Photoheterotrophic metabolism of volatil fatty acids in Rhodospirillum rubrum

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Résumé: The MELISSA loop is an autonomous ecosystem developed by the European Space Agency (ESA). Volatile fatty acids are final products of fermentative processes and thus the main effluents from the first compartment of the loop. Through his photoheterotrophic metabolism, Rhodospirillum rubrum is supposed to remove these VFA from the system. We recently undertook the characterization of metabolic pathways involved in R. rubrum in the VFA assimilation, and particularly acetate, propionate, butyrate and mixtures of them using two different approaches, one for the phenotypic aspect of bacterial growth and the other for the proteomic characterization of metabolic pathways.

Mots Cles: Rhodospirillum rubrum; Purple non-sulfure bacteria; photoheterotrophy; volatile fatty acids

Thème(s): Sciences du vivant, Médical, Paramédical, Pharmaceutique ; Sciences;

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