

THIS WEEK

EDITORIALS

ERITREA The lessons of a decaying national science system **p.8**

WORLD VIEW Arab women know their rights and when to go home **p.9**



BIOSENSOR Blue is the colour when protein is present **p.10**

Murky manoeuvres

Scientific reform promised to give Italy's scientists the respect and autonomy they deserve, and political posturing must not be allowed to tip the burgeoning system off balance.

Three separate Italian court decisions, each in some way hinged on science, have shocked the international research community in recent months.

On 12 October, Italy's highest civil court ruled that compensation should be paid to a man who developed a tumour close to his brain that he claimed was caused by work-related use of mobile phones. On 22 October, a judge in L'Aquila sentenced six scientists and a government official to prison for manslaughter, saying that they failed to appropriately convey the risk of the 2009 earthquake, causing the deaths of 29 people who would otherwise have left their homes (see page 15).

The third decision, by a court in Brescia in July, ordered the temporary closure of Green Hill, a dog-breeding company in Montichiari that supplied animals for the toxicity tests officially required by bodies such as the European Medicines Agency and the US Food and Drug Administration, while mistreatment charges by animal-rights groups were investigated. The business had been regularly and rigorously checked by authorities over previous years, but has now effectively been destroyed because the judge placed the dogs in the care of the animal-rights groups, which distributed them to private homes.

Judges in Italy, as in democracies elsewhere, are supposed to make independent decisions based solely on the law. But the influence of a general societal mood is hard to avoid — and in Italy that society lacks understanding of, or respect for, science and its complexities.

Science is subject to a level of irrational suspicion in many countries, but in Italy there is a perception that science doesn't even matter — a state of affairs encouraged by decades of underfunding and political disdain. Italy invests just 1.26% of its gross domestic product in research and development (R&D), compared with Germany's 2.82% and a European Union (EU) average of 2%. In 2009, Italy employed only 226,000 full-time-equivalent R&D staff, whereas Germany had 535,000. The system has long suffered from the lack of a legally enforced meritocracy, allowing cronyism to taint academic appointment and promotion. Heads of research agencies have often been political appointees rather than competent experts.

Successive governments, well aware of the problems, introduced a series of reforms that tinkered with the system without fixing it, causing only further uncertainty. Then, three years ago, came a watershed: the reform-to-end-all-reforms intended to give more autonomy to research agencies, along with appropriate accountability. It sought to introduce an independent system to identify suitably qualified candidates as agency presidents (see <http://doi.org/fwskwv>), as well as a national research-evaluation agency whose assessments would be linked to funding. Designed by the centre-left government of Romano Prodi, it was finally passed into law in 2009 by the centre-right government of Silvio Berlusconi.

Enactment of such major reform has been a struggle, particularly for the newly appointed presidents of the 12 research agencies — which include the National Research Council, the National Institute of Nuclear Physics and the National Institute of Astrophysics — who

are currently finalizing their new statutes. But a spirit of confidence has emerged. The agency presidents have formed a loose, cooperative alliance. And even the historically timid national academy, Accademia Nazionale dei Lincei, has become outspoken — for example, loudly challenging the L'Aquila court decision.

But research minister Francesco Profumo seems set on tipping things off balance again. In a murky manoeuvre, he announced reform plans in a financial newspaper on 11 October that would, along with other major

“In Italy there is a perception that science doesn't even matter.”

changes, merge all 12 agencies into a single national organization — before the end of the year. He argued, unconvincingly and without a technical plan, that such a system would help to save money and win EU research grants. In the style of the old guard, whose day was thought to be done, he did not consult the

general scientific community on the matter, not even agency presidents.

It is impossible to imagine such a thing happening in, say, Germany, a country whose successful scientific system Profumo says he would like to emulate. German politicians and their administrations are in appropriate awe of their research-agency presidents and of the scientific culture they represent. It is also hard to imagine courts there crudely running rough-shod over science.

Profumo's amateurish proposal, which he tried to insert into Prime Minister Mario Monti's crisis-related financial law for 2013–15, did not survive first-round parliamentary scrutiny, but Profumo seems set to try to push for some sort of high-speed change — his government is slated to dissolve in March.

Crucial for now is that scientific leaders are left in peace to complete the reform-to-end-all-reforms, and that science doesn't fall victim, once again, to opaque politics. Building respect for science takes time. ■

Bad press

Japan's media have played a large part in exacerbating the effects of a fraud.

It is a shame that Shinya Yamanaka's recent Nobel prize had to be tainted by the shenanigans of Hisashi Moriguchi, the University of Tokyo project scientist who fabricated a story about having used Yamanaka's fêted technology on induced pluripotent stem (iPS) cells to treat patients who had heart failure.

The poor quality of journalism that led to the story being so widely reported was not an isolated incident in the coverage of science, in Japan or elsewhere. The *Yomiuri Shimbun's* presentation