

Engineering *Escherichia coli* to overproduce cadaverine

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Cadaverine (1,5-diaminopentane) is a five-carbon diamine that can be used for sustainable polymer production. Microbial production of cadaverine from renewable feedstock is a promising and sustainable alternative to the conventional petroleum-based chemical synthesis. Herein, we report a metabolically engineered *Escherichia coli* strain capable of overproducing cadaverine from glucose in minimal salts medium. With the pathways that lead to cadaverine degradation deleted, the final engineered strain produced 9.61 g/L of cadaverine with a productivity of 0.32 g/L/h by fed-batch fermentation. [This work was supported by the Technology Development Program to Solve Climate Changes on Systems Metabolic Engineering for Biorefineries from the Ministry of Science, ICT and Future Planning (MSIP) through the National Research Foundation (NRF) of Korea (NRF-2012-C1AAA001-2012M1A2A2026556).]