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Sequestration of Carbon Dioxide with Simultaneous Production of Succinic Acid by Metabolically Engineering *Escherichia coli*

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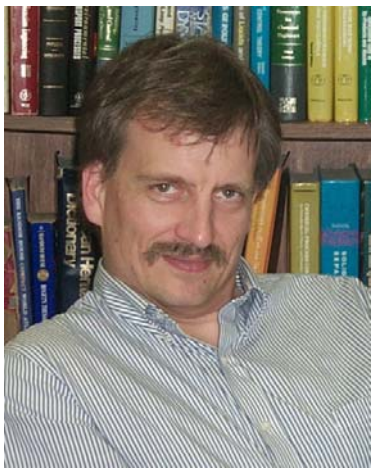

Prof. Mark A. Eiteman

What characteristics should a biological process to "sequester" CO_2 have?

1. **have a high rate of CO_2 utilization.**
2. **generate a co-product.**
3. **be able to use readily available sources of CO_2.**

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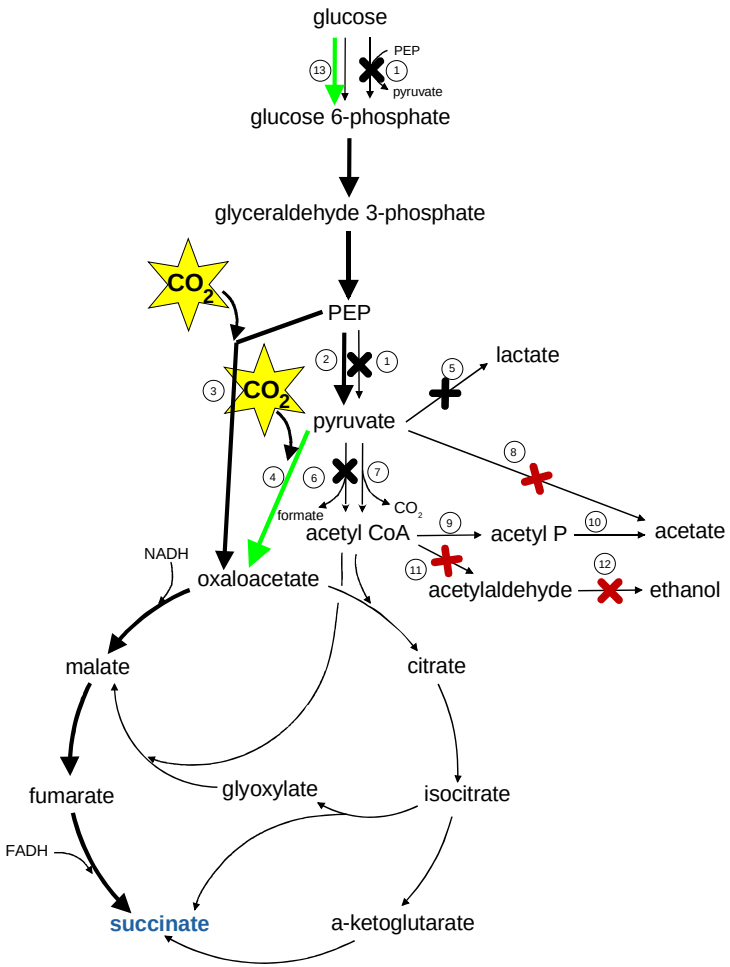

- How fast can CO_2 be utilized?
- What conditions are necessary for cell growth/CO_2 utilization?
- How long can succinate production/CO_2 utilization be extended?
- Can gases with a lower concentration of CO_2 including flue gas (containing about 15% CO_2 but also CO, O_2, NO_X and SO_X) be used directly for this process?