

Electronic Supplementary Information

**Microbial production of sebacic acid from a renewable source:
production, purification, and polymerization**

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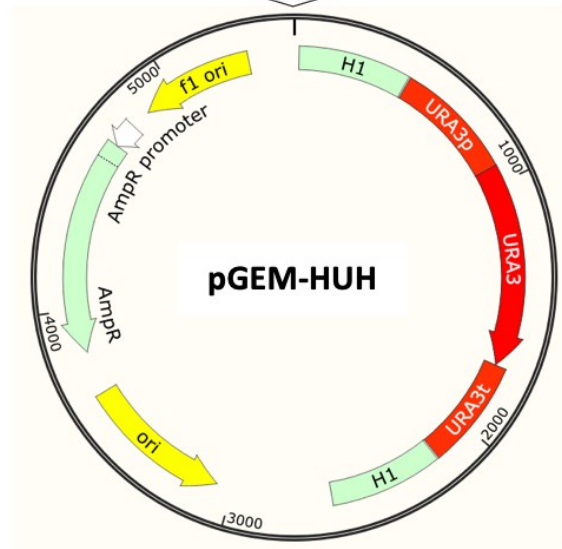
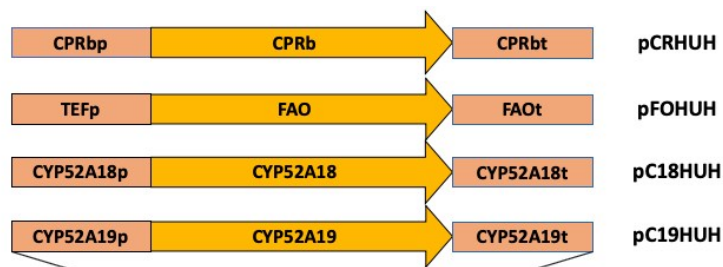
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Supplementary Fig. S1 The plasmid maps for expression cassette constructed in this study. pGEM-HUH was constructed by inserting the *URA3* and two identical *hisG* DNA sequences. Four plasmids (pCRHUH, pFOHUH, pC18HUH, and pC19HUH) were constructed by inserting each target gene (CPRB, FAO, CYP52A18, and CYP52A19). F1 ori : f1 bacteriophage origin of replication; arrow indicates direction of (+) strand synthesis. AmpR : ampicillin resistant gene. Ori: high-copy-number ColE/pMB1/pBR322/pUC origin of replication. CPRbp : CPRb promoter, TEFp : TEF promoter, CYP52A18p: CYP52A18 promoter, CYP52A19p : CYP52A19 promoter, URA3p : URA3 promoter, CPRbt : CPRb terminator, FAOt : FAO terminator, CYP52A18t : CYP52A18 terminator, CYP52A19t : CYP52A19 terminator, URA3t : URA3 terminator

Supplementary Table S1. Comparison of the amino acid composition between the impurities and yeast extract.

Amino acid	Impurities composition (g/100 g)	Yeast extract composition (g/100 g)
Aspartate	6.15	6.00
Threonine	2.40	2.60
Serine	2.49	2.70
Glutamate	6.21	11.00
Proline	1.89	2.2
Glycine	2.11	2.5
Alanine	3.02	4.10
Valine	2.75	3.10
Isoleucine	2.39	2.60
Leucine	4.49	2.33
Phenylalanine	1.69	2.50
Tyrosine	2.87	0.80
Lysine	2.00	4.20
Histidine	0.69	1.10
Arginine	0.92	2.80

The amino acid composition of solid impurities was similar to that of yeast extract.

Supplementary Table S2. Composition of solid impurities.

Component	Composition (%)
Metal	10.6
Amino acid	42.1
Other	47.3
Total	100