

Your future perfume may come from genetically engineered microbes

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A synthetic biology foundry in Boston, Ginkgo Bioworks, which has dubbed itself as [“the organism company,”](#) is re-wilding our noses with raw biological smells by drilling right down into an organism’s DNA.

In a room in Times Square packed with people who want to [#growthefuture](#) by turning the biology of microbes into assembly lines that manufacture useful things for us, the idea that we can, and should, biofabricate whatever we want from “living factories” was buzzing at last month’s Biofabricate 2015 conference. This is where Christina Agapakis, the creative director of Ginkgo Bioworks, took the stage to explain how a rose is not really a regular rose any longer with Ginkgo’s futuristic perfuming methods.

The company is never going to bottle the exact natural rose smell you know, and it doesn’t want to. Instead, Ginkgo Bioworks wants to extend it towards new varieties of rose smells that its scientists can build up, bit by bit, with chunks of DNA.

How does it work? Well, scientists already know a lot about the metabolic pathways of different organisms that lead to the individual compounds they make, like [the aromatic molecules of a rose’s smell](#). Equipped with this knowledge, scientists at Ginkgo take the smell they’re interested in — rose aroma — then look at rose metabolism to see what enzymatic steps a rose uses to turn sugar, its raw input, into its coveted odor. Agapakis describes it as “an enzyme-discovery process.”

Read full, original post: [A Synthetic Bio Company Is Hacking Microbes to Build the Smells of the Future](#)