

Extraterrestrial musings: Does Jupiter's ice-coated moon Europa host life?

Europa has captivated planetary scientists interested in the geophysics of alien worlds. All that water and energy—and hints of elements essential for building organic molecules —point to another extraordinary possibility. In the depths of its ocean, or perhaps crowded in subsurface lakes or below icy surface vents, Jupiter's big, bright moon could host life.

Follow the latest news and policy debates on sustainable agriculture, biomedicine, and other 'disruptive' innovations. Subscribe to our newsletter.

[SIGN UP](#)

[Bob Pappalardo, a planetary scientist at NASA's Jet Propulsion Laboratory] has been at the forefront of efforts to send a craft to Europa for more than two decades. Now his hope is finally coming to fruition: later this year, NASA plans to launch Europa Clipper, the largest-ever craft designed to visit another planet. The \$5 billion mission, scheduled to reach Jupiter in 2030, will spend four years analyzing this moon to determine whether it could support life.

...

Finding something, anything, living on Europa would offer strong evidence for an alternate path through which [life](#) could emerge. It would mean that life on Earth is not exceptional. We'd know that we have neighbors close by—even if they're microbial, which would be the most likely life-form—and that would make it very likely that we have neighbors elsewhere in the cosmos.

[**This is an excerpt. Read the full article here**](#)