

Biotech for all

Can information sharing make scientific research cheaper?

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Watch out Monsanto *et al.* A small non-profit biotech research organisation in Australia is out to change the industry. CAMBIA has found a new way of transferring genetic material to plants; it bypasses the heavily-patented agrobacterium transformation (AT) method. Moreover, CAMBIA researchers have placed this tool in the public sphere by distributing it under an open source license called the Biological Initiative for Open Source (BIOS). Any researcher or company can use the technology but is legally obliged to make new discoveries based on its use available to others. Now, patent-driven monopolistic biotech must rethink its business strategies

Radical departure

In the biotech industry today, sharing information is hardly standard practice. Richard Jefferson, head of CAMBIA, says the plethora of patents surrounding the AT method made it especially difficult for researchers in developing countries to experiment in key areas such as agriculture. The developing world could only rely on products major patent-holders sold. Sharing information, Jefferson says, empowers scientists the world over to create products more suitable for their societies: this is the basis of the BIOS initiative. Along with a novel licensing arrangement, BIOS's website provides information on the patent implications of key technologies, and provides researchers a platform to collaborate on finding alternatives, contributing to a resource pool of open biotech tools. Researchers can tap this pool without high royalty fees or legal hurdles. Cutting-edge research will now be available to all legally and cheaply.

The million dollar question

Jefferson acknowledges that research and development costs are high in biotechnology in the current system, but insists this is because information is



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not shared. "Innovation does not have to be expensive," he says. In the BIOS model, scientists work on problems in parallel. Thus, by making incremental developments on a problem, innovation is more likely. To prove the system can work, he points to the success of the open source paradigm in the software industry led by a software called Linux.

A new revolution?

Jefferson hopes that biotech businesses too can find new ways to make money using the global commons. The stakes in this industry are far higher. Life-saving drugs and hopes for improved crops are now denied to the poor due to 20 year long patent monopolies on new technologies.

The software community had a cultural revolution with the release of Linux that paved the way for a multi-million dollar business that shuns monopolistic practices. The biotech community will also need a revolution in thinking if BIOS is to achieve critical mass. CAMBIA is trying to do just that: the word is Spanish for change. ■