DIY gene editing at home? ‘Farma’ kits can produce home-brewed pharmaceuticals

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis.

MIT Media Lab graduate Will Patrick has designed a prototype desktop bioreactor that could enable the production of pharmaceutical drugs at home.

The cylinder-shaped Farma kitchen appliance could be used to grow, measure, filter and dry synthetically designed microbes.

Patrick‘s first Farma prototype has been created for growing Spirulina that’s been genetically modified to produce pharmaceutical drugs, but the designer has said it could be adapted for other uses.

“The prototype can control temperature and light levels, and aerate and mix the culture thoroughly,” said Patrick, who previously served as a researcher in Neri Oxman’s Mediated Matter group.

Patrick researched techniques such as CRISPR technology, which can change the sequence of specific genes, and recent explorations into the ways technology could mass-produce opium-like drugs using yeast rather than poppies.

According to Patrick, the Farma would be most useful for the kinds of drugs that are used for long periods of time, such as anti-depressants, chemotherapy or insulin – rather than occasional drugs such as antibiotics.

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Will Patrick’s Farma bioreactor could let owners brew their own drugs