US universities promise to go carbon neutral

In the biggest move yet to make academia carbon neutral, the leaders of more than 290 US colleges and universities have signed a pledge to reduce or offset all their greenhouse-gas emissions.

Signatories of the American College and University Presidents Climate Commitment range from from large public university systems — such as the University of California — to small community colleges. All have agreed to make their plans to go carbon neutral, and their progress in achieving it, available for public scrutiny.

But it's not clear how long the universities will take to reach their goal or how much it will cost. Many are hoping that short-term savings, such as cuts in electricity bills, will help pay for longer-term changes, such as altering buildings to make them more energy efficient or buying carbon offsets to compensate for air travel.

China looks for alternative biofuel options

China is likely to stop growing food crops such as corn (maize) to make biofuels, according to a statement earlier this month by the National Development and Reform Commission.

The policy comes as demand for corn for biofuel is jumping, and prices worldwide are rising. Earlier this month, the United Nations Food and Agriculture Organization reported that worldwide import bills for coarse grains and vegetable oils — used in biofuels — are estimated to rise by up to 13% between 2006 and 2007.

In an attempt to reduce harmful emissions and decrease its need for imported oil, China plans to have 15% of its fuel coming from renewable sources, such as biofuels, by 2020. In place of corn, the China Oil and Food Corporation says it will focus on sorghum to make ethanol.

W. DONGJUN/CHINA FOTOPRESS/NEWSCOM

China intends to switch from growing corn to sorghum for biofuels.

More choice for space tourists

An established European space-equipment company has joined dedicated space tourism ventures such as Virgin Galactic and SpaceX in the race to take passengers to space.

Astrium, a subsidiary of the European Aeronautic Defence and Space Company, has unveiled plans for a vehicle capable of shooting four people to an altitude of 100 kilometres, giving them a 3-minute zero-gravity experience. The €1 billion (US$1.3 billion) needed for the project is expected to come from private capital, topped up with loans and regional development funding. Astrium hopes to take its first customers up in 2012. Virgin Galactic claims it will be ready for business in 2009.

The Astrium craft will use standard jet engines to take off and land. Once it reaches an altitude of 12 kilometres, rockets will blast the vehicle the rest of the way.

M. NEWSON/NASA

US genomics centre settles lawsuit with Icelandic firm

A new US genomics centre set up to find inherited diseases in children can continue operations, now that it has settled a potentially crippling lawsuit filed by the Icelandic firm deCODE Genetics.

Last year, deCODE sued the Center for Applied Genomics at the Children's Hospital of Philadelphia in Pennsylvania, saying that four researchers who left the firm took proprietary data with them to start the $39-million non-profit institute. The centre plans to analyse DNA from 100,000 children.

But on 14 June, a US federal court approved a confidential settlement whereby the four researchers can conduct projects at the new centre. Both parties refused to provide details of the settlement.

Eris, not Pluto, is most massive dwarf planet

Pluto, step aside yet again. The dwarf planet known as Eris is officially the most massive dwarf planet known — heavier than the much-maligned Pluto, which the International Astronomical Union tossed out as a fully-fledged planet last year.

Michael Brown and Emily Schaller, of the California Institute of Technology in Pasadena, have now measured the mass of Eris, known informally as Xena, whose discovery was first reported in 2005. It clocks in at 16.6 billion trillion kilograms, making it 27% more massive than Pluto (M. E. Brown & E. L. Schaller *Science* 316, 1585; 2007).

These measurements were derived from new observations, made by both the Hubble Space Telescope and the Keck Observatory in Hawaii, of the orbit of Eris's moon Dysnomia. Brown and Schaller first worked out that the moon takes about 16 days to orbit Eris. Kepler's laws of planetary motion and models detailing the gravitational pull between two objects then allowed them to calculate the planet's mass.

Boost for physical sciences in US research budget

Round one of this year's budget cycle in the United States, the first under the new Democratic-led Congress, bodes well for research.

Over the past few weeks, budget committees in the House of Representatives have given a tentative nod towards substantial increases in 2008 for several major science agencies. The Department of Energy's office of science would receive a 19% increase to US$4.5 billion, and the National Science Foundation would see a 10% boost to $6.5 billion.

Not all agencies will enjoy such impressive growth. The troubled research wing of the Department of Homeland Security would grow by 3% after being slashed last year to $630 million, and the National Institutes of Health would grow by 2.6% to $29.6 billion, which advocates of biomedical research say is not enough.

The House process is far from complete, and bills still need to be drafted in the Senate and eventually signed into law by the president. But the signs look good for research, says analyst Kei Koizumi of the American Association for the Advancement of Science in Washington DC. "It's great news," he says. "More for everyone."

Correction

In the article "Simple switch turns cells embryonic", Shinya Yamanaka is quoted as saying he has not worked with embryos before. In fact, Yamanaka used fibroblasts derived from mouse embryos for the experiments described. In other experiments outlined in the article, the same results were achieved with fibroblasts taken from postnatal skin cells.