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Dicarboxylic acids transport, metabolism and roduction in aerobic Saccharomyces cerevisia

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Propositions

- Inability of Saccharomyces cerevisiae to utilize dicarboxylic acids as sole carbon sources is not due to the absence of suitable transport systems (opposed to the findings of Barnett and Kornberg (1960); Ansanay et al. (1996))
- 2. Passive diffusion of fumaric acid into *S. cerevisiae* is a major drawback for its production process carried out at low pH (Chapter 3)
- Scientific journals should have a repository of metabolically engineered strains to be accessed by academic institutions to reproduce the published results
- 4. Conforming to the views of Sydney Brenner; Researchers should focus more on interpreting data and designing experiments rather than generating data
- 5. Emigration correlates well with corruption
- 6. Economic development with sustainability is a dilemma for developing countries
- 7. Technology will make life monotonous
- Evolution is preferred in the direction of increasing specificity of an enzyme towards a particular substrate rather than changing the substrate specificity of a highly specific enzyme (Chapter 5, in the context of DCT-02 transporter evolution towards exporting fumaric acid)
- 9. Exposing *S. cerevisiae* strains, engineered for the overproduction of C4 acids, to high CO₂ levels, leads to increased C4 acids production.(Chapter 4).
- 10. ABC transporters play an important role in the robustness of *S. cerevisiae*

Propositions accompanying the thesis "Dicarboxylic acids transport, metabolism and production in aerobic *Saccharomyces cerevisiae*" by Mihir Vidyut Shah