Australian report calls for relaxation of stem-cell laws

An Australian report on embryonic stem-cell law could pave the way for the creation of one of the world's most permissive research environments.

The government-commissioned report, which was released on 19 December, recommends relaxing the country's current ban on therapeutic cloning and establishing a national stem-cell bank. It also advises permitting the creation of cross-species chimaeras — where human somatic cells are fused with non-human eggs — for research and training.

Australia's current laws, dating from 2002, were seen as an impediment to the field; some of the nation's leading researchers and biotechnology entrepreneurs have already moved elsewhere. "If the government adopts the recommendations, we would be in a very attractive position to get back some scientists," says Alan Trounson, a reproductive biologist at Monash University in Melbourne.

DuPont fined over safety data on Teflon chemical

Chemical titan DuPont will pay the largest-ever civil administrative penalty levied by the US Environmental Protection Agency. The fine — $10.25 million — relates to alleged infractions concerning the chemical perfluorooctanoic acid (PFOA).

PFOA, a possible carcinogen, is used to make several DuPont products, including Teflon non-stick coating for cookware. Most of the charges involve the company's failure to inform the agency about data on the chemical's risks.

Under the 14 December agreement, DuPont will also spend $6.25 million on related research, such as determining whether and how any of its products can break down to form PFOA. Further funds will go towards a green-chemistry project in schools in Wood County, West Virginia, the site of one of DuPont's chemical plants.

Innovation act proposes big boost for US research

Legislation introduced in the US Congress last week proposes a doubling of the National Science Foundation's budget between 2007 and 2011.

Among its provisions, the bill would set up a grants programme to fund innovative but high-risk projects, allocate nearly $100 million a year for graduate research grants, and encourage the development of regional hot spots for technological innovation.

The act is a response to a report released a year ago by the Council on Competitiveness, a group of US chief executives, university presidents and labour leaders. The report called for investment in education, training, research and development, and commercialization of research to keep the United States globally competitive.

Even the bill's supporters do not expect all of it to pass, but hope that pieces of the proposal may become law.

US coastguard urged to take back ageing icebreakers

The US Coast Guard, not the National Science Foundation (NSF), should run the country's ageing fleet of polar icebreakers, according to an interim report released on 14 December by the National Research Council.

US COAST GUARD

The NSF took control of the three US icebreakers used for research from the coastguard earlier this year. But the ships will need expensive repairs, and there is little experience at the NSF in running them.

"We as a group agreed that it really didn't make sense to have the NSF in charge of these icebreakers," says committee member Julie Brigham-Grette of the University of Massachusetts, Amherst.

Two of the ships, which are 30 years old, usually help break a channel to McMurdo Station in Antarctica, but this year the NSF also chartered a newer Russian icebreaker. The report urges that at least one US vessel should be capable of clearing the way to McMurdo each year.

Climate change is expected to make the Arctic Ocean more accessible to shipping. Icebreakers might be needed there in an emergency, or to break the way for commercial traffic, increasing the need for a reliable fleet, the report says.

DaimlerChrysler tops league of R&D spenders

The German car maker DaimlerChrysler is the world's biggest private investor in research and development, with an annual spend of €5.6 billion (US$6.7 billion), according to a European Commission study published on 9 December.

Sixteen companies — seven in the United States, three each in Germany and Japan and one each in Britain, France and Finland — have an annual research and development budget bigger than the European Union's €3.5-billion Framework Programme for research. The European Commission has proposed doubling the programme's budget between 2007 and 2013.

The US pharmaceutical company Pfizer comes close behind DaimlerChrysler, followed by the US Ford Motor Company, Japan's Toyota Motor Company, and Germany's Siemens. The British company GlaxoSmithKline ranks at number 11 with €4.01 billion.

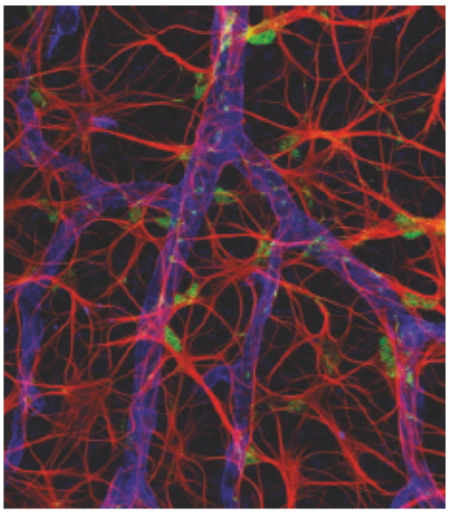
Image of retina takes prize for visions of biology

Blue blood vessels combine with red astrocytes in this award-winning image of an ageing rat's retina.

In a competition sponsored by optics firm Olympus, judges cited the image's combination of technical accomplishment, beauty and scientific significance in awarding top prize to Hussein Mansour, a graduate student at the University of Sydney, Australia. Studies of astrocytes in ageing animals could shed light on how the human brain deteriorates as it gets older.

Other winners included images of fly testis cells and the wings of a moth.

www.olympusbioscapes.com/gallery/2005/index.html


H. MANSOUR

Astrocytes are red, blood vessels are blue: the rat brain could shed light on human ageing.