

‘Live vaccines’: Recoding bacteria’s genome could lead to more effective immunizations

[G]eneticists used a new technique to recode 5 per cent of the *Salmonella* bacterium’s genome, introducing a record number of engineered changes into a single organism.

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Genome recoding is seen by many as the next big thing in genetic engineering. Among other things, it offers geneticists a way to engineer the proteins produced by organisms and give them new properties – allowing the creation of proteins that don’t exist in nature, [and potential uses in new types of drugs and vaccines](#).

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It’s a mammoth task to recode one or more codons across an entire genome. However, a team led by [Jeffrey Way and Yu Heng Lau at Harvard University’s Wyss Institute]...has already made more than 1550 codon changes in 176 genes [in a strain of *Salmonella*].

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Way says it might be no more than a couple of years before the team has applied the technique across the entire *Salmonella* genome, which will involve changing more than 33,000 codons in total. At that point, the microbe could find uses in vaccine development, he says.

Because recoded bacteria would be unable to communicate with other microbes, it should be possible to use them to create “live” vaccines – which can be far more effective.

[The study can be found [here](#).]

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: [Recoded organism paves way to new genetic language of life](#)

For more background on the Genetic Literacy Project, read [GLP](#) on Wikipedia.