

What is 'cell-free biotechnology' and how could it revolutionize our lives?

The stuff of life comes wrapped in tiny bags called cells. Inside are DNA molecules that carry the instructions for how to run the cell, to make it grow,...

It is a system that has worked well over the 4bn years that life has existed on Earth. To some biotechnologists, though, the cell is old hat. They approve of the machinery of DNA, RNA, ribosomes and proteins, which can be engineered to make useful chemicals, ranging from drugs to the building-blocks of plastics. But they want to get rid of the bags that contain it, retaining only the part of the protoplasmic "gloop" inside a cell needed to do their bidding.

In this way they hope to control, far more precisely than is possible by conventional genetic engineering (or even by improved methods of gene modification, such as CRISPR-Cas9, that are now being developed)...Cell-free biotechnology of this sort means no biochemical effort is wasted on running, growing or dividing any actual cells. The initial intention is to create a quicker way of finding the best genes for making a particular product. In the end, those working in the field aspire to the idea that cell-free production will equal mass production.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: [Cell-free biotech will make for better products](#)