

German states wield the axe

University cuts are out of step with federal government's bid to spare research.

Despite the federal government's strong support for science and higher education, the crisis in Germany's public finances is starting to take its toll, as cash-poor states prepare to cut university budgets.

In the state of Schleswig-Holstein last week, thousands rallied in the capital, Kiel, to protest against the imminent closure of the medical school at the University of Lübeck. "We will have to stop the enrolment of medical students as from the winter term 2011," says Rolf Hilgenfeld, a structural virologist at the university. "This is outrageous." And researchers in Lübeck and elsewhere fear worse is to come.

The federal government has spared national agencies, such as the German Research Funding Council (DFG), from the multi-billion-euro cuts in public spending announced last month. But many of the states, which fund the universities, are struggling to keep financing at current levels. The Hesse government, for example, last month announced university budget cuts of €30 million (US\$37 million) a year over the next five years. Universities in Saxony are facing similar cuts.

In Schleswig-Holstein, the government announced in May that it will cut public expenditure by €125 million a year to close a looming budget deficit. Science and higher education will be hit hard. From 2015, the University of Lübeck will lose €24 million a year — 30% of its



Slashed university budgets bring protesters out onto the streets of Kiel, Germany.

total budget — which scientists there say will not only close the medical school but threaten the university's very existence.

The University of Lübeck also hosts a graduate school for computing in medicine and life sciences, and is part of a €35-million 'excellence cluster' in medical research on inflammation, both funded by the federal government. Both programmes are likely to be discontinued, says university president Peter Dominiak.

The proposed cuts have to be approved by the state parliament, which is expected to vote in December. But some scientists are already preparing to leave. "The university will be damaged to such an extent that for me it makes no sense to

stay," says Jan Born, a neuroscientist who earlier this year received a €2.5-million Leibniz prize, Germany's most prestigious scientific award, for his research on sleep and memory.

The heads of the DFG and of the German Rectors' Conference (HRK), the state universities association, are concerned over the Lübeck cuts. "This ... is a misstep with far-reaching negative consequences," Margret Wintermantel, president of the HRK, wrote to Peter Harry Carstensen, the Christian Democrat prime minister of Schleswig-Holstein, "not only for the University of Lübeck but for Schleswig-Holstein and Germany at large."

Quirin Schiermeier

UK research centre born amid cuts

As the United Kingdom grinds through its worst recession in decades, British researchers have revealed ambitious plans for a massive biomedical science complex in central London.

The UK Centre for Medical Research and Innovation (UKCMRI) is the most significant scientific development in Britain "for a generation", says Paul Nurse, Nobel-prizewinning cell biologist and chair of the project's scientific planning committee. "If we get this right, it will send a message to the rest of the world that the UK is serious about science," says Nurse.

Detailed plans for the building, which will be located near London's St Pancras International station and house 1,500 staff, were unveiled last week. The open-plan design reflects what Nurse calls his "somewhat unusual" ambitions for how research will be carried out. To encourage collaboration, Nurse says that the centre will



The centre will be among the largest in the world.

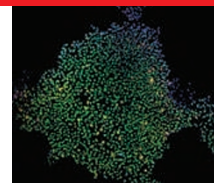
forgo traditional academic departments for multidisciplinary 'interest groups' that are set up by the researchers themselves. Nurse hopes that the different teams will essentially drive their own research programmes.

The grandiose plan will not come cheap. On top of construction costs of £600 million (US\$890

million), the centre will cost £100 million per year to operate. The stiff price tag comes at a difficult time for several of the project's backers. The UK Medical Research Council (MRC), which will pay roughly half the construction costs, is expected to have its funding squeezed in the coming government budget, and University College London (UCL), which will contribute £46 million to the building, has recently made voluntary redundancies in preparation for tight times ahead.

The new UK coalition government recently announced that it will pay its portion of the project on a year-by-year basis instead of as a single lump sum, but both the MRC and UCL say that they remain fully committed to the project. Plans for the new facility will be submitted to local authorities in August and, if approved, construction could begin early next year.

Geoff Brumfield



AN EASY WAY TO REPROGRAM CELLS
Pluripotent stem cells made with a virus alone.
go.nature.com/ScmlGK

J. THOMSON/UNIV. WISCONSIN-MADISON

Strange lesions after stem-cell therapy

In a stark reminder that stem-cell therapy is uncharted territory, a stem-cell transplant given to a patient in Thailand who had kidney disease resulted in the development of cellular masses not previously reported. The lesions, described in a paper published online on 17 June in the *Journal of the American Society of Nephrology*, were not directly linked to the patient's subsequent death (D. Thirabanasak *et al.* *J. Am. Soc. Nephrol.* doi:10.1681/ASN.2009111156; 2010).

With hundreds of poorly regulated clinics that offer unproven stem-cell therapies now running, notably in China and Thailand, the episode is a warning to patients who may be considering such treatment.

The patient had lupus nephritis, in which the immune system attacks the kidneys. In 2006, she underwent a procedure at a private clinic in which her own haematopoietic stem

cells — which can develop into any type of blood cell — were injected into her kidneys. Details of the clinic and the rationale behind the treatment have not been released.

Haematopoietic stem cells have been used to treat lupus nephritis with some reports of success. But they are usually injected into the bloodstream, not the kidney, in an attempt to 'reset' the immune system.

"She didn't get any better from stem cells, we can say that."

Six months later, the patient complained of pain and blood in the urine. Imaging studies revealed a four-centimetre mass on her left kidney and smaller masses in the kidney, liver and adrenal gland. Doctors at Chulalongkorn University in Bangkok removed the kidney, believing a malignant tumour to be present. But further analysis showed that it was something else.

"I had never seen anything like it," says Paul Thorner, a pathologist at the Hospital for Sick Children in Toronto, Canada, who has a joint

position at Chulalongkorn University and was a co-author on the paper. Thorner coined a term — angiomyeloproliferative — to describe the proliferation of blood-vessel and bone-marrow cells the team found.

Patients are undergoing other experimental stem-cell therapies, but there is usually little follow-up to establish safety or efficacy. In one case reported last year, a boy treated with fetal stem cells at a Russian clinic developed tumours in his brain and spinal cord. In the Thai case, no post-mortem was carried out, as far as Thorner is aware, so his team could work only on the removed kidney. It is not known whether the smaller masses were linked to the main mass, or what would have happened had the patient not died from other complications. "She didn't get any better from stem cells, we can say that," says Thorner, who may try to reproduce the masses in animal experiments. ■

David Cyranoski