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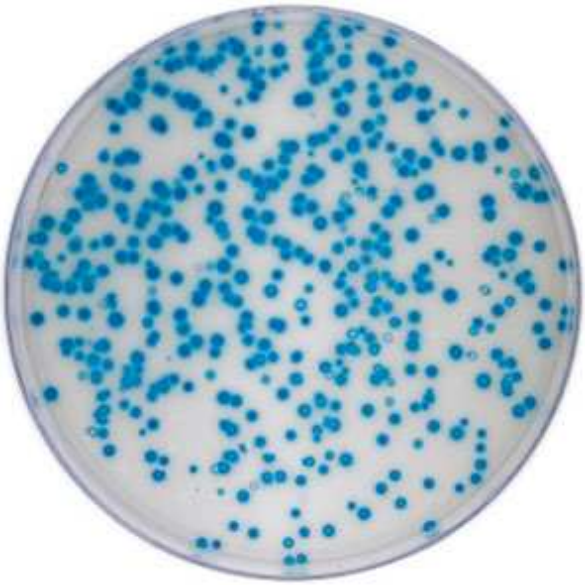
Biohackers: Brewing new life-forms in a basement near you

By Katherine Harmon in 60-Second Science



For not much more than the cost of an old-fashioned chemistry set, amateur genetic engineers are assembling homemade labs to create new organisms, the *Wall Street Journal* reports today.

The hobbyists' aims are as diverse as their day jobs: from a software engineer building a cheap test for toxic ingredients to a college student hoping to kill off harmful bacteria in the body, the story says.

"The barrier for entry is pretty low," Meredith Patterson told the *New Scientist*. With a $40 ultrasonic jewelry cleaner and some genes for a green-glowing protein, she was able to make yogurt bacteria light up.

She hopes to produce bacteria that glow in the presence of melamine, the toxic chemical that made its way into some infant formula. "No lab was working on this," she told the magazine, "so I said let's do it ourselves."

Patterson works out of her kitchen, and dozens of others are cooking up new critters in rented warehouses, basements and closets.

Who is making sure that the DNA jockeys are behaving themselves? Mostly, no one. But someone supposedly poking around on behalf of an unnamed U.S. government agency called a biohacker featured in the WSJ story with questions about her work.

Critics point to concerns over novel viruses, such as the one recently cooked up by Mother Nature, H1N1, or bioterrorism, as real possibilities if the hobbyists aren't monitored or regulated in some way.

Licensing is one option. Some practitioners are looking to create their own set of safety standards, notes the *New Scientist*. Many biohackers have come together to share tips and their own experiments on the blog DIYbio, founded by Mackenzie Cowell.

"Biology is becoming less of a science and more of a technology," he told the *New Scientist*. He compares the biohackers of today with some of the early computer tinkerers in the 1970s. Perhaps this new breed of enthusiasts will create new interest and ideas for a field that has traditionally been the province of folks working in large, well-funded labs, he noted.