Mutagenesis of Soil Bacteria for Life on Mars

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In this work, experiments were conducted that were designed to induce mutations in soil bacteria in an effort to make mutants that could grow in conditions similar to those on Mars. Seven different known mutagens were used to induce bacterial growth under different environments/characteristics of the Martian surface. These conditions include high concentration of manganese, high levels of carbon dioxide, low concentration of nutrients, UV light, and cold temperatures. In this experiment, the resulting mutated bacteria were coaxed to survive in 330 mM manganese, which is more that 50 times the previous reported concentration at which bacteria could survive.

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