

## Bio-based ethanolamine production

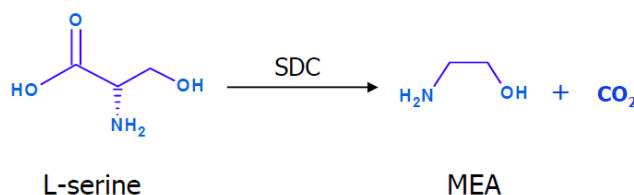
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### Description

Amines such as ethanolamine have a wide range of applications in diverse industries. They are mainly employed as building blocks in the synthesis agrochemicals, pharmaceuticals intermediates, and surfactants, among others.

The aim of this project was the selective production of ethanolamine via L-serine by fermentation using renewable resources. In a first stage, the biocatalyst was designed using synthetic biology, metabolic and protein engineering and high-throughput screening (HTS) experimentation techniques. The next stages involved the determination of the fermentation conditions that would lead to a favourable productivity and the integration with product removal techniques in order to maximize the ethanolamine production and minimize the waste generation.



### Publications

1. R. Mé dici, P. Domí nguez de María, L.G. Otten, A.J.J. Straathof, A high-throughput screening assay for amino acid decarboxylase activity, [Advanced Synthesis & Catalysis 353 \(2011\) 2369-2376](#).
2. M. Foti, R. Mé dici, H.J. Ruijssenaars, Biological production of monoethanolamine by engineered *Pseudomonas putida* S12, [J. Biotechnol. 167 \(2013\) 344-349](#)