

Humans will never set foot on Mars without biotechnology

Elon Musk has captured our imaginations by releasing plans to put humans on Mars by 2022 and establish a colony of 1 million individuals as soon as the 2060's.

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But...rockets aren't the most important technology — or largest obstacle — to our success...[W]e won't be going anywhere without the comparatively invisible tools of biotechnology.

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On a 200-day journey to the Red Planet, a human would be exposed to the radiation equivalent of 24 CAT scans, according to Space.com...We may be able to greatly reduce the need for radiation shielding by engineering ourselves to withstand higher doses of radiation, which overloads our natural ability to repair DNA...It's far from reality at this point, but one genetic edit could slash hundreds of billions of dollars in expenses from regularly scheduled treks to Mars.

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[S]ustaining a colony is more difficult than establishing one...Borrowing from industrial biotech platforms here on Earth today, it's possible to send test tubes of microbes capable of producing supplies ranging from rocket fuel to polymers for 3-D printers....

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[W]hile rockets and spacecraft are cool, know this: Boeing and SpaceX aren't going anywhere without biotechnology.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: [Boeing and SpaceX Aren't Going Anywhere Without Biotechnology](#)