

***Latilactobacillus curvatus* FFZZH5L isolated from pickled cowpea enhanced antioxidant activity in *Caenorhabditis elegans* by upregulating the level of glutathione S-transferase**

Hengqian Lu^{1,2}, Liangyin Sun^{1,2}, Sijia Tong^{1,2}, Fei Jiang^{1,2}, Liping Chen^{1,2}, Yongzhong Wang^{1,2,3*}

¹School of Life Sciences, Anhui University, Hefei 230601, Anhui, China

²Key Laboratory of Human Microenvironment and Precision Medicine of Anhui Higher Education Institutes, Anhui University, Hefei 230601, Anhui, China

³Anhui Key Laboratory of Modern Biomanufacturing, Hefei 230601, Anhui, China.

* Corresponding author: Yongzhong Wang. E-mail: yzwang@ahu.edu.cn

Table S1. Primer sequences used in this study.

Primer name	Sequence (5'-3')
<i>27F</i>	AGAGTTTGATCCTGGCTCAG
<i>1492R</i>	TACGGCTACCTTGTTACGACTT
<i>tba-1F</i>	CACCACCGCCATCGCTGAAG
<i>tba-1R</i>	CTCTCCCTCCTCCATTCCTTCTCC
<i>skn-1F</i>	GGTCTCCGTTGGCGTGATGATC
<i>skn-1R</i>	CTGGTGGATGCTCGGTGAGTATTG
<i>daf-16F</i>	CGCCGCTACCATCTGACATCAC
<i>daf-16R</i>	TCCGCCAAAAGAAGCCGAACG
<i>sod-1F</i>	TGGAAGCTGGAGCCGATGGAG
<i>sod-1R</i>	TCGCCGAGGTCGTCTTGTC
<i>sod-3F</i>	TCACTATTGCGGTTCAAGGCTCTG
<i>sod-3R</i>	TTGCACAGGTGGCGATCTTCAAG
<i>sod-5F</i>	TGCCAATGCCGTTCTTCCACAG
<i>sod-5R</i>	AACAGTTCCGAAGACAGCAGTTCC
<i>gst-1F</i>	CCGTCATCTCGCTCGTCTTAATGG
<i>gst-1R</i>	AGCCTTGCCGTTCTCGTAGTTTC
<i>gst-4F</i>	AGTTGTTGAACCAGCCCGTGATG
<i>gst-4R</i>	GCCCAAGTCAATGAGTCTCCAACG
<i>gst-10F</i>	CCGTCTTCTGTTCCCTCGACAATGG
<i>gst-10R</i>	CAATCTCTTGCCCGTCCACCTTC
<i>akt-1F</i>	TGAGGGATGGCTTCACAAGAAAGG
<i>akt-1R</i>	TCAATGGCTCAGGAAACGGTTGTC

Table S2. Antibiotic susceptibility test results

Antibiotics	Results (- is resistant, + is moderately sensitive, ++ is sensitive)
Vancomycin	-
Streptomycin	-
Penicillin	++
Cefotaxime	+
Ampicillin	-
Kanamycin	-
Ciprofloxacin	-
Norfloxacin	-
Clindamycin	++
Erythromycin	+
Tetracycline	++

Table S3. Results of the sole carbon source utilization

Sole source of carbon	Results (+ is positive, - is negative)
D-Sorbitol	+
Glycerol	-
Mannitol	+
D-Galactose	+
Maltose	+
Fructose	+
Sucrose	+
Glucose	+

Table S4 Minimum inhibitory concentration test of *L. curvatus* FFZZH5L for *S. aureus*

Percentage of <i>L. curvatus</i> FFZZH5L	<i>S. aureus</i>
control	2.25×10^7
100%	1.68×10^5
50%	9.5×10^5
25%	3.52×10^6
12.5%	2.4×10^7

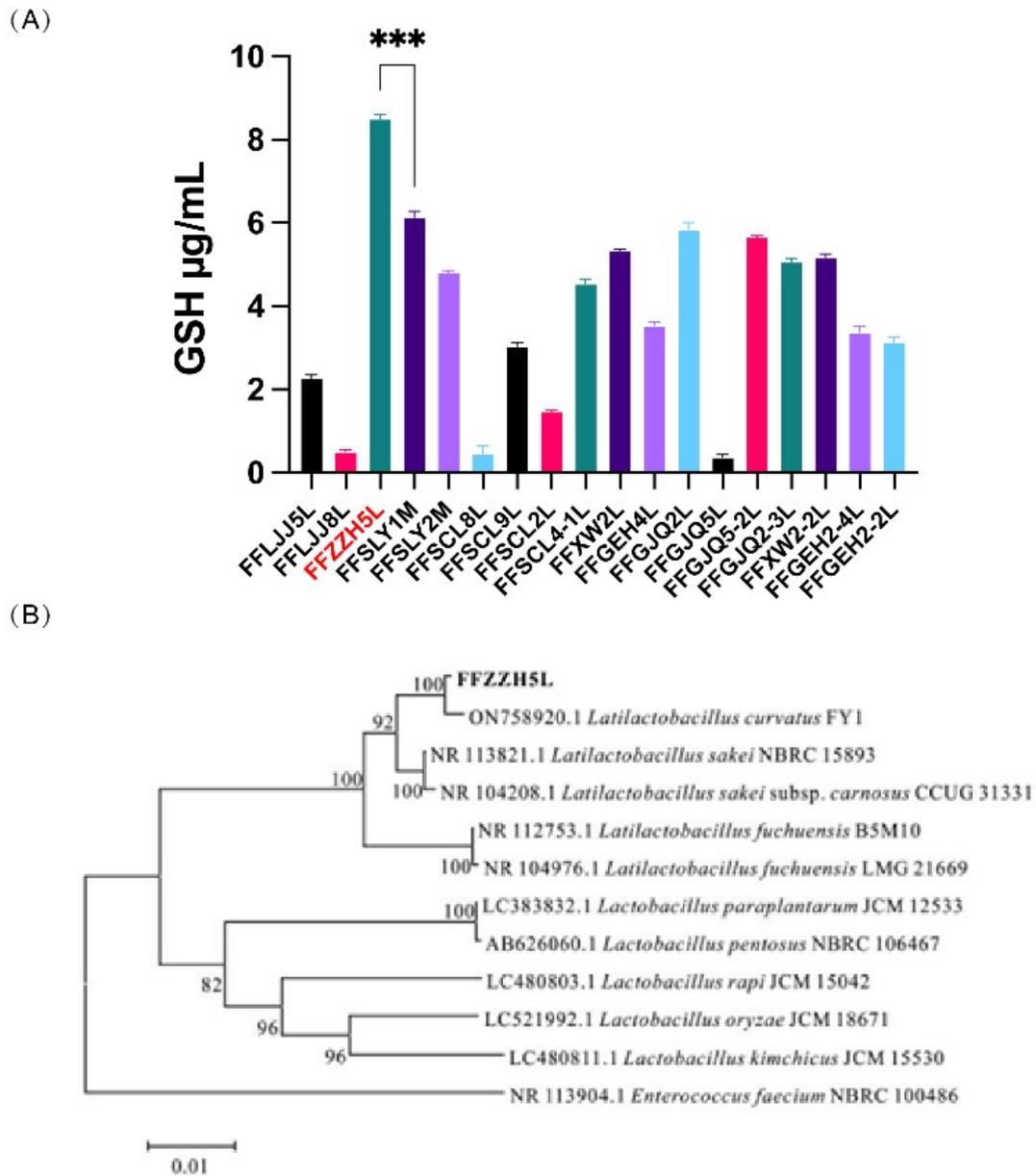


Figure S1. Screen and identification of strains with strong antioxidant activity. (A) strain with high GSH activity (FFZZH5L) was screened from numbers of strain isolated from fermented foods; (B) Phylogenetic tree, strain FFZZH5L was identified as a strain of *Latilactobacillus curvatus* by 16S rRNA sequencing and blast comparison on NCBI.