Review of: "An Archaea-Specific c-type Cytochrome Maturation Machinery is Crucial for Methanogenesis in Methanosarcina acetivorans"

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The authors have investigated c-type cytochromes in the model methanogen *Methanosarcina acetivorans*. They confirm the suspected role of genes in maturation, and with bioinformatic analyses, show the genes are likely acquired by HGT that was also shown for many *M. acetivorans* genes. Importantly, the work supports previous biochemical studies (Ref. 26) showing a role for MmcA in electron transport specific for acetate conversion to methane. However, an important discussion is missing regarding the conflicting report that MmcA is not necessary, also based on a MmcA deletion mutant (Ref. 28). Significant, although not surprising, the work shows that c-types are less essential for growth on methylotrophic substrates. Finally, the following sentence in the significance statement is grossly misleading: *“However, neither the biogenesis nor the role of c-type 47 cytochromes in methane metabolism has ever been investigated”* (see citations 26 and 28). Overall, the work represents a worthy advancement in characterization of *c*-type cytochromes in methanogens.