A genome metabolic network model of new sulfur-oxidizing bacterium *Acidithiobacillus* sp. AMEEHan

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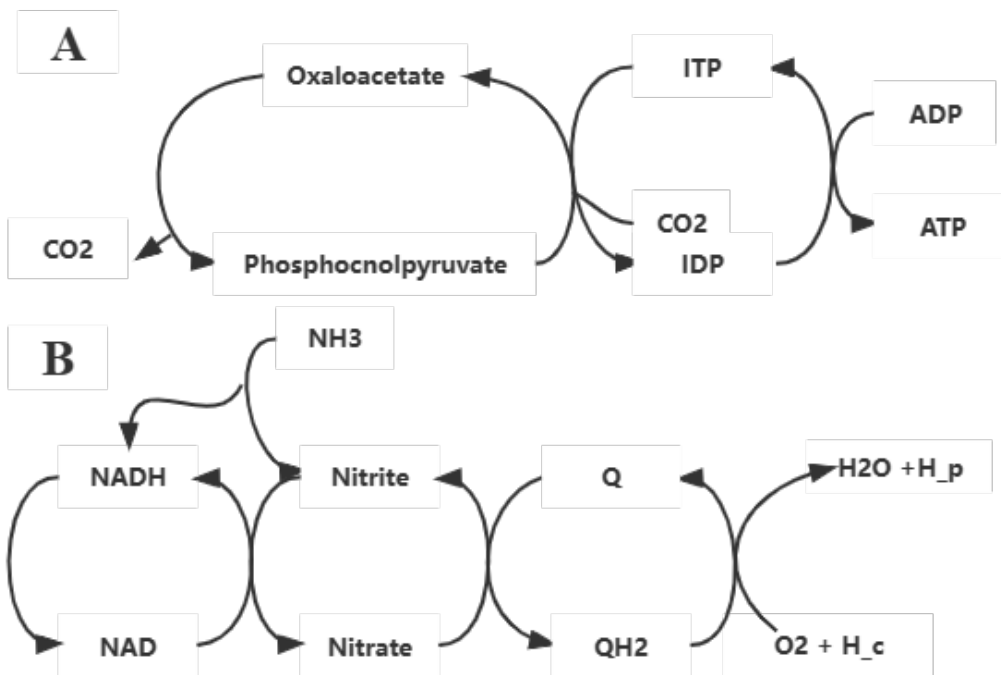
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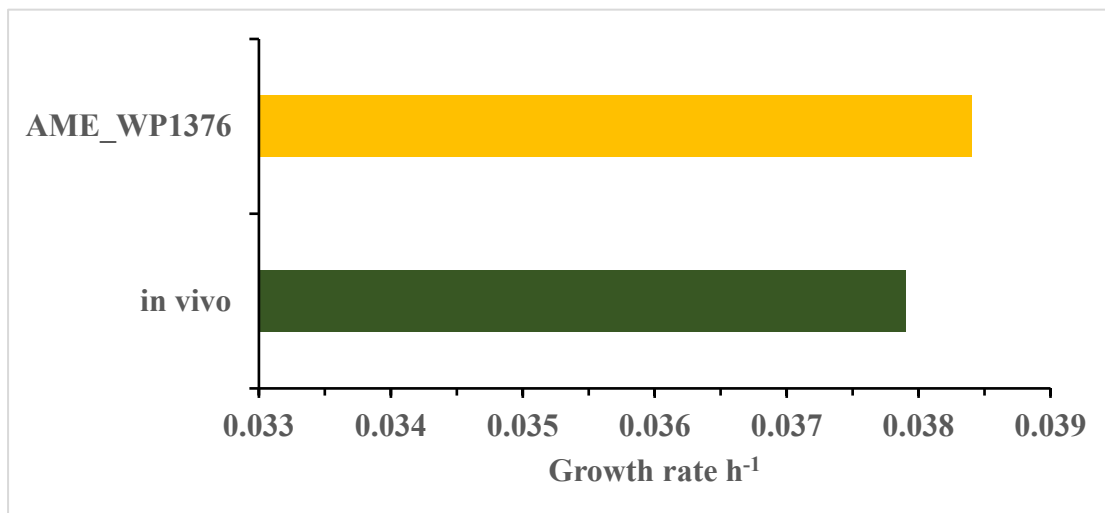Hongwu Ma
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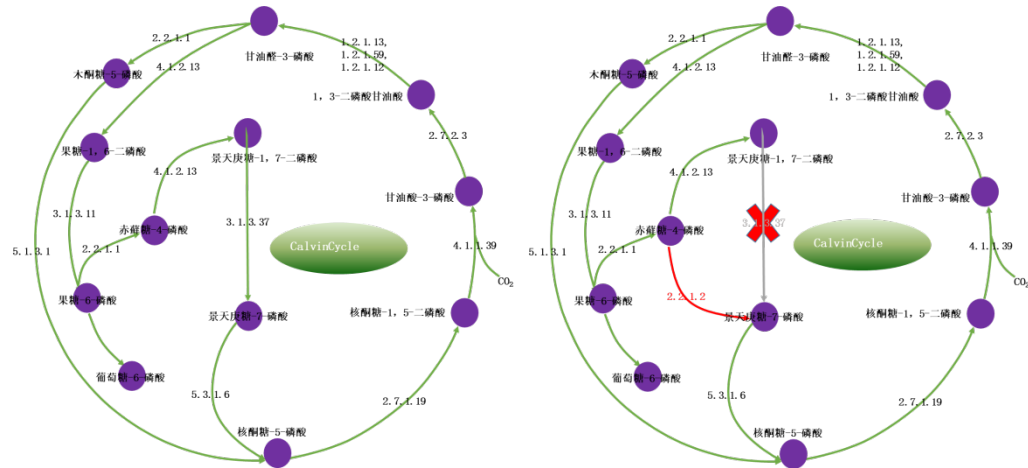Jingjing Wang
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Supplementary Figure S1. Two type errors in Model_01. (A) The energy-generation cycle leading to ATP inifite generation. (B) The proton pump cycle leading to ATP infinite generation.

Supplementary Figure S2. Comparison of *in vivo* and *in silico* growth rates of *Acidithiobacillus* sp. AMEEHan.

Supplementary Figure S3.　Differences between real Calvin and variant Calvin cycles.

The left diagram shows the actual Calvin cycle carbon sequestration metabolic pathway, and the right diagram shows the Calvin carbon sequestration metabolic pathway of AC bacteria variant, its Calvin cycle lacks the ability to catalyze the reaction of Sedum heptonulose 1,7-diphosphate into Sedum heptonulose-7-phosphate during the regeneration of RuBP in the third step of the Calvin cycle, but it can converting erythrose 4-phosphate into Sedum heptonulose-7-phosphate, which enables the Calvin cycle to proceed.