

NEWS IN FOCUS

PLANETARY SCIENCE NASA rethinks approach to Mars exploration **p.149**

CANCER RESEARCH Promising therapy raises safety concerns **p.150**

CHEMISTRY Molecular machines nab Nobel prize **p.152**



PSYCHIATRY Rise in mental-health disorders in Europe's migrants and refugees **p.158**

CHRIS RATCLIFFE/BLOOMBERG/GETTY



UK Prime Minister Theresa May gives the closing speech at the Conservative Party conference, where she took a hard line on immigration.

POLITICS

Scientists spooked by UK anti-immigration stance

Plans to restrict freedom of movement intensify fears over June's Brexit vote.

BY DANIEL CRESSEY

UK scientists say they're dismayed by their new government's toughened stance on curbing immigration, including ideas to restrict the flow of foreign students and workers.

The government outlined its plans last week at the annual Conservative Party conference, which was the first since Theresa May became prime minister in the wake of June's vote for Brexit — the decision that the United Kingdom should leave the European Union. At the

conference in Birmingham, politicians made it clear that they want to eliminate the free movement of EU citizens into the United Kingdom once the country splits from the EU, an event now expected to take place in 2019. "We are not leaving the European Union only to give up control of immigration again," said May.

Since the referendum, in which concerns over immigration were believed to have played a big part in swaying voters, scientists have worried about how Brexit would affect the free movement of people. Although the government has not fleshed out its latest proposals,

they are the strongest indication yet that scientists will not be allowed to move freely between the United Kingdom and the EU after Brexit — which in turn means that UK researchers may be excluded from EU funding programmes.

"There has been a change in tone. I was surprised by how strong some of the comments were," says Azeem Majeed, who heads the department of primary care and public health at Imperial College London. The perception that non-UK citizens are not welcome — which grew as a result of June's Brexit referendum — has only increased since the conference, ▶

► he says. That is particularly the case in health fields, because the government has pledged to cut the number of jobs for given to foreign doctors, in favour of UK citizens.

UK universities get about 16% of their research funding and 15% of their staff from the EU, and scientists have been vocal about the need to maintain freedom of movement. It may even be a prerequisite for UK access to EU research funding. When Switzerland restricted freedom of movement in 2014, its researchers lost access to the major Horizon 2020 research-funding programme, leading to protracted negotiations that are still ongoing. “The hard line on freedom of movement is almost certain to restrict us from EU funds,” says Stephen Curry, a structural biologist at Imperial College London. Other comments on immigration and restricting foreign students are also going down poorly in academia, he says. “It’s reinforcing the rather sour atmosphere.”

WORKER RESTRICTIONS

UK home secretary Amber Rudd said in her conference speech that the government would consider making it harder to recruit from overseas, forcing companies to publicly disclose the proportion of foreign staff working for them (an idea that other politicians later disavowed) and cutting down on universities’ ability to recruit foreign students to “lower quality courses”.

“We had a very decisive message from the Conservative conference that the priority is simply reducing the number of people who come here, and if that damages the economy, so be it,” says Jonathan Portes, an economist at the UK National Institute of Economic and Social Research in London.

However, the conference was not all bad news for science and science policy, says Sarah Main, director of the Campaign for Science and Engineering in London. She says that the comments on immigration are concerning. But she adds that, at the Birmingham conference, “We’ve seen the government being much more clearly positive about research and innovation in general.”

She cites a speech from Chancellor of the Exchequer Philip Hammond — which praised science as a driver of growth and emphasized the need to get “the brightest and best to work here in our high-tech industries” — and positive comments from science minister Jo Johnson at events away from the main auditorium.

But Portes, chief economist for the UK Cabinet Office during the 2008–09 financial crisis, says that Hammond’s positive messages for science don’t outweigh the negative impacts of May and Rudd’s plans. “It’s nice to know the chancellor is not on the same page as the PM and the home secretary, but it seems pretty clear who is calling the shots,” he says. ■



Schoolchildren in Limpopo, the site of one of South Africa’s existing demographic surveillance studies.

POPULATION STUDIES

South Africa plans huge health study

Network would be Africa’s largest demographics project if it can sustain long-term funding.

BY LINDA NORDLING

South Africa’s government has announced that it will expand the country’s existing demographic studies to create the largest project of its kind in Africa — tracking the health, income and educational attainment of around 1% of South Africa’s population.

The Department of Science and Technology estimates that it will put 264 million rand (US\$19 million) into the demographic project over the next five years, which will eventually cover at least half a million people. It has secured the funding for its first three years; the rest will need to be allocated in future government budgets.

If the study can be sustained in the long term, researchers hope that the data will help them to track efforts to curb major health problems such as HIV and tuberculosis, and to monitor emerging lifestyle-related threats such as cancer and diabetes. The department

intends the survey to run for decades, following people from the cradle to the grave and monitoring intergenerational trends.

Long-term demographic studies have played an important part in charting disease patterns. One survey that began in 1948 in Framingham, Massachusetts, led to the discovery of cardiovascular disease risk factors such as smoking and diabetes, and has allowed scientists to study intergenerational disease patterns.

But in Africa, as in many other parts of the developing world, such long-term projects have been neglected in favour of a focus on health emergencies such as HIV or Ebola, says Glenda Gray, president of the South African Medical Research Council.

“You never get your head above water to plan for the future,” she says. She thinks that the new project will change that.

South Africa has had three demographic surveillance projects running since the mid-to late 1990s, based in Mpumalanga and

NDLOVU/SOWETAN/GALLO IMAGES/GETTY