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Swiss evolutionary biologist Simone Immler plans to continue her research in Britain.

POLITICS

Living with Brexit

How three researchers handled the turbulent time between the UK referendum and the triggering of Article 50.

BY ALISON ABBOTT, EWEN CALLAWAY, DANIEL CRESSEY AND ELIZABETH GIBNEY

When the United Kingdom voted to leave the European Union on 23 June last year, the decision triggered a period of intense soul-searching and uncertainty, not least for a research community with strong, long-standing financial and social links to the continent. Worries about science funding, residency rights and even about racist attacks took root in labs across the nation.

But the vote also marked the beginning of a phoney war: little of substance could be done or said by the government until it triggered the previously obscure 'Article 50' clause, in the EU's governing treaty, to start the official process of leaving (see 'A slow divorce'). On 29 March, Prime Minister Theresa May will do just that. *Nature* has spoken to three people whose lives have been changed by the 'leave' vote, to see what their experiences tell us about how science will progress, post-Brexit.

I'M MOVING TO BRITAIN, DESPITE BREXIT

Simone Immler, evolutionary biologist, Uppsala University, Sweden

On 10 June last year, Immler interviewed for her dream job, a permanent position studying the evolution of sex, at the University of East Anglia (UEA) in Norwich, UK. Immler, who is Swiss, and her Israeli husband both run labs at Uppsala University — but the UEA was dangling a pair of positions in front of them.

Then, one week later, the United Kingdom voted to leave the EU. "We said, 'This can't be true'," Immler recalls. But after reassurance from friends in the United Kingdom that the nation would still be welcoming to immigrants, she and her husband, evolutionary biologist Alexei Maklakov, decided to make the leap. Their family moved to the United Kingdom this month.

Despite uncertainties over the outcome of Article 50 negotiations, Immler is taking a 'glass-half-full' perspective. She hopes that the United Kingdom will follow the example of Israel, a non-EU country that pays into funding bodies such as the European Research Council, from which both she and her husband receive support. She will maintain a lab in Uppsala for another year, so that graduate students and postdocs can continue their projects there. But as a former postdoc at the University of Sheffield, UK, she knows the benefits of free movement across Europe, and worries that she will struggle to draw graduate students and postdocs from a large pool of young scientists.

"I'm generally optimistic," Immler says. "It would have to come to extreme measures for us to leave again. Life would have to become very difficult for non-Brits in Britain, and we're still hopefully quite far from that."

A SLOW DIVORCE

The months after the UK vote to leave the European Union have been a rollercoaster for scientists.

23 JUNE 2016 United Kingdom votes to leave the EU.

18 NOVEMBER House of Commons science select committee says that all EU researchers living in the United Kingdom should be given the right to stay.

21 NOVEMBER UK government promises extra £2 billion (US$2.5 billion) per year in research and development spending by 2020.

17 JANUARY 2017 Prime Minister Theresa May lists "science and innovation" as 1 of 12 priorities in Brexit negotiations.

24 JANUARY Supreme Court rules that Parliament must vote on Brexit.

26 JANUARY Physicists shocked when government says that leaving the EU will also mean leaving the European Atomic Energy Community (Euratom).

16 MARCH Bill allowing government to trigger Article 50 is passed.

29 MARCH UK government is expected to trigger Article 50.

I SPEND HALF MY TIME DEALING WITH BREXIT

Ian Chapman, chief executive officer, Culham Centre for Fusion Energy, Abingdon, UK

The morning after the United Kingdom's referendum on its membership in the EU, as other staff at the UK national laboratory for fusion-energy research walked around in a daze, Chapman was hastily making plans. His interview for a job to head the centre — which hosts the EU-funded Joint European Torus (JET) — was just days away, and the centre's future was suddenly up in the air. "I'd made a load of preparations for things I wanted to say, and then I summarily had to rip them all up and start again," he says.

Chapman got the job. He is now tasked with leading JET through the tumult and managing a skittish staff of around 550. The physicist estimates that at least half of his time is spent dealing with the impact of Brexit.

His main goal is to keep JET — a facility that holds the world record for fusion power — running beyond the end of its current contract in December 2018. Another is to maintain the United Kingdom's involvement in the International Thermonuclear

Experimental Reactor (ITER) in southern France, for which JET is a test bed. Both tasks got harder in January, when the UK government announced that, as part of the country's withdrawal from the EU, it would also pull out of the European Atomic Energy Community (Euratom), the body that disseminates EU fusion funding and manages the United Kingdom's membership of ITER.

The decision wasn't a complete surprise, says Chapman. But it came without warning or an obvious plan for how to maintain the United Kingdom's fusion programme after the nation leaves Euratom. Chapman is now collecting data to help the government to work out the implications of various ways forward, which range from becoming an associate member of Euratom to funding an independent programme of research.

He also fills his hours by settling staff members' nerves. Scientists at JET are preparing for a 2019 dress rehearsal of a fuel mix that ITER will use, which should see JET break its own fusion record — but it may never happen. Routine negotiations to extend JET's contract are on ice.

The uncertainty has not yet triggered a mass exodus, says Chapman, but some top-level staff members have accepted positions elsewhere, and candidates have rejected job offers, citing questions over JET's future.

Despite these uncertainties, Chapman thinks that the government understands what is at stake and says that it has been responsive. But the United Kingdom's fusion community needs a concrete signal from the government — and soon. "There's a time window beyond which the disquiet will ratchet up, and we will start to haemorrhage capacity," says Chapman. "That will be hugely damaging, for us as an organization and for the entire fusion community."

"There's a time window beyond which the disquiet will ratchet up."

COME TO GERMANY, WHERE FUNDING IS GOOD

Marino Zerial, director, Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany

In some ways, Brexit could be a boon for European research, predicts Zerial. "The UK is becoming less attractive to do research, and so more people are going to consider countries in mainland Europe — particularly Germany, where the funding is so good."

Germany's research and development spending relative to its gross domestic product is among the highest in Europe.

Zerial expects to see an increase in applications to the large, international graduate school that is jointly run by his institute with the Technical University of Dresden, as well as in applications for postdoc and group-leader positions. "It'll be to our benefit."

But Brexit will hurt European science in the long run, he says. "When you lose an important piece of the European science landscape like the UK, it makes the European community weaker."

He worries that there could be fewer funding opportunities in the United Kingdom for collaborative research with institutes in mainland Europe — and that remaining opportunities might face much more bureaucracy. "European Union funding, whatever its weaknesses, supports loads of projects, and the community treasures very much the collaborations involved," he says. ■ Read more profiles at go.nature.com/2nsqeju

INSTITUTIONS

Russia's science-election chaos

The beleaguered Russian Academy of Sciences cancels presidential election at eleventh hour.

BY OLGA DOBROVIDOVA

Academics at Russia's premier science body have been left reeling after an election to choose the new president of the Russian Academy of Sciences (RAS) was cancelled at the last minute.

The three candidates — including incumbent Vladimir Fortov — pulled out on 20 March, just two days before the election. Three days later, the Russian government appointed academy vice-president Valery Kozlov, who had not planned to stand in the election, as acting leader.

The reasons for the candidates' withdrawal remain mysterious. "No one asking to postpone the election actually said anything specific," says Askold Ivantchik, a historian at the RAS Institute of World History in Moscow.

The RAS, established in 1724, heads up Russia's largest network of research institutions. It manages basic research and acts as an authority on science policy. But its past few years have been tumultuous — with a surprise reform announced by the government in 2013.

The modernizing reform began months after Fortov had been elected for his first term. It caused outrage among some scientists because it transferred budget and administrative controls to a new government agency. Fortov's term was set to end on 27 March, and the cancelled election would have been the first since the reforms.

On the first morning of a pre-election conference, the challengers, biologist Alexander Makarov and physicist Vladislav Panchenko, announced that they were dropping out, giving no reasons. Fortov, the election favourite backed by the academy's governing council, withdrew at once, saying that he could not run unopposed.

"No one asking to postpone the election actually said anything specific."

Clues emerged from interviews that Makarov and Panchenko gave to the government-run newspaper *Rossiyskaya Gazeta* on 19 March. Makarov called election procedures at the academy "archaic" and "nonsensical". Panchenko said that he and several unnamed RAS members had sent a letter to the governing council asking it to make the process — which "leaves room for manipulation" — more transparent. The letter was not made public, and neither Makarov nor Panchenko responded to *Nature*'s requests for comment.

But many scientists are still fuming about the reforms. In his election campaign, Fortov described the overhaul as "the most radical and risky for science" in the academy's history, and said it was eroding the RAS's autonomy.

Rumours are now rife. Valery Rubakov, a theoretical physicist at the RAS Institute for Nuclear Research in Moscow, told *Nature* that "without pressure 'from above', this turn of events would not have been possible".

Rubakov and at least two other members of the academy, physicists Vladimir Zakharov and Gennady Mesyats, suggested that Fortov had had a meeting at the Kremlin on 17 March. When asked about this at the conference, Fortov neither confirmed nor denied it.

Kozlov is expected to serve as acting president until an election takes place — which, under the academy's charter, should be no later than 28 September.

But experts agree that turmoil at the RAS is unlikely to affect scientists on the ground. Instead, it sends a symbolic message. "This was yet another demonstration of a profound level of disrespect for the scientific community," says Mikhail Gelfand, deputy director of the RAS Institute for Information Transmission Problems in Moscow. ■

Olga Dobrovidova is employed by TASS, a state-owned news agency in Russia.