

Global approaches for a healthy world

Nowadays, every major summit of the world's leading economies inevitably draws thousands of protesters demonstrating against the negative effects of 'globalization'. For those protesters, the word 'global' has become tainted. Indeed, if globalization means a monotony of culture or a monopoly of ownership of key resources or markets, then it is quite appropriate that banners are unfurled to promote diversity and competition in the world. But in the scientific world, increasing globalization can only be viewed as positive. We scientists frequently point to the fact that there are no barriers to knowledge and the exchange of information, and that we are players in a transparent and open enterprise, unimpeded by the time zone in which we work. We are global players and proud to be so.

But when we move away from the mere exchange of information, this warm feeling of belonging to a global community soon dissipates. Waiting until information has been checked for possible commercial applications before sharing it is a just limitation. But denying scientists from certain countries, or worse still, certain cultures, access to research laboratories is a much more serious matter. Postdoctoral researchers from many countries now have to submit themselves to increasingly complex procedures before they are allowed to enter the USA. It is not a nice welcome to be treated as if you were a potential terrorist only because of your passport. It is also not in line with a global view of science, particularly when visiting postdocs have contributed so much to the scientific output of the USA and, by extension, to its economic strength. I hope that this phase of excessive zeal does not last too long, as we have all benefited from the scientific leadership of the top US laboratories.

Europe has a different problem. Nationalism is rampant and funding for research is often restricted to universities and institutes within the country, while

bilateral agreements are so rare that they get special mention in speeches. Although the EU Framework Programmes are the best solution to overcome this restrictive mentality, the opportunities for those outside the EU to get involved are limited both by eligibility and by the complex nature of the application process. In effect, we in Europe do not do a particularly good job of attracting and welcoming ready minds from elsewhere. This attitude is particularly inappropriate at a time when Europe, just like the USA, Japan or any other economy that is investing in high-tech industries, needs more scientists.

But the ones who suffer most from limitations to global science are those colleagues in the developing world. I was reminded of this sad fact recently during a meeting in Cape Town, South Africa, where the local university had selected internationally competitive scientists from various local faculties to establish the Institute of Infectious Disease and Molecular Medicine. At the meeting, the clinicians and their colleagues from the life sciences reported on their work related to the region's catastrophic problems with HIV/AIDS, tuberculosis and cervical cancer caused by human papilloma virus. Beyond South Africa, the situation gets worse not only because of increasing poverty, but also because of the lack of skills and funds to address these major health problems. At the Institute in Cape Town—and in some other locations in the developing world—there are the skills, the infrastructure and the commitment to make a difference. However, the African researchers cannot do this alone—they depend on our commitment to global science. They need to improve their local capacity and expertise by sending young scientists to train in laboratories around the world. Relatively short visits are particularly useful in this context as they tend to have a lower impact on brain drain, but there are few such funding options for researchers from developing countries. In addition, they need practical courses in

their local settings. With clinical trials for vaccines on the horizon, skills for analysing biopsy samples will be needed. The alternative of exporting samples to laboratories elsewhere would be scandalous—indeed if it was samples from plants that were being removed from the local environment rather than clinical samples from humans there would be an outcry by the guardians of biodiversity. And last but not least, science in Cape Town is as expensive as it is in Chicago or Cologne, and the excellent scientists there need funding for their important work.

So, if those who control the funds for science could think and act truly globally, it would be a win-win situation for both the developing and the developed worlds. The clinicians who need support from scientists would win and equally the scientists could learn from the clinicians, which stimulates novel research. It would be a boost for younger scientists who could get extra training abroad. It would be a huge benefit for patients and for the health care system of developing countries. Local economies would gain also, as additional training would pave the way for upgrading the general skill level, which attracts companies' interest. It would be a win situation for the laboratories outside Africa to establish links with African research groups that have a sadly extensive pool of clinical material available for study. It would thus also be a win for developed countries that host or support these activities because it would help to establish collaborations and lead to further exchanges of scientists, skills and information. There are many major problems in Africa and other parts of the world, but there are also major opportunities for cooperation. I hope that those with the power to make financial commitments will not regard this as a low priority but rather will see the benefits of a global vision for science and, through it, for health.

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