

considered internationally competitive. Many produce only poor science — and outsiders have criticized the organization again and again for refusing to accept the dire reality of its situation.

The problems have not gone unnoticed by the Russian government. Tensions between the science ministry and the academy have risen in recent years, as the government has become increasingly worried about Russian science's lack of competitiveness. The stand-off approached a dramatic climax last week, when a bill was hastily introduced to the Russian parliament that, if approved, would effectively liquidate the academy in its present form. The academy is ill, of that there is no doubt. But the proposed cure would kill it off. Worse, the bill is marked with the worrisome signs of autocracy that characterize Russian President Vladimir Putin's current regime.

The planned coup would merge the Academy of Sciences with Russia's minor medical and agricultural academies, and would provide all members of the united body with equal status as academicians. The present academy would lose the right to manage its property and, more importantly, would cease to operate research institutes of its own. Existing institutes would be evaluated, and those deemed competitive would in future be run by a new government agency on behalf of the academy. Putin hoped to turn the proposal into law without giving the academy time to respond, although the parliament's final vote has now been postponed to October.

The proposal has caused an outcry from Russian scientists. Researchers have laid down flowers near the academy's headquarters on Leninski Prospect in Moscow in a symbolic funeral for the institution, which was founded in 1724 by Russian Emperor Peter the Great.

However, it is not the bill's aim and content that are most troubling, but the hasty and profoundly undemocratic manner in which it was

conceived. Vladimir Fortov, the academy's newly elected president and a reformer who has announced a number of measures to rejuvenate and restructure the organization (see *Nature* 497, 420–421, 2013) was not consulted. Neither were the institution's scientific workforce and the trade unions.

Some Western-orientated Russian scientists acknowledge that a number of the proposed changes could be beneficial. In effect, the reform would create a flexible learned body similar to scientific academies in the United States and much of Europe, whose main duties are to provide the government with scientific advice on questions of societal relevance. The task of organizing and funding the research itself would be passed on to a new agency — similar to Germany's Max Planck Society — that, if properly run, could provide basic science in Russia with much-needed vision and impetus.

But such sweeping changes require more time and preparation than Putin seems willing to grant. An organization that employs more than 45,000 scientists cannot be successfully transformed overnight. Russian scientists have a right to be heard and consulted, and they should have been. For the sake of Russian science, members of the parliament should refrain from hastily passing an ill-prepared bill; they should wait until at least the basic technicalities of what is indeed a much-needed reform have been thoroughly worked out and made public. The government and the academy should set up an expert committee of respected scientists and give it at least 12 months to plan the transition. If the result is to be a system that rewards excellence and can give solid advice to those in power, then Russia can wait one more year. ■

of the WI-38 cell line, derived from a fetus aborted from a woman in Sweden (see *Nature* 498, 422–426; 2013). And Rebecca Skloot's book *The Immortal Life of Henrietta Lacks* (Crown, 2010), the history of the HeLa cell line and the ethical issues it raises, continues to sell. Consent — in medicine and science — has become a key issue.

It also comes at a time when there remains a critical shortage of some tissues for research — the brains of children for example, which are needed for work on autism and schizophrenia. Advocates and patient groups are already working on ways to confront the biggest obstacle — the emotionally fraught conversation with devastated parents who have lost a child (see *Nature* 478, 427; 2011). By talking to the parents of children with autism about the benefits of donation, for example, they can increase the chances of gaining consent should the worst happen.

Presumed consent, with the burden placed on people and families to opt-out of tissue donation, seems a step too far at present for material needed for scientific research. But are the issues involved that different from those surrounding transplantation? Both promise better health and new life from the waste of death.

One important motivation when it comes to organ donation is that there is little alternative. If someone with a failing organ today does not find a willing donor, they may not see tomorrow. That may not always be the case. As a News Feature on page 20 investigates, researchers are using tissue-engineering techniques to build artificial hearts in the laboratory. A Letter published online this week describes the use of induced pluripotent stem cells to grow human liver tissue in mice (T. Takebe *et al.* *Nature* <http://dx.doi.org/10.1038/nature12271>; 2013). And, last month, Japan announced plans to relax a ban on experiments that mix human and animal cells, which could be used to generate transplantable human organs in pigs.

For now, such research is of little comfort to those waiting for someone else to die. The planned change in Wales goes some way towards making the bodies of the deceased more widely available. And it shows that, given the chance, the kindness of strangers, as well as their consent, can be presumed. ■

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## Presumed consent

*More must be done to boost tissue donation for transplantation and research.*

Despite decades of scientific progress in the field of organ transplantation, there remains a crippling shortage of suitable tissue from willing donors. Actually, make that donors who have made it clear that they would be willing. Surveys in Wales, for example, have shown that although some two-thirds of people asked say that they would be willing to see their heart, liver, lungs and other tissues reused after their death, only half of those people go as far as registering their consent on the organ-donation register. The resulting shortage, according to Mark Drakeford, the Welsh health minister, means that one person dies in his country almost every week while waiting for a donor.

As *Nature* went to press, the Welsh Assembly was voting on a proposed change in the rules. It would see Wales reverse the donation dynamic — on death, an adult's organs will automatically be considered for transplantation, unless that person previously made it clear this was against their wishes. A new register would record the names of those who do not wish to be classed as donors.

If passed, the 'presumed consent' scheme would come into force in 2015. Although the family of someone who died without registering to opt-out would have no legal right to block use of that person's body parts, in practice officials say they would be given the opportunity to show that their loved one would not have wanted to donate. This 'soft' scheme is similar to that in operation in Spain. Austria takes a stronger line and its 'hard' opt-out means that if someone dies without registering their dissent, then their organs are considered fair game.

The vote comes at a time of increasing scrutiny of the way in which tissue taken during hospital procedures is used in medical and scientific research. Last week, *Nature* told the largely unexplored story