of the celebrated Fermat's last theorem (V. Dimitrov. Preprint available at http://arxiv.org/abs/1601.03572; 2016).

The purported proof, which Mochizuki first posted on his webpage in August 2012, builds on more than a decade of previous work, in which he developed a novel and extremely abstract branch of mathematics in virtual isolation.

MOCHIZUKI IN THE ROOM

The Kyoto workshop followed on the heels of one held last December in Oxford, UK. Mochizuki did not attend that first meeting, although he answered questions over a video link. This time, having him in the room — and hearing him present some of the materials himself — was helpful, says Taylor Dupuy, a mathematician at the Hebrew University of Jerusalem.

Around ten mathematicians are now putting substantial effort into digesting the material — up from three before the Oxford workshop, says Ivan Fesenko, a mathematician at the University of Nottingham, UK, who co-organized both workshops.

Mochizuki did not take part in the customary mingling and social activities at the Kyoto meeting. And although he was unfailingly forthcoming in answering questions, it was unclear what he thought of the proceedings. "Mochizuki does not give a lot away," Kedlaya says. "He's an excellent poker player."

Mathematicians have criticized Mochizuki for his refusal to travel: after he posted his papers, he turned down multiple offers to go abroad. He spent much of his youth in the United States, but is now said to rarely leave the Kyoto area. (Mochizuki does not respond to interview requests, and the workshop's website noted: "Activities aimed at interviewing or media coverage of any sort within the facilities of RIMS, Kyoto University, will not be accepted.")

"He is very level-headed," says another workshop participant who did not want to be named. "The only thing that frustrates him is people making rash judgemental comments without understanding any details." Still, Dupuy says, "I think he does take a lot of the criticism about him really personally. I'm sure he's sick of this whole thing, too." ■

MATTHEW CHATTLE/REX/SHUTTERSTOCK

David Davis leads the UK government's Department for Exiting the European Union.

POLITICS

UK scientists seek Brexit influence

They hope for active role in negotiations to exit EU.

BY ELIZABETH GIBNEY

British science's largest lobbying campaign in years is under way. After the shock of the United Kingdom's vote to leave the European Union, anxious researchers are doing all they can to ensure that their interests are represented in Brexit negotiations. One big unanswered question is what role science will have in the new 'Brexit ministry' — the Department for Exiting the European Union (DEEU) — that has been expressly formed to take the country out of the EU.

Worried at the prospect of losing access to EU funding and collaborations, scientific societies have fired off numerous letters asking the government to keep their country in the EU's research system, and warning of damage already caused by Brexit. An advocacy group, Scientists for EU, says it has gathered (in confidence) 25 cases of foreign scientists withdrawing job applications or being refused a UK post as a result of Brexit, 7 cases of someone in UK science leaving the country, and 33 of disruption to funding for the EU's Horizon 2020 research-grants programme.

The government has indicated that it is listening to scientists — but seems reluctant to say so too loudly. On 18 July, Prime Minister Theresa May sent a letter to Paul Nurse, the director of London's Francis Crick Institute, telling him that the government was committed to "ensuring a positive outcome for UK science" as the country exited the EU. But the letter — effectively May's first statement on science — did not become public knowledge until science minister Jo Johnson referred to it in passing in a 25 July speech at the EuroScience Open Forum in Manchester, prompting journalists to press for a copy. Venkatraman Ramakrishnan, the president of London's Royal Society, said he welcomed the comments and was looking forward to working with May and her colleagues "to turn these words into action". ▶

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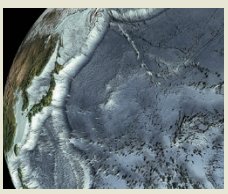

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What action May will take remains unclear: prospects for science are inextricably entangled with the wider Brexit issues of freedom of movement and UK access to the EU's single market. David Davis, a Member of Parliament who had campaigned on the 'leave' side of the referendum, leads the DEEU. He has announced plans to conduct a "huge consultation" ahead of the start of formal EU exit negotiations, which May has postponed until at least 2017.

SCIENCE IN THE BREXIT MINISTRY

Davis's team is talking to "the research institutes", he told Sky News on 17 July — but his department could not confirm which bodies this referred to. UK national academies have written jointly to Davis and "look forward to working with him to ensure that science's voice is heard in Brexit negotiations", the Royal Society told *Nature*.

Some hope that the Brexit ministry will contain specific advocates for research. "There should be some sort of champion for science within the department," says John Beddington, a population biologist at the Oxford Martin School, and a former UK chief scientific adviser. An obvious choice is science minister Johnson, Beddington says, although the DEEU could also dedicate a group of civil servants to the job. Johnson could be a "very strong, very early voice" in DEEU deliberations, Sharon Witherspoon, policy chief at the UK Academy of Social Sciences, told a House of Lords inquiry on 19 July. She added that research needed "urgent attention, and cannot wait to be an afterthought".

Giving more-formal responsibilities to Johnson, whose role in May's government is split between the education and business departments, might be a stretch. "If anyone can do it, Jo can. But I'm not confident that the best voice for the science community would be to add another job on for Jo," says Nick Hillman, director of the Oxford-based Higher Education Policy Institute.

A different potential conduit for scientific input could be the DEEU's departmental board, an advisory body that, in other departments, often includes senior business figures. And another idea is for Davis's department to appoint a chief scientific adviser (CSA), as most other UK ministries already have. But Beddington says that although the DEEU and the newly created Department for International Trade should each have a CSA, their role should not be to advocate for science, but to feed advice into the negotiations on issues such as environmental regulations, product standards and health and safety. "Whether to appoint a CSA is the kind of thought process they should be going through," says Hillman. "It doesn't mean they are there yet, though." ■

Daniel Himmelstein, pictured at his previous research post at the University of California, San Francisco.

STEVE BABULJAK

INTELLECTUAL PROPERTY

Legal maze threatens to slow data science

Researcher who spent months chasing permission to republish online data sets urges others to read up on the law.

BY SIMON OXENHAM

Knowledge from millions of biological studies encoded into one network — that is Daniel Himmelstein's alluring description of Hetionet, a free online resource that melds data from 28 public sources on links between drugs, genes and diseases. But for a product built on public information, obtaining legal permissions has been surprisingly tough.

When Himmelstein, a data scientist at the University of Pennsylvania in Philadelphia, contacted researchers for permission to reproduce their work openly, several said they were surprised that he had to ask. "It never really crossed my mind that licensing is an issue here," says Jörg Menche, a bioinformatician at the Research Center for Molecular Medicine of the Austrian Academy of Sciences in Vienna.

Menche rapidly gave consent — but not everyone was so helpful. One research group never replied to Himmelstein, and three replied without clearing up the legal confusion. Ultimately, Himmelstein published the final version of Hetionet in July — minus one data set whose licence forbids redistribution, but including the three that he still lacks clear permission to republish. The tangle shows that many researchers don't understand that simply posting a data set publicly doesn't mean others can legally republish it, says Himmelstein.

The confusion has the power to slow down science, he says, because researchers will be discouraged from combining data sets into more useful resources. It will also become increasingly problematic as scientists publish more information online. "Science is becoming more and more dependent on reusing data," Himmelstein says.

DATA-SET LAWS

Because a piece of data — a fact — cannot be copyrighted, many scientists think that a publicly posted data set that does not place explicit terms and conditions on access can simply be republished without legal problems. But that's not necessarily correct, says Estelle Derclaye, a specialist in intellectual-property law at the University of Nottingham, UK.

The European Union assigns specific database rights, independent of copyright, that aim to protect the investment made in compiling a database. Legally speaking, these rights prevent researchers such as Himmelstein from