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Like information technology before it, biotech is starting to spawn hackers**[Get article background](#)**

MANY a computer business has started in a garage or a teenager's bedroom. So, though, has many a computer virus. And where computing led, biotechnology may follow. As genetic information multiplies and the cost of hardware falls, biohackers are emerging.

Biohacking is not quite yet within the range of a teenager with a Saturday job and a parental allowance, but prices are falling. Using second-hand equipment a basic home-biotechnology laboratory could probably be put together for less than \$50,000. Understandably, therefore, those biotechnology hobbyists who now exist are few in number. But that looks set to change.

The hordes of biology graduates leaving university hoping to become biotechnology start-up millionaires are the most likely to be tempted by homebrewed biotechnology. They are trained scientists who, for the most part, take the same precautions at home as they would in a university or industrial laboratory. And some have had success. Agribiotics, an agricultural biotechnology firm recently sold for €20m (then \$24m), grew from a business run in the basement of a family home.

Encouraged in part by such stories, biotechnology is now becoming a hobby for all sorts of people. Websites such as [DNAhack.com](#) and magazines such as *Biotech Hobbyist* serve as guides to basic biotech procedures. One biotech hobbyist claims to have created a weed resistant to Roundup, America's most popular herbicide. Others have created skin-tissue cultures that glow colourfully under ultraviolet light by splicing in a gene from a species of coral. Some just clone trees.

The science is hard, but the computer revolution showed the tendency for people to jump on the bandwagon of a new technology, no matter the intellectual difficulties. Even toymakers have noticed the trend—the Discovery DNA Explorer, suitable for those over ten years old, helps children extract and map DNA.

If the trend persists, ethical issues and definite penalties for wrongdoing will probably be taught alongside practical techniques. The excitement of playing with the latest technology is hard to tame—but like any dangerous beast, it is best approached not with fear but with caution and a plan.

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