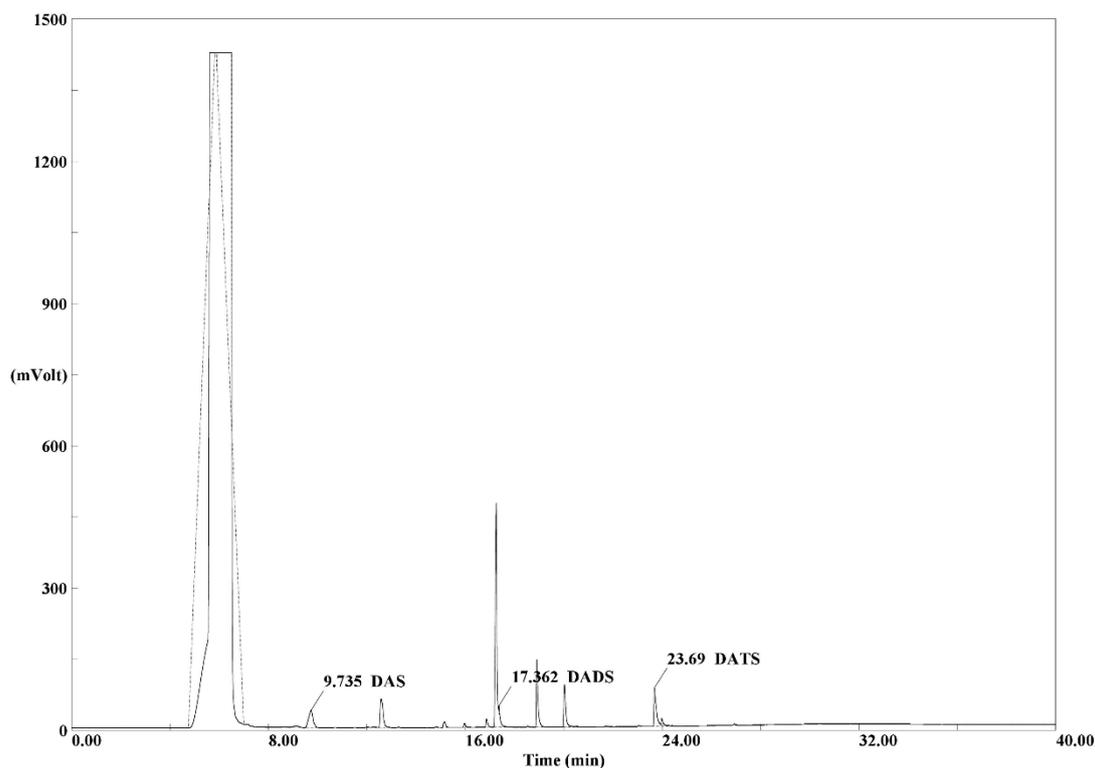


Supplementary data



Supplementary Figure 1. The components of garlic essential oil (GEO) in different retention time (RT) used gas chromatograph (GC).

The three major components of GEO including DADS (36.9 %), DATS (21%), and DAS (7.9 %) accounted for 65.0% of the total oil.

DAS (diallyl sulfide): 9.73 min

DADS (diallyl disulfide): 17.36 min

DATS (diallyl trisulfide): 23.69 min

Supplementary Table 1. The effects of GEO administration on levels of DA, 5-HT, and their metabolites in the frontal cortex and hippocampus of rats in forced swimming test (FST).

Groups	5-HT	5-HIAA	DA	DOPAC	HVA
	ng/g brain tissue			ng/g brain tissue	
Frontal cortex					
CTL	632.7 ± 104.2 ^b	1003 ± 504.8 ^a	1048 ± 425.1 ^b	936.8 ± 203.4 ^a	1815 ± 1417 ^a
GEO 25	715.9 ± 128.7 ^{ab}	799.7 ± 85.8 ^a	2394 ± 712.4 ^a	742.8 ± 99.3 ^{ab}	1083 ± 155.2 ^a
GEO 50	878.7 ± 235 ^a	940.1 ± 159.7 ^a	2347 ± 1171 ^a	730 ± 108.9 ^b	1101 ± 164.3 ^a
FLU	806.5 ± 225.6 ^{ab}	799.6 ± 181.5 ^a	1705 ± 812 ^{ab}	928.6 ± 185.8 ^a	1276 ± 275.4 ^a
Hippocampus					
CTL	124 ± 77.1 ^b	103.5 ± 19.2 ^a	N.D.	N.D.	N.D.
GEO 25	217 ± 83.7 ^a	115.2 ± 29.2 ^a	N.D.	N.D.	N.D.
GEO 50	165.9 ± 20.6 ^{ab}	87.28 ± 24.8 ^a	N.D.	N.D.	N.D.
FLU	136.3 ± 23.6 ^b	87 ± 7.8 ^a	N.D.	N.D.	N.D.

Data are presented as the mean ± SD (n = 6). Statistical analysis was performed using one-way ANOVA with Duncan's multiple-comparison test. Different letters indicate significant differences among groups at the level of $p < 0.05$. CTL, control; GEO, garlic essential oil; FLU, fluoxetine 10 mg/kg bw.

Supplementary Table 2. The effects of GEO and DADS administration on levels of DA, 5-HT, and their metabolites in the frontal cortex and hippocampus of rats in unpredictable chronic mild stress (UCMS).

Groups	5-HT	5-HIAA	DA	DOPAC	HVA
	ng/g brain tissue			ng/g brain tissue	
Frontal cortex					
CON	742 ± 103.7 ^b	697.9 ± 101 ^a	2131 ± 1380 ^b	604.2 ± 171.8 ^c	1016 ± 131.7
UCMS	422.5 ± 60.1 ^c	554.8 ± 248.6 ^{ab}	1207 ± 631.6 ^b	491.3 ± 61.4 ^c	N.D.
GEO 25	1413 ± 516.3 ^a	718.7 ± 375.4 ^a	8597 ± 5440 ^a	832.5 ± 393 ^a	1957 ± 1670
GEO 50	924.1 ± 334 ^b	697.1 ± 143.9 ^{ab}	3466 ± 2636 ^b	607.4 ± 108 ^b	990.9 ± 468.5
DADS 10	715 ± 77.6 ^{bc}	661.4 ± 113.2 ^{ab}	1814 ± 973.7 ^b	479.4 ± 109.1 ^{bc}	945.6 ± 182.7
DADS 20	672 ± 208.9 ^{bc}	465.7 ± 118.5 ^b	739.1 ± 458.8 ^b	359.2 ± 73.9 ^{bc}	N.D.
FLU	717.4 ± 111.4 ^{bc}	454.9 ± 75.5 ^b	1543 ± 297.8 ^b	555.2 ± 93.8 ^{bc}	N.D.
Hippocampus					
CON	404.9 ± 80.21 ^a	398.9 ± 105.7 ^b	N.D.	N.D.	N.D.
UCMS	240.2 ± 56.7 ^{cd}	514.6 ± 103.2 ^a	N.D.	N.D.	N.D.
GEO 25	281.8 ± 124.1 ^{bcd}	340.2 ± 80.7 ^b	N.D.	N.D.	N.D.
GEO 50	211 ± 147.1 ^{de}	291.5 ± 66.1 ^b	N.D.	N.D.	N.D.
DADS 10	326.5 ± 87.1 ^{abc}	368.2 ± 131.1 ^b	N.D.	N.D.	N.D.
DADS 20	358 ± 72.4 ^{ab}	290.7 ± 47.2 ^b	N.D.	N.D.	N.D.
FLU	124.4 ± 82.9 ^e	338.1 ± 143.9 ^b	N.D.	N.D.	N.D.

Data are presented as the mean ± SD (n = 7). Statistical analysis was performed using one-way ANOVA with Duncan's multiple-comparison test. Different letters indicate significant differences among groups at the level of $p < 0.05$. UCMS, unpredictable chronic mild stress; CON, control; GEO, garlic essential oil; DADS, diallyl disulfide;

FLU, fluoxetine 10 mg/kg bw.