

## Could next industrial evolution be fueled by microbes?

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Microbes are everywhere. They're too small for the eye to see, but these bacteria, yeast, and other microscopic creatures are in the soils that grow our crops, in the air around us, all over our skin, and inside our guts. Each one of us, in fact, is host to more bacteria than actual human cells. And the more we learn about these invisible ecosystems, the clearer it becomes how much our lives and the environment depend on them.

To Cristina Agapakis this is all *very* exciting.

A young microbiologist, Agapakis is the new creative director at a Boston-based biotech company called Gingko Bioworks, where scientists design microbes that can churn out the complicated molecules that we use for things like perfumes or sweeteners. Agapakis says that, in the coming decades, advances in biotechnology could breath new life into our industrial society.

"I think a lot of companies were in the industrial revolution, moving away from biology and living things," she says. "Now we're going back to biology with a different kind of approach, and a different vision."

holds great promise for improving human health and sustainability. Some of the earliest applications of synthetic biology, for example, involve redesigning the digestive systems of microbes to convert sugar into chemicals that we might otherwise manufacture or extract in environmentally intensive ways. And how cool would it be if we could deploy specially engineered bacteria to fight off their antibiotic-resistant brethren?

**Read full, original post:** [Are microbes about the remake manufacturing? This synthetic biologist thinks so](#)