News in focus

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Boris Johnson remains UK prime minister following a Conservative victory in the UK general election.

UK ELECTION DASHES SCIENTISTS' HOPES OF STAYING IN THE EU

Brexit certainty intensifies researchers' concerns about international collaboration and access to European Union funds.

By Jonathan O'Callaghan

The United Kingdom is now firmly on the path towards leaving the European Union, after the Conservative party won a majority of 79 seats in last Thursday's general election — a result that has major implications for science.

In the wake of the election, researchers are also questioning whether the party will be able to honour its campaign promise to increase spending on science.

Prime Minister Boris Johnson campaigned on the basis that he would take the United Kingdom out of the EU with his previously negotiated withdrawal agreement by 31 January 2020, if his party won a majority. So the Conservative victory more or less ends the possibility of remaining in the EU, an outcome that was left open before the general election, and which some scientists had hoped for.

"Given the pro-remain sentiments of a large majority of the scientific and academic community, many people would have been clinging to the hope of some kind of second referendum or some attempt to try and reopen the fundamental question," says James Wilsdon, director of the Research on Research Institute at the University of Sheffield, UK. "Clearly, that option has now gone."

But the result does mean that, for the time being, researchers no longer face the prospect of a chaotic no-deal Brexit.

"There is a great degree of certainty in what was a very uncertain situation," says Wilsdon. "I think a lot of the science community don't like the substance of that certainty, but at least this does mean we won't be looking at months or years more of when or how we'll be leaving the European Union."

Although Brexit now looks certain, there is still a question mark over what the United

Kingdom's future relationship with the EU will look like.

Details on trade and other aspects have yet to be ironed out, while key issues for science – such as the United Kingdom's involvement in Europe's Horizon 2020 research programme, a crucial source of funding and collaboration – have yet to be resolved. "The Conservative manifesto says we will continue to collaborate internationally and with the EU on scientific research, including Horizon," says Sarah Main, executive director for the Campaign for Science and Engineering in London. "But it's not quite 100% clear how that's going to be enabled to happen."

Brexit will also bring changes to the free movement of EU citizens in and out of the United Kingdom, which could affect overseas recruitment at UK universities and research institutions. The Conservatives promised in their manifesto to introduce "new rules for those of exceptional talent" in a post-Brexit immigration system.

It's now necessary to ensure that non-British, European researchers who currently benefit from freedom of movement can still come to the United Kingdom, says Beth Thompson, head of UK and EU policy at Wellcome, a biomedical-research charity in London. "It's important that we send a signal to the rest of the world that the UK is open for business, and that we want to participate in internationally competitive and collaborative science."

Manifesto pledges

Whether the government can fulfil the science promises laid out in the Conservative manifesto is also unknown. The party has committed to raising UK spending on science and research to 2.4% of gross domestic product (GDP) by 2027, up from 1.7%.

But the Conservatives have so far failed to make much progress towards this target, warns Kieron Flanagan, a science-policy researcher at the University of Manchester, UK. The pledge to increase research spending to 2.4% of GDP was made in the run-up to the 2017 general election. "It's been an objective for a few years now," says Flanagan, "But we haven't seen much activity." He adds that roughly two-thirds of research funding currently comes from the private sector, so both private and public spending increases will be needed to reach the 2.4% target.

Thompson says that the Conservative manifesto has some "very strong commitments to science", but at the moment we "don't have detail on how that will be implemented".

Other Conservative pledges will also come under scrutiny, such as the proposal to develop "a new agency for high-risk, high-payoff research", thought to be modelled on the US Defense Advanced Research Projects Agency. At the moment, it is still unclear how the agency would actually operate and how it would improve science in the United Kingdom. "We can all rally around those aims," says Wilsdon. "But I've not seen anything yet that makes a clear, evidence-informed case for why we need a new institution."

As the new government settles in, researchers will have to wait and see whether the ruling party can fulfil its manifesto pledges, and how negotiations with the EU progress. "We've got a government that is driving an aggressive and ambitious science agenda, but it also has a mandate to leave the EU," says Main. "And that raises questions for the science community."

CHINA SPENDS MILLIONS TO BOOST HOME-GROWN JOURNALS

US$29-million investment aims to boost the country's status as an international scientific powerhouse.

By David Cyranoski

China is taking dramatic steps to improve the quality and international reputation of its home-grown science journals. Publishers of hundreds of Chinese titles will receive generous government funding as part of a major five-year plan to elevate the country's publications to among the world's best.

The government said in August that it wants to publish more of the world's breakthrough discoveries in Chinese journals. On 25 November, it revealed that it will spend more than 200 million yuan (US$29 million) per year for 5 years to help improve the standards of some 280 journals – most of which publish in English – and to increase submissions from international researchers.

"There is no such thing as Chinese chemistry, American biology or German physics."

China has launched several initiatives over the past 5 years to improve the quality and international submission rates of its roughly 500 English-language science journals, following growing concerns that some were publishing a lot of low quality, even fraudulent, research. The initiatives have helped to improve some publications, but editors say that few manuscripts are submitted from top researchers in China or abroad.

The latest initiative is the largest and most comprehensive attempt yet to transform the country's scientific-publishing landscape, says Tao Tao, an independent consultant on Chinese academic publications who is based in Washington DC. "The new programme, given its scale, will be successful," she says.

It also marks a turning point in a long-running debate about how China should raise its status as an international scientific powerhouse, says Tang Li, who researches science policy at Fudan University in Shanghai. Many Chinese-born scientists who have returned after training overseas think the country's research heft is already reflected in the increasing number of Chinese scientists publishing in prominent foreign-owned journals. But Chinese journal editors and publishers think that more highly regarded domestically owned publications are needed to burnish the country's reputation. The latest investment signals that the government is backing the latter strategy, says Tang.

The investment is being overseen by a committee of representatives from seven high-profile organizations: the finance, science and education ministries; the General Administration of Press and Publication, a powerful Communist Party propaganda agency; the Chinese science and engineering academies; and the Chinese Association for Science and Technology, a non-governmental science organization.

To determine how funds will be allocated, the committee has ranked 250 journals into 3 tiers on the basis of quality, although it has not released details about how the ranks were decided. Twenty-two 'tier one' journals, which publish in English, will each receive between 1 million and 5.2 million yuan per year to help them attract submissions from researchers around the world. Another 29 'tier two' English-language journals will each receive between 600,000 and 1 million yuan per year. Four hundred thousand yuan will be invested in each of another 199 'tier three' journals, half of which publish in Chinese. An additional 30 journals that have not been ranked will be selected each year to share 500,000 yuan to