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| KEVIN HAND, ASTROBIOLOGIST |



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PLANETARY SCIENTIST

Astrobiologist and National Geographic Emerging Explorer Kevin Hand is searching for life beyond Earth. NASA's mantra in this quest has long been "follow the water." When NASA's Galileo mission in 1989 detected hints of a vast sub-surface ocean on Europa (Jupiter's fourth largest moon), that discovery sparked intense curiosity about the potential for finding life in this alien world nearly 600 million miles from Earth.

Working in the Jet Propulsion Laboratory, Hand is helping plan a NASA mission to Europa to get a closer look. To create instruments that will travel hundreds of millions of miles through space, he has traveled to the most forbidding environments on Earth. "I'm trying to understand extremes of life here, so we can better assess and investigate habitable environments on alien worlds like Europa." He has explored the north slope of Alaska, the glaciers of Mount Kilimanjaro, the valleys of Antarctica, and the depths of our oceans to see how microbes eke out a living in our world's harshest climes.

Hand has served on NASA's Science Definition Teams for the Europa Flagship mission and has worked on several instruments for solar system exploration, including a spectrometer that was field tested in Antarctica and proposed for the instrument suite on Curiosity, the Mars Science Lab rover. He is also the Principal Investigator for the NASA Astrobiology Institute's Icy Worlds Team. In 2005, Hand appeared alongside director James Cameron in *Aliens of the Deep*, applying his knowledge about extraterrestrial environments to Earth's own unexplored territories. And more recently, Hand was part of James Cameron's team on his record-breaking Mariana Trench dive.

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