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Science won't deliver while market forces rule

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In the world of innovation, big money is triumphing over the public interest.

There are sometimes issues so important and so oppressively overbearing that we don't speak of them, perhaps being disconcerted by their magnitude or embarrassed at our lack of engagement.

Last Tuesday at the International Congress of Genetics in Melbourne, a long-awaited panel discussion on "Public Science v Private Science, Who Wins?" was held. The experts — including Nobel laureate John Sulston — were from pub-

lic and private-sector research, business and publishing.

The panel grappled with the "elephant in the room", and concurred that we have reached a new crisis in genetic science. The very democratic freedom to innovate — and to deliver that innovative capacity to neglected people and problems — is seriously threatened.

We used to imagine that scientific endeavour would, as if by magic, transform itself into public goods, at least when the science was funded with public money. The world of biotechnology as it could apply to agriculture and human nutrition is a field where outcomes affect billions of lives. But we may indeed need magic to make it happen, because the law and our own institutions have let us down.

The sad reality is that unwise use of intellectual property rights and big money are now calling the shots, and our public agencies are in denial, unable to deliver innovations to complement or compete with the multinationals.

While the science is still doubtless getting done, the conversion of that science into value for society has been left solely and naively to market forces that are no longer balanced nor representative of the public interest. And the public are no fools. They can sense this disempowerment. The genetically modified organisms debate ultimately distils down to perceptions of power and profits dictating priorities and products.

The battleground used to be the information itself. A few

warriors for the public good, including John Sulston, have been fighting to place DNA sequence information in the public domain, counteracting moves to keep that data secret and to unfairly profit from it. But these efforts have been partly frustrated by other people trying to patent the genes and their uses.

The goal posts have moved, and now the most powerful targets to control science have become broad patents on the very tools needed to make and deliver research outcomes.

Technologies such as the ability to transfer a new gene to a plant, or to "express" that gene in the plant, are called "enabling technologies". Without access to these tools, locked up by thousands of patents worldwide, none of the count-

less promises about GM crop innovations by public agencies made for the past 20 years can be delivered as a counterpoint to the corporate offerings. We become beggars waiting for multinationals to grace us with a glance, and throw the occasional technology bone our way.

Scientific research, no matter how brilliant, without the ability to use it to deliver products of public value, is of only academic interest. Our institutions have not yet made the transition beyond the "academic", in spite of their business rhetoric, nor have they exercised the leadership to keep the public good as their core focus, not just their institutional bottom lines.

This seemingly intractable problem is not without precedent, nor is the solution obscure. The Open Source

movement has revolutionised the information technology industry to make powerful software tools available to all innovators, public and private.

With software such as GNU/Linux, Perl and Apache, it has stimulated a more vibrant and profitable industry in which monopolies can be challenged, competition can flourish and small markets can be served.

If we are to democratise innovation and harness the creativity and generosity of spirit that is the best of science, we must reject the laissez-faire market apologists.

Richard Jefferson, the inventor of key techniques in plant biotechnology, is founding chief executive of CAMBIA, a Canberra-based, non-profit organisation dedicated to "democratising" innovation.