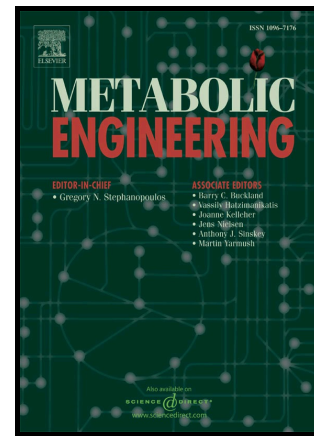


# Author's Accepted Manuscript

Metabolic engineering to guide evolution – creating a novel mode for L-valine production with *Corynebacterium glutamicum*

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*Metabolic engineering to guide evolution* – creating a novel mode for

L-valine production with *Corynebacterium glutamicum*

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### Highlights

- *Metabolic engineering to guide evolution* as evolutionary approach yielding a neat set of relevant mutations
- Isocitrate dehydrogenase as evolutionary target enabling PEP and pyruvate carboxylase-deficient *C. glutamicum* to grow on glucose
- PEP and pyruvate carboxylase-deficient *C. glutamicum* strains with identified ICD mutations represent an alternative mode for L-valine producer strains with inactive or attenuated pyruvate dehydrogenase complex

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