

# Scientists to test if life on Mars could be related to life on Earth

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A size comparison of the Earth and Mars. Image credit: NASA.

Over the course of the Earth's history, about a billion tons of rocks have been exchanged between the Earth and Mars. Scientists think it's possible that one or more of those rocks might have contained tiny microbes that successfully made the journey from one planet to the other. In 2018, they plan to test this hypothesis by searching for Earthling-like DNA under Mars' surface.

The NASA-funded project, called the Search for Extraterrestrial Genomes (SETG), is being undertaken by MIT scientists including engineer and scientist Christopher Carr. The researchers are designing a device that can detect and identify nucleic acids, whether they be in Martian ice, brine, or soil. Although any [organic material](#) on the surface would likely have been destroyed by ultraviolet rays and radiation, DNA

hidden underground could remain viable for about one million years, the scientists estimate.

While most scientists expect organic materials to be on Mars, it's more difficult to predict what exactly those materials might be. In the SETG project, the researchers are focusing on specific [genes](#) that are fairly common in life on [Earth](#). If there is DNA or [RNA](#) on Mars similar to that on Earth, then the new device should be able to find it.

"We would feel awfully silly if we spent a lot of time looking for something that was very different and didn't spend time looking for something that was very similar," Carr said. "Life could have arisen independently, but that is not the most likely scenario."

In two years, the researchers plan to test the DNA-detecting technology on Earth in locations including the Atacama Desert in Chile and in the cold, dry valleys of Antarctica, where the conditions are similar to those on Mars. Then they plan to fly the device on a joint NASA-ESA mission to [Mars](#), projected to launch in 2018.

**More information:**

via [Discovery News](#)

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