

Newly discovered organism may bridge evolutionary gap between simple and complex cells

The discovery of a new microorganism may help bridge the knowledge gap between simple and complex cellular organisms, also shedding light on how complex cellular life came to be

For all of life's complexity on Earth, we generally divide it in two classes: prokaryotes, and eukaryotes. Prokaryotes are the simplest life forms, with small, simple cells without nuclei; they comprise only of Bacteria and a group of creatures called [Archaea](#). Meanwhile, eukaryotes have large, complex cells with nuclei and a degree of internal organisation, and they make up for all the other life on our planet – everything that's macroscopic, and much of the microscopic too.

The problem is that the difference between these two groups is so huge that how the latter evolved from the former still remains a mystery; recent studies have indicated that eukaryotes evolved from Archaea, but the differences between the two are hard to account for, and biologists haven't been able to find any organism to link the two – until now.

Thijs Ettema from the University of Uppsala and his team may have finally found that missing link – they discovered a new archaea from deep marine sediments that could be the closest prokaryote to eukaryotes. The newly discovered organism, Lokiarchaeota, has genes which code for proteins only otherwise found in eukaryotes, which researchers believe to be a 'starter kit' for developing more complex cells.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: [Scientists find new microorganism that may shed light on evolution of complex cells](#)