Iron Acquisition by Pseuomonads from Insoluble Mineral Sources

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Iron is an essential element for most living things. The mechanisms by which pathogenic microbes acquire host iron have been well-studied, providing several pharmaceutical targets. Microbes in diverse terrestrial and aquatic environments similarly require iron, but often must obtain it from scarce, insoluble, or chemically diverse sources, including highly insoluble minerals. We are interested in the mechanisms by which terrestrial Pseudomonads recognize and acquire iron from a variety of mineral sources. We are taking a molecular approach, investigating this process at the transcript and protein levels. Preliminary work is presented.