat-Sen University of Medical Sciences, Guangzhou, Taiwan) removed the chromosomes from rabbit eggs and replaced them with the nuclei of skin cells from a seven-year-old boy. In some of the ~100 successful nuclear transfers, an embryo developed to the morula stage—the compact ball of cells that forms after ~3 days of embryonic development. Before ES cells can be isolated from human embryos, they need to develop beyond this stage to form a blastocyst. Chen has not yet been able to coax his embryos into developing this far, but he is optimistic of success. **DM**

**The Vatican and xenotransplantation**

The Pontifical Academy for Life in the Vatican (Rome, Italy) has announced that it does not object to xenotransplantation (the transplantation of animal organs into humans). On 26 September, they stated that because humans enjoy a unique and superior dignity, and God has placed non-human creatures at the service of people, the sacrifice of animals is justified as long as there will be a ‘relevant benefit for humans’. Research into transgenic animals is also ‘morally acceptable’ because of these benefits. **DM**

**Endangered animal cloned**

Pasqualino Loi et al. (Nature Biotechnology, October issue), report the successful cloning of a wild endangered animal, Ovis orientalis musimon or moufflon, a mountain sheep found on the islands of Sardinia, Corsica and Cyprus. Enucleated domestic-sheep eggs were injected with granulosa cells collected from two female mouflons that were found dead in a pasture. This isn’t the first time that attempts have been made to clone an endangered species. For example, last January, a clone of the ox-like guar was born to a cow in Iowa, USA, however, it died of dysentery within 48 hours. The authors summarise their work succinctly: ‘Our findings support the use of cloning for the expansion of critically endangered populations.’ **DM**

**Nobel prize for work on the cell cycle**

This year’s Nobel prize for physiology or medicine goes to three biologists for their contributions to our understanding of the cell cycle and cell division. Leland Hartwell, president and director of the Fred Hutchinson Cancer Research Center (Seattle, WA, USA), Paul Nurse, director-general of the Imperial Cancer Research Fund (ICRF) (London, UK) and Tim Hunt also of the ICRF have been honoured. **DM**

**Anthrax vaccine**

Brian Price et al. have shown that mice injected with fragments of DNA from anthrax bacteria can be immunized against the disease (Infection and Immunity, July issue). Using combinations of two genes from the bacterium responsible for causing anthrax (Bacillus anthracis), the researchers were able to successfully immunize mice against the disease. **DM**

**Stuffed DNA**

The DNA inside some viruses is packed so tightly that the internal pressure reaches 50–60 atmospheres – about ten times that in a champagne bottle. Douglas Smith et al. suspect that this high pressure helps the virus insert its DNA into a cell once it has latched onto the surface (Nature, 18 October). Such tight packing is achieved by one of the most powerful molecular motors ever observed: stronger than the motors that move our muscles or the nanoscale molecular motors that duplicate DNA or transcribe it into RNA. The motor belongs to bacteriophage ø29 (phi-29), however, adenoviruses, popular with gene therapists as vehicles for ferrying genes into cells, are also suspected to pack their genes in this way. **DM**

**Slow release pesticides**

Controlled release of crop pesticides could make them safer and more cost-effective to use, according to researchers at Naples University, Italy (Chemweb.com, 1 October). Maria Immacolata La Rotunda and coworkers encapsulated a model pesticide (carbaryl) in microspheres prepared from mono-, di- and –triglycerides and polyethylene glycol esters of fatty acids, and found that the rate of pesticide release could be controlled by the microsphere formulation. Soil run-off loss was also reduced, and thus the environmental impact of pesticides could be controlled. **MJ D**

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