

Brazil needs action rather than words

The downward trend in support for postgraduates could reverse recent improvements.

Sir—As David King reveals in his Feature “The scientific impact of nations” (*Nature* **430**, 311–316; 2004), Brazil compares unfavourably with most other countries. It produces a meagre 1.2 % of the world’s publications, despite having roughly 3% of the world’s population and income. If Brazil is to have any chance of improving its status, the current trend of decreasing financial support for science graduates should be reversed, as a matter of urgency.

During the past few decades, many more people have taken part in Brazil’s graduate programmes. Brazil has a formal system for evaluating these courses, and despite many flaws (as noted by L. de Meis, M. S. do Carmo & C. de Meis, *Nature* **424**, 723; 2003), this has allowed some progress in science and technology.

Such progress has become evident in the increasing number of contributions made to international science by Brazilian scientists — up from 48,800 authors appearing in publications indexed by the ISI in 1998 to 58,000 in 2002. A closer

analysis reveals that this increase was due exclusively to the work of postgraduate authors (who increased from 11,300 to 21,800 during that period), while the participation of career investigators has decreased. Thus, the significance of postgraduate students in the production of scientific knowledge is unquestionable.

However, in a country where science funding is mainly public, the resources allocated by the Brazilian government to science and technology have decreased over this same time period. Between 1998 and 2002 the National Council for Science and Technology Development (CNPq), a federal agency, cut the amount of money allocated for postgraduate fellowships by 50%. This loss of funding is even more drastic when you consider that the number of postgraduate students increased by 36% during the same period. Sadly, this downward trend has also been followed by other Brazilian agencies, such as CAPES (which funds graduate programmes in Brazil and Brazilian postgraduates studying abroad) and FAPESP, which mainly supports

innovation in science and technology.

Inflation has further eroded the value of the remaining fellowships; in 1994, a PhD fellowship provided the equivalent of US\$1,000 a month, whereas today it is worth a mere US\$350.

Given these numbers, it is not far-fetched to say that these students are being exploited. How long can even the most motivated student be expected to survive on just US\$350 a month?

All of these factors are seriously jeopardizing Brazilian science. Surprisingly and contradictorily, the Brazilian government has historically emphasized the importance of science in the development of the country. It is time to convert those words into actions.

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No mistake in Berkeley’s biotechnology deal

Sir—I still do not understand why the funding deal between the Swiss firm Syngenta and Berkeley’s department of plant and microbial biology was considered “a mistake”, as the Busch report claims (*Nature* **430**, 598; 2004).

Let’s look at the balance sheet. On the up side, Berkeley got \$25 million, which funded 26 researchers. These researchers made 12 patentable discoveries with Syngenta funding, and the company is pursuing six of these. Moreover, there was no harm to the quality or freedom of academic research. On the down side, an individual faculty member may or may not have had problems separating his personal interest from his duties on a tenure committee, and the Berkeley researchers were not especially productive with the Syngenta funding.

Where is the mistake here? It looks to me as if Berkeley got a pretty good deal, and the negatives seem to be the responsibility of individuals in the Berkeley community.

Is there more to the story? Does the report show that Syngenta’s funding somehow caused the disappointing productivity of the research?

Judging from what I have read, it

seems that the deal was a “mistake” only because the critics have decided that all such deals must be mistakes.

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Scientists and teachers should ignore politics

Sir—We read with interest your News story “Nobel laureates spearhead effort to put Kerry in the White House” (*Nature* **430**, 595; 2004) about scientists campaigning in the United States.

Nobel laureates have more productive ways to benefit society than entangling themselves in the chaotic web of political campaigns. The expertise of the American Nobel laureates is in physics, chemistry, physiology or medicine — otherwise they would have received their Nobel Prizes for peace efforts. Why should their expertise in their chosen subjects make them masters in the sphere of politics?

We witnessed an example of this activity in Taiwan’s 2000 presidential elections, and we find reasons for concern. Taiwan’s only Nobel laureate, the chemist Lee Yuan-tseh, supported the Democratic Progressive Party nominee, Chen Shui-bian, before Chen’s election to office in 2000.

After that election, Lee continued to speak out on political matters, with sometimes mixed results. Lee has been involved in educational reforms in Taiwan for more than a decade, but last year university lecturers launched a signature campaign, asking him to take responsibility for what they considered to be failures in educational reform.

Yet Lee’s scientific achievements have been rightly acclaimed. He has also been honoured as a Chinese scholar by the People’s Republic of China. Perhaps his greatest skill is in inspiring a younger generation to become teachers themselves. Lee’s reported words at a recent award ceremony for teachers in Taipei are worth recalling: “It is teachers, not politicians, who control the lifeline of society.”

We recently heard that the 82-year-old Chinese scientist Yang Cheng-ning, who received the 1957 Nobel Prize in physics and has lived for many years in the United States, now teaches physics at Tsinghua University in Beijing as well as continuing his research. This is what laureates should be doing, not taking part in politics.

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