

Health care, energy, food could be transformed by synthetic biology

[Editor's note: Excerpts are taken from an interview with three experts in the field of synthetic biology: David Berry, general partner at Flagship Ventures; Andras Forgacs, cofounder and CEO of Modern Meadow; and Ellen Jorgensen, molecular biologist and executive director of Genspace.]

Synthetic biology builds upon genetic engineering—something that has been around for 30 years and the results of which are everywhere in our daily lives...Genetic engineering adds new DNA to an organism, and synthetic biology is similar. The end goal of both is to edit the DNA code of an organism in order to do something useful. Synthetic biology, however, allows the standardization and automation of the process, making it more precise and faster.

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Synthetic biology aims to take this a step further by making the pieces of DNA easier to assemble, effectively modularizing them. Then you can build what you need much more quickly, accurately, and at scale.

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Medicine is of course an important frontier. Perhaps one of the earliest breakthroughs for synthetic biology was making artemisinin for treating malaria...Outside medicine, there have been lots of attempts to disrupt the fuel industry with biofuels, although low oil prices have slowed that down.

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The capabilities of synthetic biology are getting us to the point where we can start imagining and effecting ways to create real impact, such as more nutritious crops that thrive with less water, land, and energy...and on land that otherwise would not support intensive farming.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: [Exploring the disruptive potential of synthetic biology](#)