

Supplementary Materials

Effects of Puerarin on the Ovariectomy-Induced Depressive-Like Behavior in ICR Mice and Its Possible Mechanism of Action

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Table S1. One-way analysis of variance (ANOVA) test of TST.

Group comparison	One-way analysis of variance	
	<i>P</i>	<i>F</i> (DF _{between group} , DF _{residual})
Sham <i>vs.</i> OVX	<0.001	<i>F</i> (4,36)=13.095
OVX <i>vs.</i> 2	<0.001	
OVX <i>vs.</i> 1(10)	<0.001	
OVX <i>vs.</i> 1(100)	<0.001	

Table S2. One-way analysis of variance (ANOVA) test of FST.

Group comparison	One-way analysis of variance	
	<i>P</i>	<i>F</i> (DF _{between group} , DF _{residual})
Sham <i>vs.</i> OVX	0.002	<i>F</i> (4,36)=14.729
OVX <i>vs.</i> 2	<0.001	
OVX <i>vs.</i> 1(100)	<0.001	
OVX + 1(10) <i>vs.</i> OVX + 1(100)	0.008	

Table S3. Statistical analysis of the effect of puerarin (1) and 17 β -estradiol (2) on uterine weight.

Group comparison	One-way analysis of variance	
	<i>P</i>	<i>F</i> (DF _{between group} , DF _{residual})
Sham <i>vs.</i> OVX	<0.001	<i>F</i> (4,36)=60.016
OVX <i>vs.</i> 2	<0.001	
OVX <i>vs.</i> 1(100)	0.025	
OVX + 1(10) <i>vs.</i> OVX + 1(100)	0.020	

Table S4. Statistical analysis of the effect of puerarin (1) and 17 β -estradiol (2) on uterine volume.

Group comparison	One-way analysis of variance	
	<i>P</i>	<i>F</i> (DF _{between group} , DF _{residual})
Sham <i>vs.</i> OVX	<0.001	<i>F</i> (4,22)=19.134
OVX <i>vs.</i> 2	0.048	
OVX <i>vs.</i> 1(100)	0.047	

Table S5. Statistical analysis of the effect of administration of puerarin (1) on serum corticosterone levels.

Group comparison	One-way analysis of variance	
	<i>P</i>	<i>F</i> (DF _{between group} , DF _{residual})
Sham <i>vs.</i> OVX	<0.001	<i>F</i> (4,13)=27.707
OVX <i>vs.</i> 2	0.047	
OVX <i>vs.</i> 1(100)	0.021	

Table S6. Statistical analysis of the effects of puerarin (1) and 17 β -estradiol (2) on the hippocampal BDNF mRNA expression.

Group comparison	One-way analysis of variance	
	P	F (DF _{between group} , DF _{residual})
Sham +OVX	<0.001	-
OVX + 2	0.006	F(4,15)=5.795
OVX + 1 (100)	0.012	

Table S7. Statistical analysis of the effects of puerarin (1) and 17 β -estradiol (2) on the hippocampal ER α mRNA expression.

Group comparison	One-way analysis of variance	
	P	F (DF _{between group} , DF _{residual})
Sham + OVX	<0.001	F(4,14)=24.135
OVX + 2	0.002	
OVX + 1 (100)	0.008	

Table S8. Statistical analysis of the effects of puerarin (1) and 17 β -estradiol (2) on the hippocampal ER β mRNA expression.

Group comparison	One-way analysis of variance	
	P	F (DF _{between group} , DF _{residual})
Sham +OVX	<0.001	-
OVX + 2	<0.001	F(4,14)=24.135
OVX + 1 (100)	0.003	

Table S9. Statistical analysis of the effects of puerarin (1) on the neurogenesis in the dentate gyrus area in the hippocampus.

Group comparison	One-way analysis of variance	
	P	F (DF _{between group} , DF _{residual})
Sham vs. OVX	<0.001	F(3,11)=46.83
OVX vs. 2	<0.001	
OVX vs. 1 (100)	<0.001	
OVX+1(10) vs. OVX+1(100)	<0.001	

Figure S1. HPLC chromatogram of puerarin (1) from root bark of *Pueraria candollei* var. *mirifica*.

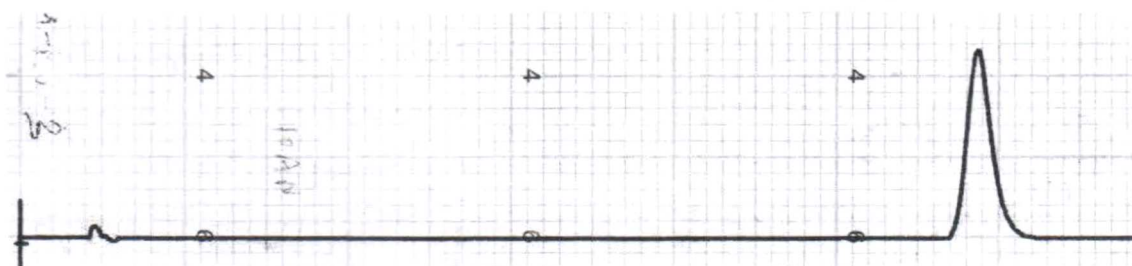


Figure S4. ^{13}C NMR spectrum of puerarin (**1**) (100 MHz, $\text{DMSO-}d_6$)

