

**Methyl viologen boosts Erinacine A biosynthesis in *Hericium erinaceus*  
fermentation: Multi-omics insights**

**Applied Microbiology and Biotechnology**

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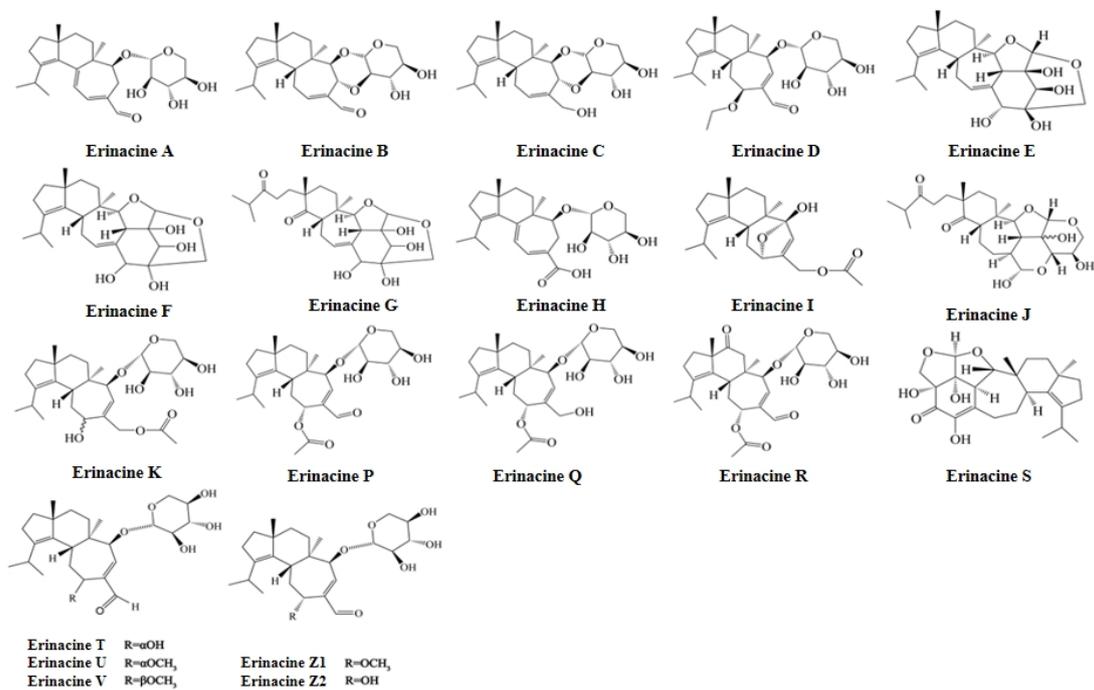
**Table S1.** Gradient elution system.

Time/min	A%	B%
0	98	2
1.5	98	2
3	15	85
10	0	100
10.1	98	2
11	98	2
12	98	2

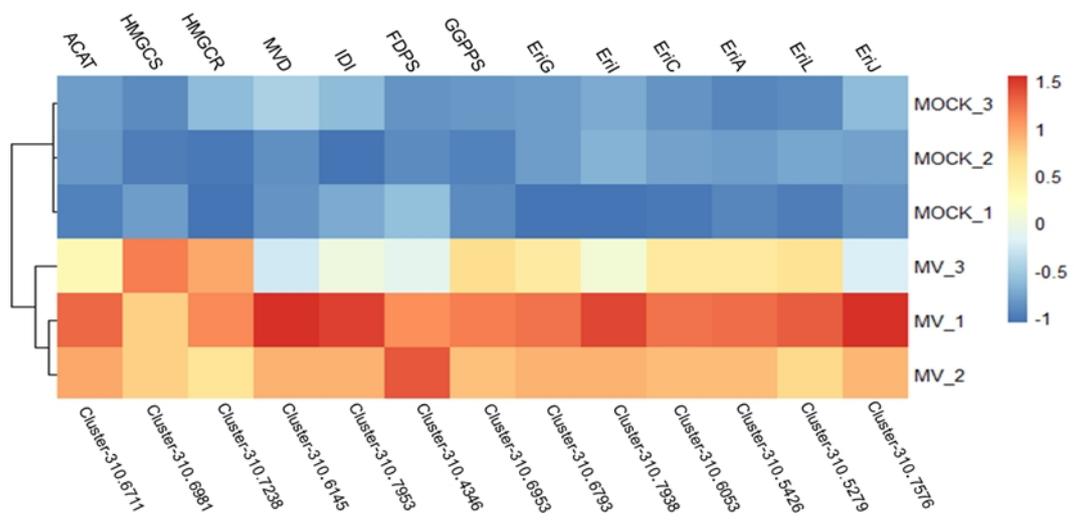
Scan range selection m / z 100-1500; The ESI source is set as follows: spray voltage (Spray Voltage): 3.5 kV; sheath gas flow rate (Sheath gas flow rate): 35 psi; auxiliary gas flow rate (Aux Gas flow rate):10 L/min; ion transmission tube temperature (Capillary Temp):320 °C; ion import RF level (S-lens RF level): 60; auxiliary gas heater temperature (Aux gas heater temp):350 °C; polarity (Polarity): positive, negative; MS/MS, the secondary scan is a data-dependent scan (data-dependent scans).

**Table S2.** Sample sequencing data quality summary

Sample	library	raw_reads	raw_bases	clean_reads	clean_bases	error_rate	Q20	Q30	GC_pct
MV_2	FRAS2302 80003-1r	23106599	6.9	22716801	6.8	0.03	97.92	94.2	59.05
MV_3	FRAS2302 80004-1r	25511537	7.7	25195933	7.6	0.03	97.85	94.04	59.32
MV_1	FRAS2302 80002-1r	23528410	7.1	23213901	7	0.03	97.91	94.18	59.19
MOCK_1	FRAS2302 80006-1r	23172778	7	22905610	6.9	0.03	97.65	93.56	58.98
MOCK_3	FRAS2302 80008-1r	22022674	6.6	21703681	6.5	0.03	97.93	94.19	59.33
MOCK_2	FRAS2302 80007-1r	22611283	6.8	22252852	6.7	0.02	98.09	94.65	59.44



Supplementary Fig. 1. Chemical structures of 20 erinacines.



Supplementary Fig. 2. Heat map of DEGs in Erinacine A biosynthetic pathway.