THIS WEEK

Twice the price

Governments and funding agencies must do more to prevent the awarding of grants to research projects with significant overlap.

There is nothing more central to the modern world of international science than the research grant. And with government budgets squeezed, there is nothing more important than making sure that what money remains for project-based science is spent wisely. So scientists everywhere should be disturbed that two separate pieces in *Nature* this week report on the lack of oversight of potential waste and overlap between research grants.

Similarities between a number of US grants were first flagged up by a Comment on bioinformatics research (see page 599). Two reporters then requested more details under the US Freedom of Information Act (see page 588). Just as important as what we found is what we couldn't find.

It turns out that although some individual agencies maintain databases, in most countries — perhaps even all — there is no centralized government-maintained online database of all state-funded research projects. This week's findings come from three US government agencies that do keep such records: the US Army's Congressionally Directed Medical Research Programs, the National Institutes of Health and the National Science Foundation (NSF). There is no reason to think that these agencies are not representative. So the findings, limited though they are, warrant careful attention.

A review of 22 pairs of seemingly similar grant files revealed many that appeared to overlap, with specific aims, hypotheses and methods that contained large sections of duplicated text. Where we saw different text, we were careful to analyse whether it had a central role — for example, whether it showed study of an entirely different protein or nanomaterial by an identical method. In many instances, the different text didn't seem to fully distinguish projects from each other. In some cases, researchers and agencies did provide explanations of why seemingly similar grants did not overlap, and these are given in our News story. But the exercise nevertheless exposed some loopholes.

First, checks on overlap are mostly trust-based. The responsibility lies with researchers and institutions to declare when they have been awarded similar grants. Yet some that we reviewed apparently had not done so, or not in a timely fashion. Similarly, researchers sometimes declared "overlap: none" between applications when to us — and sometimes even to agency staff — it seems that there was some overlap. Although much of science is trust-based, there is no reason, with the advent of text-similarity software and electronic databasing, for agencies not to be proactive (in the way the bioinformaticians who prepared the Comment piece were) and ask for more original documentation when large segments of grants seem identical. Indeed some officials, we could see from the files, are already doing this.

Second, concurrent submissions of similar grant applications to US agencies do not have to be declared to every agency involved until funding decisions are made. The NSF does require declaration on submission when applications are identical, but we found that in most cases they were only similar. It is worth considering whether all submissions should be declared up front, in the same way that college and graduate-school applications in the United States and the United Kingdom include information on all applications made by a student. This might help reviewers to better understand each researcher's range of interests, as well as helping agencies to avoid overlap. Agencies should adopt and adapt the NSF checkbox to applications so that instead of asking about duplicate proposals under submission it asks 'do you have any grant applications (submitted or funded) that may overlap with this one?'. If selected, this would trigger a more detailed review.

> *"There is no reason, with the advent of text-similarity software, for agencies not to be proactive."*

More importantly, agencies worldwide should also follow the example of the three that we examined and create databases of grant funding online, where past and current awards can be easily found by scientific search terms, researchers' names, institution, city and agency. Having created such databases, funding agencies should maintain them.

The US Department of Energy recently took down a useful project database from its website, it says, to save money. But as this information increasingly already exists in-house, the costs of making it public should be modest. The benefit would be that researchers, and others, can see quickly what has been funded and where future efforts are needed. In addition, such a facility would allow the public to understand and scrutinize where its money goes. Of course, the idea of anyone being able to survey funding decisions at a click of a button may make some officials uncomfortable, but those who do a good job to balance and police their portfolios will get the credit they deserve. ∎

Change for good

The United States must boost energy spending to make its mark on the climate debate.

Environmentalists lauded US President Barack Obama when he raised the issue of global warming in his second inaugural address on 21 January, but the truth is that he said nothing new. Obama kept it simple, short and vague, discussing climate change as a moral imperative while declaring clean energy a battleground for innovation. It was a generic vision for a pragmatic president, which is to his credit. But if Obama truly wants to leave his mark on the climate debate, he will need to break out of the mould and lay the foundation for something larger.

His initial focus is likely to be a trio of energy decisions, on a pipeline