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Aggregation of the rhizospheric bacterium Azospirillum brasilense in response to oxygen

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Azospirillum brasilense spp. have ecological, scientific and agricultural importance. As model plant growth promoting rhizobacteria they interact with a large variety of plants, including important food and cash crops. Azospirillum strains are known for their production of plant growth hormones that enhance root systems and for their ability to fix nitrogen. Azospirillum cells transform in response to environmental cues. The production of exopolysaccharides and cell aggregation during cellular transformation are important steps in the attachment of Azospirillum to roots. We investigate signals that induce cellular transformation and aggregation in the Azospirillum and report on the importance of oxygen to the process of aggregation in this rhizospheric bacterium.