

Article title: Promotion of Phenolic Compounds Production in *Salvia miltiorrhiza*

Hairy Roots by Six Strains of Rhizosphere Bacteria

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Materials and methods

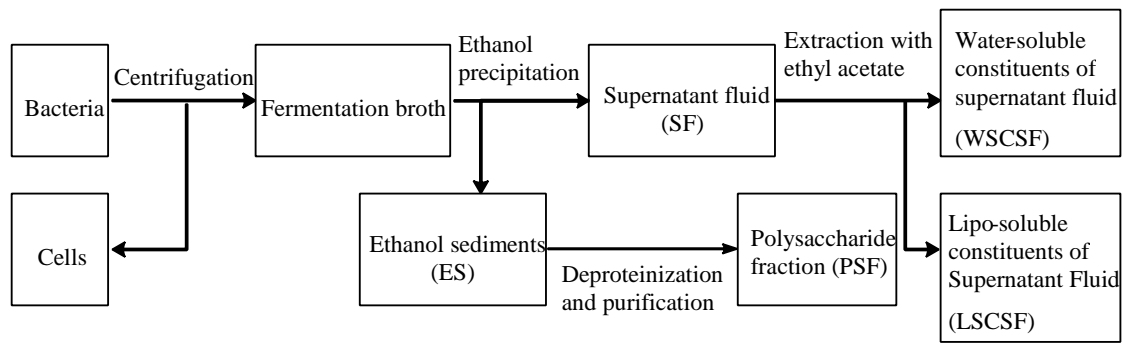
Total RNAs were extracted from *S. miltiorrhiza* hairy roots using RNAiso™ Plus (Takara, Tokyo, Japan) according to the manufacturer's protocol. The first strand cDNA was synthesized from 500 ng total RNA with PrimeScript™ RT reagent Kit (Takara, Tokyo, Japan). Primers with the following sequences, FPAL (5'-GGCGGCGATTGAGAGCAGGA-3') and RPAL (5'-ATCAGCAGATAGGAAGAGGAGCACC-3'), F4CL (5'-TCGCCAAATACGACCTTTCC-3') and R4CL (5'-TGCTTCAGTCATCCCATACCC-3'), FC4H (5'-CCAGGAGTCCAAATAACAGAGCC-3') and RC4H (5'-GAGCCACCAAGCGTTCACCAA-3'), FTAT (5'-TTCAACGGCTACGCTCCAAC-3') and RTAT (5'-AAACGGACAATGCTATCTCAAT-3'), FHPPR (5'-GACTCCAGAAACAACCCACATT-3') and RHPPR (5'-CCCAGACGACCCTCCACAAGA-3'), FRAS (5'-CGCCCTAGTTGAGTTCTACCCTTACGC-3') and RRAS (5'-TCGGATAGGTGGTGCTCGTTTGC-3'), were used to detect the gene expression of *smPAL*, *sm4CL*, *smC4H*, *smTAT*, *smHPPR* and *smRAS*, respectively. The 18S rRNA with specific primers F18S (5'-ATGATAACTCGACGGATCGC-3') and R18S (5'-CTTGGATGTGGTAGCCGTTT-3') were used as control. Real-time PCR was performed on the Bio-Rad CFX96 system (Bio-Rad, USA) with SYBR® Premix Ex Taq™ II (Tli RNaseH Plus, Takara). The reaction mixture was incubated for 30 s at

95 °C, and for 40 cycles of 5 s at 95 °C and 30 s at 60 °C.

Figure legends

~~Fig. S1 The way of isolating the components of fermentation broth of strain LNHR13.~~

Fig. S12 Effects of bacteria LNHR13 on the expression level of six key enzyme genes (*smPAL*, *sm4CL*, *smC4H*, *smTAT*, *smHPPR* and *smRAS*) of RA and SAB biosynthesis pathway (phenylpropanoid pathway and the tyrosine pathway) in *S. miltiorrhiza* hairy roots at sixth day after treatment. Values are presented as mean \pm SD, n = 3. The asterisks indicate significant differences at $P < 0.05$, $P < 0.01$, and $P < 0.001$, marked as *, **, and ***, respectively.



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