

SUPPLEMENTARY MATERIALS

Resveratrol Prevents Age-Related Memory and Mood Dysfunction with Increased Hippocampal Neurogenesis and Microvasculature, and Reduced Glial Activation

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Table 1 – Percentage reductions in latency values from trial 1 (T1) to T2, T2 to T3, and T3 to T4, in the first session of learning in resveratrol (RESV) or vehicle (VEH) treated aged animals.

RESV-treated animals - Learning session 1

Learning Trials (Session 1)	Mean Latency Values (Seconds) (Mean $\pm$ S.E.M.)	Percentage Reductions in Latency Values over Successive Trials
Trial 1	44.86 $\pm$ 12.7	---
Trial 2	20.16 $\pm$ 5.5	T1-T2, 55% reduction
Trial 3	18.26 $\pm$ 4.1	T2-T3, 59% reduction
Trial 4	23.72 $\pm$ 7.4	T3-T4, 47% reduction

Repeated measures ANOVA, $p > 0.05$, $F = 2.3$

VEH-treated animals - Learning session 1

Learning Trials (Session 1)	Mean Latency Values (Seconds) (Mean $\pm$ S.E.M.)	Percentage Reductions in Latency Values over Successive Trials
Trial 1	51.99 $\pm$ 9.0	---
Trial 2	60.48 $\pm$ 8.3	T1-T2, 16% reduction
Trial 3	47.34 $\pm$ 13.1	T2-T3, 9% reduction
Trial 4	55.61 $\pm$ 12.5	T3-T4, 7% reduction

Repeated measures ANOVA, $p > 0.05$, $F = 0.37$

Table 2 – Comparison of latency values between trial 4 (T4) of every learning session (S) with the first trial (T1) of the subsequent learning session in aged rats receiving vehicle treatment.

Trials Compared	Latency Values (Mean $\pm$ S.E.M.)	P values
T4 of S1 and T1 of S2	63.2 $\pm$ 11.5 17.9 $\pm$ 3.8	p<0.01
T4 of S2 and T1 of S3	63.4 $\pm$ 11.3 50.1 $\pm$ 10.7	p>0.05
T4 of S3 and T1 of S4	40.0 $\pm$ 10.3 33.7 $\pm$ 10.3	p>0.05
T4 of S4 and T1 of S5	36.3 $\pm$ 11.8 33.1 $\pm$ 8.1	p>0.05
T4 of S5 and T1 of S6	33.5 $\pm$ 9.3 38.5 $\pm$ 8.3	p>0.05
T4 of S6 and T1 of S7	29.9 $\pm$ 11.4 23.5 $\pm$ 4.0	p>0.05

Table 3 – Comparison of latency values between each of learning sessions 1-6 (S1-S6) with the first trial (T1) of the subsequent learning session in aged rats receiving vehicle treatment.

Comparisons	Latency Values (Mean $\pm$ S.E.M.)	P values
Entire S1 and T1 of S2	60.0 $\pm$ 5.1 17.9 $\pm$ 3.8	$p > 0.0001$
Entire S2 and T1 of S3	43.9 $\pm$ 4.4 50.1 $\pm$ 10.7	$p > 0.05$
Entire S3 and T1 of S4	42.8 $\pm$ 5.3 33.7 $\pm$ 10.3	$p > 0.05$
Entire S4 and T1 of S5	37.9 $\pm$ 5.6 33.1 $\pm$ 8.1	$p > 0.05$
Entire S5 and T1 of S6	32.0 $\pm$ 6.0 38.5 $\pm$ 8.3	$p > 0.05$
Entire S6 and T1 of S7	30.6 $\pm$ 5.0 23.5 $\pm$ 4.0	$p > 0.05$

Supplement Figure 1 - Comparison of Swim speeds from pre- and post-treatment water maze tests in vehicle (VEH) treated and resveratrol (RESV) treated aged animals.

