Review of: "Evidence for the Early Origin of Genes Leading to the Development of Biogeochemical Homeostasis at Planetary Scale"

Jun Sun

Potential competing interests: No potential competing interests to declare.

This paper combines Gaia theory with gene evolution to find genes that existed in ancient times and are still prevalent in modern organisms. This gene may have been the first gene needed for life to emerge, and when this gene emerged, Gaia also emerged. This gene, then, is the key to making the Earth's environment suitable for life. This paper cleverly uses genetic evolution evidence to find the time of Gaia's emergence. The author lists 6 examples as evidence, such as gene *CheY*. At the same time, fossil evidence has been found that similar structures regulated by this gene have appeared in ancient organisms. This illustration clearly shows the reader when Gaia might have first appeared.