

Life's DNA blueprint: Rewriting yeast genome could help design better drugs and improve stem cell therapy

Scientists have long been able to make specific changes in the DNA code. Now, they're taking the more radical step of starting over, and building redesigned life forms from scratch. [Jef Boeke], a researcher at New York University, directs an international team of 11 labs...working to "rewrite" the yeast genome....

Their work is part of a bold and controversial pursuit aimed at creating custom-made DNA codes to be inserted into living cells to change how they function, or even provide a treatment for diseases. It could also someday help give scientists the profound and unsettling ability to create entirely new organisms.

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Also on the horizon is redesigning human DNA. That's not to make genetically altered people, scientists stress. Instead, the synthetic DNA would be put into cells, to make them better at pumping out pharmaceutical proteins, for example, or perhaps to engineer stem cells as a safer source of lab-grown tissue and organs for transplanting into patients.

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The cutting edge for redesigning a genome...is yeast. Its genome is bigger and more complex than the viral and bacterial codes altered so far. But it's well-understood and yeast will readily swap man-made DNA for its own.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: Scientists build DNA from scratch to alter life's blueprint