Erratum



Pathway of propionate formation in Desulfobulbus propionicus

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Due to an unfortunate error, part of the Abstract was exchanged. It should have read as follows:

Abstract. Whole cells of Desulfobulbus propionicus fermented $[1^{-13}C]$ ethanol to $[2^{-13}C]$ and $[3^{-13}C]$ propionate and $[1^{-13}C]$ acetate, which indicates the involvement of a randomizing pathway in the formation of propionate. Cell-free extracts prepared from cells grown on lactate (without sulfate) contained high activities of methylmalonyl-CoA:pyruvate transcarboxylase, NAD-dependent malate dehydrogenase, fumarase, succinyl-CoA synthetase, propionate kinase, NAD(P)-independent pyruvate dehydrogenase, phosphotransacetylase, acetate kinase and reasonably high activities of NAD(P)-independent L(+)-lactate dehvdrogenase. fumarate reductase and succinate dehydrogenase. Cell-free extracts catalyzed the conversion of succinate to propionate in the presence of pyruvate, CoA and ATP and the oxaloacetate-dependent conversion of propionate to succinate. After growth on lactate or propionate in the presence of sulfate similar enzyme levels were found except for fumarate reductase which was considerably lower. Fermentative growth on lactate led to higher cytochrome b contents than growth with sulfate as electron acceptor.

The labeling studies and the enzyme measurements demonstrate that in *Desulfobulbus* propionate is formed via a succinate pathway involving a transcarboxylase like in *Propionibacterium*. The same pathway may be used for the degradation of propionate to acetate in the presence of sulfate.