

How synthetic biology will allow us to redesign humans ‘from the ground up’

Just as physics and chemistry have given humans power over the world of the inanimate, biology is giving us the ability to [engineer living systems](#), from viruses and bacteria to animals and people.

Which is why [Wired co-founder Jane] Metcalfe thinks design could be the next big thing in medicine.

We’ll combat disease and improve human health by designing biological systems from the ground up. “We can design embryos. We can edit genes in humans. We have synthetic biology. And so we really are looking at designing future humans,” Metcalfe said.

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The ultimate goal is writing whole human genomes from scratch, and [Andrew] Hessel cofounded Genome Project-write (GP-write) to convene the world’s top synthetic biologists to do just that.

There are obviously [big hurdles that still need clearing](#)—including software that can make design more accurate and efficient and DNA synthesis tools that assemble longer base-pair sequences—and Hessel’s group recently published a paper outlining the challenges.

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“Literally in 10 years we’ve gone from making proteins synthetically to making a eukaryote,” he said. “As soon as we can start making whole chromosomes, well, we’ve only got 23 of them.”

Read full, original post: [Why Designing Our Own Biology Will Be the Next Big Thing in Medicine](#)