

## Electronic Supplementary Information

### Combined bioderivatization and engineering approach to improve the efficiency of geraniol production

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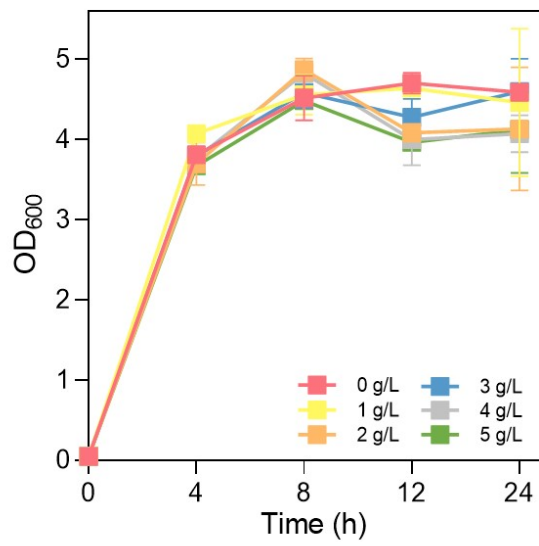
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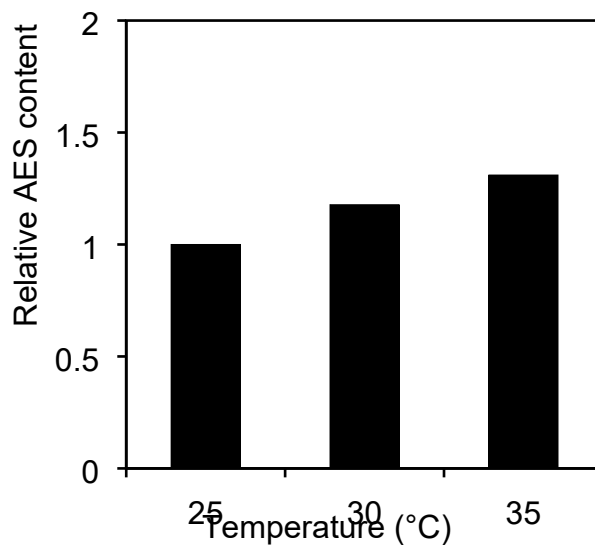
<sup>c</sup> International Innovation Center for Forest Chemicals and Materials, Nanjing Forestry  
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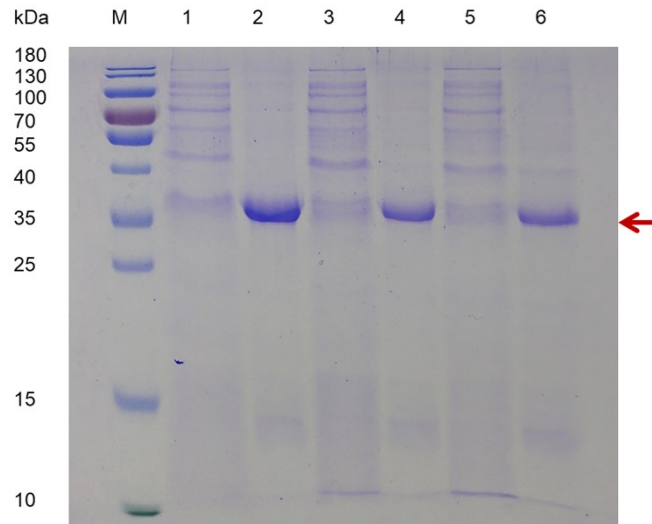
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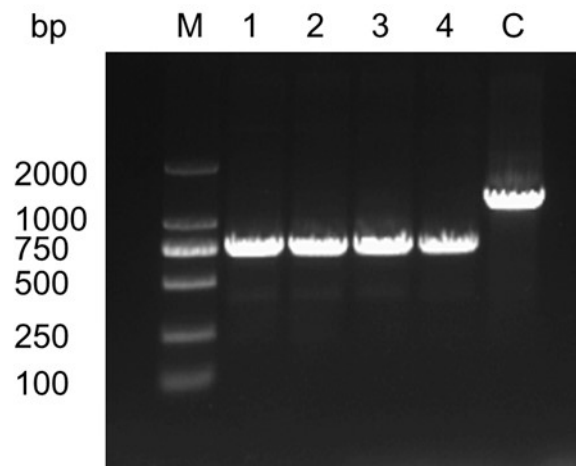
**Fig. S1** Toxicity of different concentrations of geranyl acetate (0 to 5 g/L) to *E. coli* DH5α.



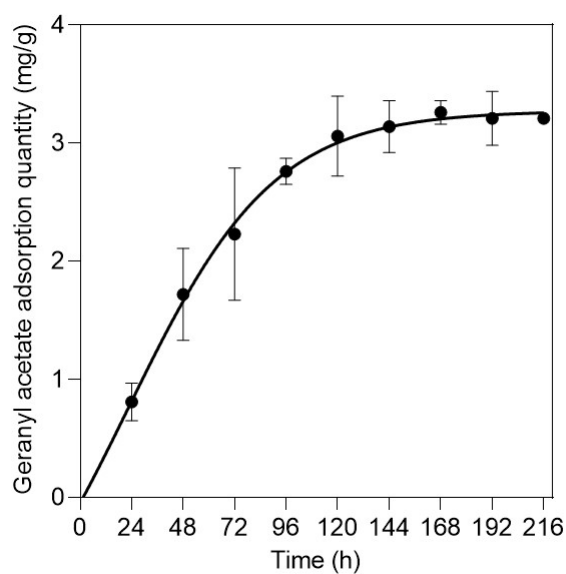
**Fig. S2** Estimation of AES expression strength at three different induction temperatures (25, 30, and 35 °C) using densitometric analysis in ImageJ.



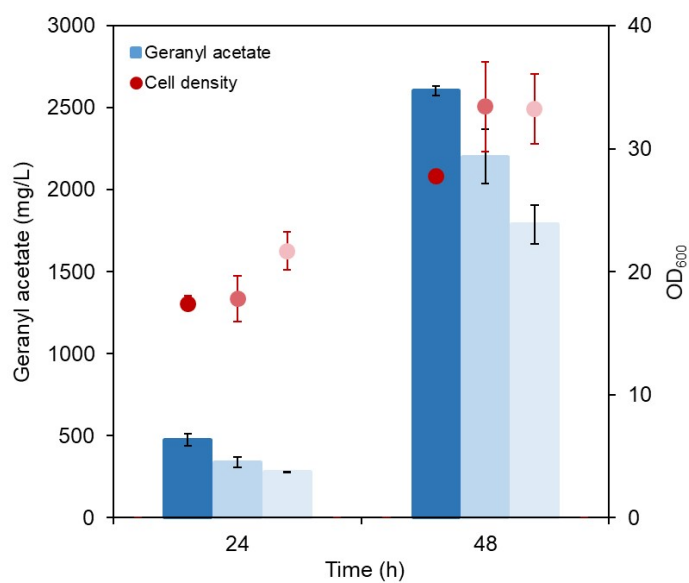
**Fig. S3** SDS-PAGE analysis of the recombinant strain E2PG expressing pelB\*AES fusion protein at different temperatures (25, 30, and 35 °C). M, protein marker; Numbers 1, 3, and 5 represent the supernatant of strain E2PG at temperatures of 25, 30, and 35 °C, respectively; Numbers 2, 4, and 6 represent the precipitation of strain E2PG at temperatures of 25, 30, and 35 °C, respectively.



**Fig. S4** Agarose electrophoresis gel of colony PCR from 4 transformants of *lpp* knockout (1 to 4) and wild type (C).



**Fig. S5** Adsorption curves of geranyl acetate using the IRA410 Cl resin.



**Fig. S6** Effects of adding different proportion of isopropyl myristate on the yield of geranyl acetate and cell density. The colors from dark to light represent 10%, 20% and 40% organic overlay, respectively.

**Table S1** Primers used in this study

Name	Sequence 5' → 3'
AAT-F	cctaggctgcatgctcggcgtagaggat
AAT-R	attcggatccttaatccataccaacactacttgc
fadL-F	catgccatgggcatgagccagaaaaccctgtttaca
fadL-R	ggaattctcagaacgcgtagttaagtagtaccg
ompW-F	catgccatgggcatgaaaaagttaacagtggcggt
ompW-R	ggaattcttaaaaacgatatcctgctgagaacataa
AES-F	catgccatgggcaaaccgaaaataaactgcc
AES-R	tcataactgggcggtaaaaaactgggcac
pelB-F	catatgaaatacctgctgccgaccgc
pelB-R	ttcggtttgcccatggccatgccggctg
N20-F	aaccagcgtcgttttagagctagaaatagcaagttaaataa
N20-R	agcacgagctactagtattatacctaggactgagctagctg
X1-Δlpp-F	tcggtgcttttttgaattcgatgaacagccgtctcgagtca
X1-Δlpp-R	tttcacttcacaggtactattacaggacgtgaacagatgcgg
X2-Δlpp-F	aaaatcgatctagtacctgtgaagtgaaaaatggcg
X2-Δlpp-R	atagatctaagcttctgcaggcagaagaacagcagaacgttcag