Data Analysis. It is this paper that the journal has decided to retract. So it seems likely that the plagiarism in the 2008 paper is also present in the 2006 Congress report. Still not look like a big deal?

That doubts about the 2006 report have resulted in concrete action is mainly down to the sterling work of an anonymous climate blogger called Deep Climate. His website first reported plagiarism in a different section of the congressional report in December 2009. One of those whose work was plagiarized is Raymond Bradley, director of the Climate System Research Center at the University of Massachusetts, Amherst. Ironically, Bradley was one of the co-authors of the climate reconstructions criticized by the Wegman report. Bradley, alerted by Deep Climate, complained to George Mason University on 5 March last year.

Wegman has blamed a graduate student for the plagiarism. Daniel Walsch, spokesperson for George Mason University, says that an internal review of the matter began in the autumn. He cannot estimate when that review will be complete, and, until it is, he says, the university regards it as a "personnel matter" and will not comment further. He adds that the review is still in the "inquiry" phase to ascertain whether a full investigation should be held. "Whether it is fast or slow is not as important as it being thorough and fair," says Walsch.

The fact that 14 months have passed since Bradley's complaint without it being resolved is disheartening but not unusual. An examination of George Mason University's misconduct policies suggests that investigations should be resolved within a year of the initial complaint, including time for an appeal by the faculty member in question. According to the university's own timeline, the initial inquiry should have been complete within 12 weeks of the initial complaint — in May 2010. But there are loopholes galore for extensions, and, like many universities, George Mason seems content to drag its feet.

Long misconduct investigations do not serve anyone, except perhaps university public-relations departments that might hope everyone will have forgotten about a case by the time it wraps up. But in cases such as Wegman's, in which the work in question has been cited in policy debates, there is good reason for haste. Policy informed by rotten research is likely to have its own soft spots. Those who have been wronged deserve resolution of the matter. And one can hardly suppose that those who have been wrongfully accused enjoy living under a cloud for months.

So, what incentives do universities have to pick up the pace? Agencies such as the US Office of Research Integrity and ethics offices at funding bodies should take universities to task for slow investigations and demand adherence to the schedules listed in university policies. However, the agencies themselves haven't exactly been models of swift justice. The most recent annual report from the Office of Research Integrity — for 2008 — reported that the cases closed in that year spent a mean of 14.1 months at the agency. Perhaps it should fall to accreditation agencies to push for speedy investigations. Tom Benberg, vice-president of the Commission on Colleges of the Southern Association of Colleges and Schools — the agency that accredits George Mason University — says that his agency might investigate if the university repeatedly ignored its own policies on the timing of misconduct inquiries. To get the ball rolling, he says, someone would have to file a well-documented complaint.

"If the work in question has been cited in policy debates, there is good reason for haste."

Even if funding and accreditation agencies fail to apply pressure, universities should take the initiative to move investigations along as speedily as possible while allowing time for due process. Once an investigation is complete, the institution should be as transparent as it can about what happened. Especially when public funds are involved, or at public universities, the taxpayer has a right to know what happened when papers are retracted — even if the faculty member in question is eventually exonerated. This tidies the scientific record, clears the air and kicks the legs out from under any conspiracy theories. Over to you, George Mason University. ■

Modern heroes

The great achievements of vaccines are not consigned to the past.

It is easy to see the heroic age of vaccines as one that ended decades ago. The Salk polio vaccine, after all, which swiftly and visibly transformed the disease into a distant memory in the developed world, was introduced in 1955. And the smallpox eradication campaign led by the World Health Organization had, by the late 1970s, reduced the virus from a killer of millions of people a year to a prisoner of biosafety labs. These were monumental feats, but the best could be still to come.

This week *Nature* explores the undiminished promise of vaccines, and the factors that threaten it — complacency, funding shortages and the unease that vaccines provoke in so many people.

Worldwide, up to one-third of all deaths of children under five result from diarrhoea and pneumonia. In the past ten years or so, vaccines against the microorganisms that cause many of these cases have become a standard part of the childhood regimen in the developed world. If they could be made available worldwide, the lives of hundreds of thousands of children could be saved each year.

Research efforts are adding to the promise. Together, AIDS, malaria and tuberculosis kill more people each year than smallpox did when the global campaign to eradicate it began in 1967. The search for vaccines for all three diseases has been long and frustrating, but a Perspective on page 463 describes how new technologies are reviving it.

There is no room for complacency. The global campaign to eradicate polio made stunning progress from 1988 to the end of the twentieth century, reducing worldwide incidence by 99%. But the disease continues to smoulder in Pakistan, India, Afghanistan and Nigeria, where vaccinators have struggled with turmoil and corruption, high transmission rates and suspicion about the vaccine itself (see pages 427 and 446). Similarly, a long vaccination campaign against measles has reduced the global death toll from more than 2.5 million a year in 1980 to fewer than 200,000 today. But vaccination rates are still below 80% in much of Africa and India, and funds pledged to the global measles initiative have fallen. Some people think that the disease is poised to surge again in the developing world (see page 434). Europe has already seen outbreaks, in part because vaccination rates dipped after the combined measles, mumps and rubella (MMR) vaccine was falsely linked to autism.

Vaccines can become victims of their own success. In the developed world, for example, vaccination has already reduced measles to a rarity, which makes an 'informed' choice to shun the vaccine seem risk free. Even doctors and nurses can fall prey to this reasoning. They have a disproportionate influence over whether parents vaccinate their children, and when they lose sight of the overwhelming ratio of benefit to risk for most vaccines, they can amplify public fears (see page 443). Back in the 1950s, '60s, and '70s, when vaccines offered protection against clear and present menaces, it was easier to accept their small risk of harm.

Designing a cheap, effective vaccine against the more complex major killers of today is a harder task, and people everywhere are quicker to question the official line, on vaccines as on everything else. But the promise for vaccines to transform global health is as bright as ever, and funders and public-health experts must continue their heroic support for research, global vaccination efforts and communication strategies to win over the doubters. ■

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