

Artificial cells may show how earliest life forms came to be

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Scientists have a pretty good theory for how life on Earth began: Meteorites that bombarded our planet brought simple carbon-based compounds called amino acids. Eventually, slowly, these chemicals combined to make cells, which were then able to replicate and become the increasingly complex forms of life that we have today. But researchers didn't quite understand the mechanisms through which the earliest life forms evolved; though these cells were able to replicate, they were not yet alive. Now a team of Japanese biologists has created artificial cells similar to those that might have first existed on Earth to better understand how they might have started to divide and evolve, according to [a study published](#) in *Nature Communications*.

The researchers made a synthetic "protocell" made of DNA and proteins packaged inside lipids. These spheres aren't alive, but the DNA in them contains instructions to replicate under the right conditions. By changing the pH of the spheres' environment, the researchers were able to trigger the cells to divide. But the hard part was replenishing the spheres' supplies so that they could start the division process over again, as real cells do. To work around this, the researchers designed the newly split synthetic cells to combine with other cell-like structures nearby. It worked—the spheres had three successful generations in the lab.

Read full, original post: [Researchers make artificial cells that can replicate themselves](#)