

Supplementary Table 2. Statistical Analyses

1. Figure 1b SPT

a. Genotype x Enriched Environment Treatment Effects

Two-way ANOVA			Genotype Effects	Treatment Effects	Genotype X Treatment Interactions	<i>Post hoc</i> Bonferroni Test Genotype Effects (WT vs KIV)		<i>Post hoc</i> Bonferroni Test Treatment Effects (SCT vs EET)	
						SCT	EET	WT	KIV
Early-life Development (ED)	Male	Pre	$F_{(1,56)} = 8.2$ $P < 0.01$	$F_{(1,56)} = 8.4$ $P < 0.005$	$F_{(1,56)} = 7.0$ $P < 0.05$	$T_{28} = 3.9$ $P < 0.001$	$T_{28} = 0.15$ $P > 0.05$	$T_{28} = 0.18$ $P > 0.05$	$T_{28} = 3.9$ $P < 0.001$
		Post	$F_{(1,56)} = 16.7$ $P < 0.001$	$F_{(1,56)} = 5.4$ $P < 0.05$	$F_{(1,56)} = 4.6$ $P < 0.05$	$T_{28} = 4.4$ $P < 0.0001$	$T_{28} = 1.4$ $P > 0.05$	$T_{28} = 0.1$ $P > 0.05$	$T_{28} = 3.2$ $P < 0.01$
	Female	Pre	$F_{(1,56)} = 1.9$ $P = 0.17$	$F_{(1,56)} = 3.0$ $P = 0.09$	$F_{(1,56)} = 14.5$ $P < 0.001$	$T_{28} = 3.7$ $P < 0.01$	$T_{28} = 1.7$ $P > 0.05$	$T_{28} = 1.5$ $P > 0.05$	$T_{28} = 3.9$ $P < 0.001$
		Post	$F_{(1,56)} = 8.9$ $P < 0.005$	$F_{(1,56)} = 1.3$ $P = 0.17$	$F_{(1,55)} = 9.2$ $P < 0.01$	$T_{28} = 4.3$ $P < 0.001$	$T_{28} = 0.03$ $P > 0.05$	$T_{28} = 1.4$ $P > 0.05$	$T_{28} = 2.9$ $P < 0.01$
Young Adult (YA)	Male	Pre	$F_{(1,56)} = 2.4$ $P = 0.12$	$F_{(1,56)} = 1.5$ $P = 0.22$	$F_{(1,56)} = 6.2$ $P < 0.05$	$T_{28} = 2.9$ $P < 0.05$	$T_{28} = 0.66$ $P > 0.05$	$T_{28} = 0.88$ $P > 0.05$	$T_{28} = 2.6$ $P < 0.05$
		Post	$F_{(1,49)} = 7.9$ $P < 0.01$	$F_{(1,49)} = 5.5$ $P < 0.05$	$F_{(1,49)} = 1.1$ $P = 0.31$	$T_{28} = 2.9$ $P < 0.05$	$T_{21} = 1.1$ $P > 0.05$	$T_{28} = 0.92$ $P > 0.05$	$T_{28} = 2.4$ $P < 0.05$
	Female	Pre	$F_{(1,56)} = 2.7$ $P = 0.11$	$F_{(1,56)} = 1.6$ $P = 0.21$	$F_{(1,56)} = 4.5$ $P < 0.05$	$T_{28} = 2.7$ $P < 0.05$	$T_{28} = 0.34$ $P > 0.05$	$T_{28} = 0.59$ $P > 0.05$	$T_{28} = 2.4$ $P < 0.05$
		Post	$F_{(1,56)} = 4.3$ $P < 0.05$	$F_{(1,56)} = 0.2$ $P = 0.63$	$F_{(1,56)} = 5.0$ $P = 0.03$	$T_{28} = 3.1$ $P < 0.01$	$T_{28} = 0.12$ $P > 0.05$	$T_{28} = 1.2$ $P > 0.05$	$T_{28} = 1.9$ $P > 0.05$
Old Adult (OA)	Male	Pre	$F_{(1,56)} = 1.8$ $P = 0.19$	$F_{(1,56)} = 2.4$ $P = 0.12$	$F_{(1,56)} = 4.5$ $P < 0.05$	$T_{28} = 2.4$ $P < 0.05$	$T_{28} = 0.55$ $P > 0.05$	$T_{28} = 0.40$ $P > 0.05$	$T_{28} = 2.6$ $P < 0.05$
		Post	$F_{(1,56)} = 2.4$ $P = 0.13$	$F_{(1,56)} = 1.6$ $P = 0.22$	$F_{(1,56)} = 4.0$ $P < 0.05$	$T_{28} = 2.5$ $P < 0.05$	$T_{28} = 0.31$ $P > 0.05$	$T_{28} = 0.52$ $P > 0.05$	$T_{28} = 2.3$ $P > 0.05$
	Female	Pre	$F_{(1,56)} = 5.0$ $P < 0.05$	$F_{(1,56)} = 4.3$ $P < 0.05$	$F_{(1,56)} = 2.7$ $P = 0.11$	$T_{28} = 2.7$ $P < 0.05$	$T_{28} = 0.42$ $P > 0.05$	$T_{28} = 0.31$ $P > 0.05$	$T_{28} = 2.6$ $P < 0.05$
		Post	$F_{(1,56)} = 2.2$ $P = 0.15$	$F_{(1,56)} = 0.03$ $P = 0.87$	$F_{(1,56)} = 8.2$ $P < 0.01$	$T_{28} = 3.1$ $P < 0.01$	$T_{28} = 1.0$ $P > 0.05$	$T_{28} = 1.9$ $P > 0.05$	$T_{28} = 2.1$ $P > 0.05$

Student's <i>t</i> -test	WT-SCT vs. KIV-EET			WT-SCT vs. KIV-EET-SCT		
	ED	YA	OA	ED	YA	OA
Male	P=0.97	P=0.11	P=0.82	P=0.74	P=0.72	P=0.81
Female	P=0.81	P=0.07	P=0.76	P=0.17	P=0.90	P=0.40

2. Supplementary Figure 1 Age Effects on Sucrose Preference

a. Age effects on genotype (Suppl. Fig. 1a)

One-way ANOVA		Age Effect (ED YA OA)	
% WT		Male	P = 0.745
		Female	P = 0.671

b. Genotype x age effects on EET effects (Suppl. Fig. 1b and 1c)

Two-way ANOVA		Genotype Effects	Age Effects	Genotype X Age Interactions
Pre (T1)	Male	$F_{(1,84)} = 50.6$ $P < 0.001$	$F_{(2, 84)} = 2.1$ $P > 0.05$	$F_{(2,84)} = 0.47$ $P > 0.05$
	Female	$F_{(1,83)} = 46.6$ $P < 0.001$	$F_{(2, 83)} = 0.04$ $P > 0.05$	$F_{(2,83)} = 0.14$ $P > 0.05$
Post (T2)	Male	$F_{(1,77)} = 13.4$ $P < 0.001$	$F_{(2, 77)} = 0.27$ $P > 0.05$	$F_{(2,77)} = 0.37$ $P > 0.05$
	Female	$F_{(1,84)} = 44.5$ $P < 0.001$	$F_{(2, 84)} = 1.9$ $P > 0.05$	$F_{(2,84)} = 4.02$ $P < 0.05$

3. Fig. 2 Total BDNF mRNA (exon IXc)

a. Basal level (Fig. 2a)

Genotype x age effects

Two-way ANOVA		Genotype Effects	Age Effects	Genotype X Age Interactions	Post hoc Bonferroni multiple comparisons								
					Genotype Effects (WT vs. KIV)			Age Effects (ED, YA, OA)					
					ED	YA	OA	WT		KIV			
								ED vs YA	ED vs OA	YA vs OA	ED vs YA	ED vs OA	YA vs OA
Hippocampus		$F_{(1, 90)} = 60.5$ $P < 0.001$	$F_{(2, 90)} = 0.11$ $P > 0.05$	$F_{(2, 90)} = 0.28$ $P > 0.05$	$T_{30} = 4.7$ $P < 0.001$	$T_{30} = 4.9$ $P < 0.001$	$T_{30} = 3.9$ $P > 0.05$	$T_{30} = 0.16$ $P > 0.05$	$T_{30} = 0.09$ $P > 0.05$	$T_{30} = 0.25$ $P > 0.05$	$T_{30} = 0.03$ $P > 0.05$	$T_{30} = 0.71$ $P > 0.05$	$T_{30} = 0.74$ $P > 0.05$
Frontal Cortex		$F_{(1, 90)} = 369$ $P < 0.001$	$F_{(2, 90)} = 7.8$ $P < 0.001$	$F_{(2, 90)} = 9.0$ $P < 0.001$	$T_{30} = 14.0$ $P < 0.001$	$T_{30} = 11.2$ $P < 0.001$	$T_{30} = 8.03$ $P < 0.001$	$T_{30} = 2.1$ $P > 0.05$	$T_{30} = 5.7$ $P < 0.001$	$T_{30} = 3.6$ $P < 0.01$	$T_{30} = 0.74$ $P > 0.05$	$T_{30} = 0.31$ $P > 0.05$	$T_{30} = 0.42$ $P > 0.05$

b. BDNF induction by EET (T1) (Fig. 2b)

EET x age effects

Two-way ANOVA		EET Effects	Age Effects	EET X Age Interactions	Post hoc Bonferroni multiple comparisons								
					EET Effects (EET vs. SCT)			Age Effects (ED, YA, OA)					
					ED	YA	OA	EET					
								ED vs YA	ED vs OA	YA vs OA			
Hippocampus	WT	$F_{(1, 38)} = 27.1$ $P < 0.001$	$F_{(1, 38)} = 0.59$ $P > 0.05$	$F_{(2, 38)} = 0.41$ $P > 0.05$	$T_{13} = 2.61$ $P < 0.05$	$T_{13} = 2.63$ $P < 0.05$	$T_{13} = 3.78$ $P < 0.01$						
	KIV	$F_{(1, 38)} = 35$ $P < 0.001$	$F_{(1, 38)} = 0.18$ $P > 0.05$	$F_{(2, 38)} = 0.14$ $P > 0.05$	$T_{12} = 3.39$ $P < 0.01$	$T_{13} = 3.80$ $P < 0.01$	$T_{13} = 1.29$ $P < 0.05$						
Frontal Cortex	WT	$F_{(1, 42)} = 23.5$ $P < 0.001$	$F_{(2, 42)} = 1.34$ $P > 0.05$	$F_{(2, 42)} = 1.34$ $P > 0.05$	$T_{14} = 2.29$ $P > 0.05$	$T_{14} = 1.98$ $P > 0.05$	$T_{14} = 4.12$ $P < 0.001$						
	KIV	$F_{(1, 42)} = 5.96$ $P < 0.05$	$F_{(2, 42)} = 7.35$ $P < 0.01$	$F_{(2, 42)} = 8.16$ $P < 0.01$	$T_{14} = 4.60$ $P < 0.001$	$T_{14} = 0.55$ $P > 0.05$	$T_{14} = 0.92$ $P > 0.05$	$T_{14} = 4.05$ $P < 0.01$	$T_{14} = 5.33$ $P < 0.001$	$T_{14} = 0.184$ $P > 0.05$			

Genotype x age effects

Two-way ANOVA		Genotype Effects	Age Effects	Genotype X Age Interactions	Post hoc Bonferroni multiple comparisons								
					Genotype Effects (WT vs. KIV)			Age Effects (ED, YA, OA)					
					ED	YA	OA	WT		KIV			
								ED vs YA	ED vs OA	YA vs OA	ED vs YA	ED vs OA	YA vs OA
Hippocampus		$F_{(1, 36)} = 0.97$ $P > 0.05$	$F_{(2, 36)} = 0.0007$ $P > 0.05$	$F_{(2, 36)} = 2.6$ $P > 0.05$									
Frontal Cortex		$F_{(1, 42)} = 9.20$ $P < 0.01$	$F_{(2, 42)} = 4.38$ $P < 0.05$	$F_{(2, 42)} = 12.1$ $P < 0.001$	$T_{14} = 1.69$ $P > 0.05$	$T_{14} = 1.69$ $P > 0.05$	$T_{14} = 5.25$ $P < 0.001$	$T_{14} = 0.34$ $P > 0.05$	$T_{14} = 2.03$ $P > 0.05$	$T_{14} = 2.37$ $P > 0.05$	$T_{14} = 3.73$ $P < 0.01$	$T_{14} = 4.92$ $P < 0.001$	$T_{14} = 1.19$ $P > 0.05$

c. Lasting BDNF induction by EET (T2) (Fig. 2c)

EET x age effects

Two-way ANOVA		EET-SCT Effects	Age Effects	EET-SCT X Age Interactions	Post hoc Bonferroni multiple comparisons				
					EET Effects (EET-SCT vs. SCT-SCT)			Age Effects (ED, YA, OA)	
					ED	YA	OA	EET-SCT	
Hippocampus	WT	$F_{(1,38)} = 0.03$ $P > 0.05$	$F_{(2,38)} = 0.63$ $P > 0.05$	$F_{(2,38)} = 0.79$ $P > 0.05$	$T_{13} = 2.67$ P < 0.05	$T_{13} = 0.34$ $P > 0.05$	$T_{12} = 0.95$ $P > 0.05$	$T_{13} = 2.60$ $P > 0.05$	$T_{12} = 4.71$ P < 0.001
	KIV	$F_{(1,38)} = 0.58$ $P > 0.05$	$F_{(2,38)} = 5.23$ $P < 0.01$	$F_{(2,38)} = 6.28$ P < 0.01					$T_{13} = 2.26$ $P > 0.05$
Frontal Cortex	WT	$F_{(1,40)} = 3.62$ $P > 0.05$	$F_{(2,40)} = 0.80$ $P > 0.05$	$F_{(2,40)} = 0.80$ $P > 0.05$	$T_{14} = 2.75$ P < 0.05	$T_{14} = 1.06$ $P > 0.05$	$T_{14} = 0.64$ $P > 0.05$	$T_{14} = 3.6$ P < 0.01	$T_{14} = 1.9$ $P > 0.05$
	KIV	$F_{(1,42)} = 1.81$ $P > 0.05$	$F_{(2,42)} = 2.87$ $P > 0.05$	$F_{(2,42)} = 3.64$ P < 0.05					$T_{14} = 1.69$ $P > 0.05$

Genotype x age effects

Two-way ANOVA		Genotype Effects	Age Effects	Genotype X Age Interactions	Post hoc Bonferroni multiple comparisons				
					Genotype Effects (WT vs. KIV)			Age Effects (ED, YA, OA)	
					ED	YA	OA	WT	KIV
ED	ED	ED	YA	YA	YA	OA	OA	ED	ED
vs	vs	vs	vs	vs	vs	vs	vs	vs	vs
YA	OA	YA	OA	YA	OA	YA	OA	YA	OA
Hippocampus	$F_{(1,40)} = 0.75$ $P > 0.05$	$F_{(2,40)} = 5.39$ P < 0.01	$F_{(2,40)} = 0.36$ $P > 0.05$	$T_{12} = 1.00$ $P > 0.05$	$T_{14} = 0.62$ $P > 0.05$	$T_{13} = 0.16$ $P > 0.05$	$T_{13} = 1.50$ $P > 0.05$	$T_{13} = 1.65$ $P > 0.05$	$T_{14} = 0.16$ $P > 0.05$
Frontal Cortex	$F_{(1,42)} = 14.1$ P < 0.001	$F_{(2,42)} = 3.4$ P < 0.05	$F_{(2,42)} = 4.21$ P < 0.05	$T_{14} = 2.75$ P < 0.05	$T_{14} = 1.28$ $P > 0.05$	$T_{14} = 0.73$ $P > 0.05$	$T_{14} = 0.18$ $P > 0.05$	$T_{14} = 2.17$ $P > 0.05$	$T_{14} = 1.99$ $P > 0.05$

4. Supplementary Figure 2. Exon-specific BDNF transcription with SCT

Genotype x age effects on basal level

Two-way ANOVA		Genotype Effects	Age Effects	Genotype X Age Interactions	Post hoc Bonferroni multiple comparisons							
					Genotype Effects (WT vs. KIV)			Age Effects (ED, YA, OA)				
					ED	YA	OA	WT	ED vs YA	ED vs OA	YA vs OA	KIV
Hippocampus	Exon I	$F_{(1,87)} = 186$ $P < 0.001$	$F_{(2, 87)} = 9.78$ $P < 0.005$	$F_{(2, 87)} = 2.98$ $P > 0.05$	$T_{30} = 8.8$ $P < 0.001$	$T_{29} = 6.0$ $P < 0.001$	$T_{27} = 8.8$ $P < 0.001$	$T_{29} = 2.8$ $P < 0.05$	$T_{27} = 2.9$ $P < 0.05$	$T_{26} = 0.15$ $P > 0.05$	$T_{30} = 0.06$ $P < 0.05$	$T_{28} = 3.35$ $P < 0.01$
	IIa	$F_{(1, 88)} = 160$ $P < 0.001$	$F_{(2, 88)} = 1.75$ $P < 0.005$	$F_{(2, 88)} = 6.19$ $P > 0.05$	$T_{30} = 8.1$ $P < 0.001$	$T_{29} = 8.1$ $P < 0.001$	$T_{29} = 5.7$ $P < 0.001$	$T_{29} = 0.49$ $P > 0.05$	$T_{28} = 3.0$ $P < 0.05$	$T_{28} = 3.5$ $P < 0.01$	$T_{30} = 0.42$ $P > 0.05$	$T_{30} = 0.78$ $P > 0.05$
	IIb	$F_{(1, 88)} = 120$ $P < 0.001$	$F_{(2, 88)} = 4.6$ $P < 0.05$	$F_{(2, 88)} = 1.45$ $P > 0.05$	$T_{30} = 7.7$ $P < 0.001$	$T_{29} = 6.1$ $P < 0.001$	$T_{29} = 5.2$ $P < 0.001$	$T_{29} = 0.85$ $P > 0.05$	$T_{30} = 3.2$ $P < 0.05$	$T_{29} = 2.3$ $P > 0.05$	$T_{30} = 0.59$ $P > 0.05$	$T_{29} = 0.73$ $P > 0.05$
	IIc	$F_{(1, 88)} = 339$ $P < 0.001$	$F_{(2, 88)} = 10.2$ $P < 0.005$	$F_{(2, 88)} = 5.54$ $P < 0.01$	$T_{30} = 12.9$ $P < 0.001$	$T_{29} = 11.0$ $P < 0.001$	$T_{29} = 8.1$ $P < 0.001$	$T_{29} = 1.2$ $P > 0.05$	$T_{30} = 5.3$ $P < 0.001$	$T_{29} = 4.0$ $P < 0.005$	$T_{30} = 0.51$ $P > 0.05$	$T_{29} = 0.61$ $P > 0.05$
	III	$F_{(1, 89)} = 190$ $P < 0.001$	$F_{(2, 89)} = 8.8$ $P < 0.005$	$F_{(2, 89)} = 3.5$ $P < 0.05$	$T_{30} = 10.0$ $P < 0.001$	$T_{29} = 7.5$ $P < 0.001$	$T_{30} = 6.3$ $P < 0.001$	$T_{29} = 2.1$ $P > 0.05$	$T_{30} = 4.5$ $P < 0.001$	$T_{29} = 2.6$ $P > 0.05$	$T_{30} = 0.23$ $P > 0.05$	$T_{30} = 1.1$ $P > 0.05$
	V	$F_{(1, 41)} = 71$ $P < 0.001$	$F_{(2, 41)} = 2.33$ $P > 0.005$	$F_{(2, 41)} = 1.26$ $P > 0.05$	$T_{14} = 5.8$ $P < 0.001$	$T_{13} = 5.2$ $P < 0.001$	$T_{14} = 3.6$ $P < 0.01$	$T_{13} = 0.49$ $P > 0.05$	$T_{14} = 2.5$ $P > 0.05$	$T_{13} = 1.93$ $P > 0.05$	$T_{14} = 0.13$ $P > 0.05$	$T_{14} = 0.40$ $P > 0.05$
	VI	$F_{(1, 88)} = 16.3$ $P < 0.001$	$F_{(2, 88)} = 5.71$ $P < 0.005$	$F_{(2, 88)} = 1.57$ $P > 0.05$	$T_{29} = 3.6$ $P < 0.01$	$T_{30} = 1.0$ $P > 0.05$	$T_{29} = 2.4$ $P > 0.05$	$T_{29} = 2.3$ $P > 0.05$	$T_{29} = 3.0$ $P < 0.05$	$T_{30} = 0.61$ $P > 0.05$	$T_{30} = 0.2$ $P > 0.05$	$T_{29} = 1.8$ $P > 0.05$
	VIIa	$F_{(1, 89)} = 112$ $P < 0.001$	$F_{(2, 89)} = 8.35$ $P < 0.005$	$F_{(2, 89)} = 1.57$ $P > 0.05$	$T_{30} = 7.6$ $P < 0.001$	$T_{29} = 6.4$ $P < 0.001$	$T_{30} = 4.4$ $P < 0.001$	$T_{29} = 1.0$ $P > 0.05$	$T_{30} = 4.3$ $P < 0.005$	$T_{29} = 3.1$ $P < 0.05$	$T_{30} = 0.2$ $P > 0.05$	$T_{30} = 1.8$ $P > 0.05$
	VIII	$F_{(1, 89)} = 60.0$ $P < 0.001$	$F_{(2, 89)} = 5.14$ $P < 0.01$	$F_{(2, 89)} = 2.15$ $P > 0.05$	$T_{30} = 6.8$ $P < 0.001$	$T_{29} = 5.5$ $P < 0.001$	$T_{30} = 3.9$ $P < 0.001$	$T_{29} = 0.92$ $P > 0.05$	$T_{30} = 3.6$ $P < 0.01$	$T_{29} = 2.6$ $P < 0.01$	$T_{30} = 0.3$ $P > 0.05$	$T_{30} = 0.65$ $P > 0.05$
	IXa	$F_{(1, 89)} = 122$ $P < 0.001$	$F_{(2, 89)} = 6.33$ $P < 0.01$	$F_{(2, 89)} = 2.16$ $P > 0.05$	$T_{30} = 7.9$ $P < 0.001$	$T_{29} = 6.3$ $P < 0.001$	$T_{30} = 4.9$ $P < 0.001$	$T_{29} = 1.5$ $P > 0.05$	$T_{30} = 3.9$ $P < 0.05$	$T_{29} = 2.4$ $P > 0.05$	$T_{30} = 0.01$ $P > 0.05$	$T_{30} = 0.98$ $P > 0.05$
Frontal Cortex	I	$F_{(1, 87)} = 138$ $P < 0.001$	$F_{(2, 87)} = 11.1$ $P < 0.005$	$F_{(2, 87)} = 4.00$ $P < 0.05$	$T_{28} = 9.0$ $P < 0.001$	$T_{30} = 5.7$ $P < 0.001$	$T_{29} = 5.6$ $P < 0.001$	$T_{28} = 1.1$ $P > 0.05$	$T_{28} = 4.2$ $P < 0.005$	$T_{30} = 3.2$ $P < 0.05$	$T_{30} = 2.43$ $P > 0.05$	$T_{30} = 0.77$ $P < 0.05$
	IIa	$F_{(1, 90)} = 154$ $P < 0.001$	$F_{(2, 90)} = 1.39$ $P < 0.05$	$F_{(2, 90)} = 0.88$ $P > 0.05$	$T_{30} = 8.2$ $P < 0.001$	$T_{30} = 6.9$ $P < 0.001$	$T_{30} = 6.4$ $P < 0.001$	$T_{30} = 0.58$ $P > 0.05$	$T_{30} = 1.9$ $P > 0.05$	$T_{30} = 1.3$ $P > 0.05$	$T_{30} = 0.75$ $P > 0.05$	$T_{30} = 0.07$ $P > 0.05$
	IIb	$F_{(1, 90)} = 68.7$ $P < 0.001$	$F_{(2, 90)} = 0.30$ $P > 0.05$	$F_{(2, 90)} = 0.08$ $P > 0.05$	$T_{30} = 4.6$ $P < 0.001$	$T_{30} = 4.7$ $P < 0.001$	$T_{30} = 5.1$ $P < 0.001$	$T_{30} = 0.54$ $P > 0.05$	$T_{30} = 0.66$ $P > 0.05$	$T_{30} = 0.12$ $P > 0.05$	$T_{30} = 0.49$ $P > 0.05$	$T_{30} = 0.16$ $P > 0.05$
	IIc	$F_{(1, 90)} = 288$ $P < 0.001$	$F_{(2, 90)} = 1.03$ $P > 0.05$	$F_{(2, 90)} = 0.76$ $P > 0.05$	$T_{30} = 10.8$ $P < 0.001$	$T_{30} = 9.55$ $P < 0.001$	$T_{30} = 0.09$ $P < 0.001$	$T_{30} = 0.12$ $P > 0.05$	$T_{30} = 1.1$ $P > 0.05$	$T_{30} = 1.2$ $P > 0.05$	$T_{30} = 1.3$ $P > 0.05$	$T_{30} = 1.1$ $P > 0.05$
	III	$F_{(1, 90)} = 173$ $P < 0.001$	$F_{(2, 90)} = 0.353$ $P > 0.05$	$F_{(2, 90)} = 0.78$ $P > 0.05$	$T_{30} = 8.5$ $P < 0.001$	$T_{30} = 8.8$ $P < 0.001$	$T_{30} = 7.5$ $P < 0.001$	$T_{30} = 1.2$ $P > 0.05$	$T_{30} = 1.1$ $P > 0.05$	$T_{30} = 0.07$ $P < 0.05$	$T_{30} = 0.58$ $P > 0.05$	$T_{30} = 0.08$ $P > 0.05$

	V	F_{(1, 90) = 135} P < 0.001	F _{(2, 90) = 1.87} P > 0.05	F _{(2, 90) = 0.58} P > 0.05	T_{30 = 7.4} P < 0.001	T_{30 = 6.9} P < 0.001	T_{30 = 5.9} P < 0.001	T _{30 = 0.35} P > 0.05	T _{30 = 2.2} P > 0.05	T _{30 = 1.9} P < 0.05	T _{30 = 0.90} P > 0.05	T _{30 = 0.01} P > 0.01	T _{30 = 0.88} P > 0.05
	VI	F_{(1, 90) = 26.8} P < 0.001	F _{(2, 90) = 0.49} P > 0.05	F _{(2, 90) = 1.72} P > 0.05	T_{30 = 3.6} P < 0.01	T _{30 = 1.5} P > 0.05	T_{30 = 3.9} P < 0.005	T _{30 = 0.37} P < 0.05	T _{30 = 0.71} P > 0.05	T _{30 = 1.1} P > 0.05	T _{30 = 1.7} P > 0.05	T _{30 = 0.35} P > 0.01	T _{30 = 1.35} P > 0.05
	VIIa	F_{(1, 90) = 125} P < 0.001	F _{(2, 90) = 0.80} P > 0.05	F _{(2, 90) = 0.50} P > 0.05	T_{30 = 7.3} P < 0.001	T_{30 = 6.1} P < 0.001	T_{30 = 6.0} P < 0.001	T _{30 = 0.10} P > 0.05	T _{30 = 1.1} P > 0.05	T _{30 = 1.0} P > 0.05	T _{30 = 0.40} P > 0.05	T _{30 = 0.17} P > 0.01	T _{30 = 0.89} P > 0.05
	VIII	F_{(1, 90) = 110} P < 0.001	F _{(2, 90) = 0.55} P > 0.05	F _{(2, 90) = 0.56} P > 0.05	T_{30 = 6.9} P > 0.05	T _{30 = 5.4} P > 0.05	T_{30 = 5.8} P < 0.001	T _{30 = 0/61} P > 0.05	T _{30 = 1.1} P > 0.05	T _{30 = 0.45} P > 0.05	T _{30 = 0.85} P > 0.05	T _{30 = 0.06} P > 0.01	T _{30 = 0.91} P > 0.05
	IXa	F_{(1, 90) = 142} P < 0.001	F _{(2, 90) = 0.73} P > 0.05	F _{(2, 90) = 0.65} P > 0.05	T_{30 = 7.8} P < 0.001	T_{30 = 6.7} P < 0.001	T_{30 = 6.2} P < 0.001	T _{30 = 0.26} P > 0.05	T _{30 = 2.1} P > 0.05	T _{30 = 1.2} P > 0.05	T _{30 = 0.84} P > 0.05	T _{30 = 0.24} P > 0.01	T _{30 = 0.84} P > 0.05

One-way ANOVA		Age Effects	WT			KIV		
			ED vs YA	ED vs OA	YA vs OA	ED vs YA	ED vs OA	YA vs OA
Hippocampus	exon IV (WT)	F_{(2, 43) = 3.62} P < 0.05	T _{29 = 1.3} P > 0.05	T_{29 = 2.7} P < 0.05	T _{28 = 1.4} P > 0.05			
	IV-GFP (KIV)	F _{(2, 45) = 2.63} P > 0.05				T _{30 = 0.40} P > 0.05	T _{30 = 1.8} P > 0.05	T _{30 = 2.2} P > 0.05
Frontal Cortex	exon IV (WT)	F _{(2, 45) = 3.62} P < 0.05	T _{30 = 0.37} P > 0.05	T _{30 = 0.30} P < 0.05	T _{30 = 0.66} P > 0.05			
	IV-GFP (KIV)	F _{(2, 45) = 2.63} P > 0.05				T _{30 = 0.99} P > 0.05	T _{30 = 0.54} P > 0.05	T _{30 = 0.46} P > 0.05

5. Figure 3 Exon-specific BDNF transcription with EET (T1)

EET x age effects

Two-way ANOVA			EET Effects	Age Effects	EET X Age Interactions	Post hoc Bonferroni multiple comparisons					
						EET Effects (EET vs. SCT)			Age Effects (ED, YA, OA)		
						ED	YA	OA	ED vs YA	ED vs OA	YA vs OA
Hippocampus	I	WT	F_(1, 40) = 31.3 P < 0.001	F_(2, 40) = 6.68 P < 0.01	F_(2, 40) = 6.68 P < 0.01	T ₁₄ = 1.4 P > 0.05	T ₁₃ = 2.3 P > 0.05	T₁₃ = 6.1 P < 0.001	T ₁₄ = 0.9 P > 0.05	T₁₄ = 5.0 P < 0.001	T₁₄ = 4.1 P < 0.01
		KIV	F_(1, 39) = 5.65 P < 0.05	F _(2, 39) = 1.47 P > 0.05	F _(2, 39) = 0.23 P > 0.05	T ₁₃ = 1.2 P > 0.05	T ₁₂ = 1.0 P > 0.05	T ₁₄ = 2.0 P > 0.05			
	IIa	WT	F_(1, 40) = 28.6 P < 0.001	F _(2, 40) = 0.61 P > 0.05	F _(2, 40) = 0.61 P > 0.05	T₁₄ = 2.7 P < 0.05	T₁₃ = 2.6 P < 0.05	T₁₃ = 4.0 P < 0.005			
		KIV	F_(1, 40) = 17.9 P < 0.005	F_(2, 40) = 3.28 P < 0.05	F _(2, 40) = 1.76 P > 0.05	T ₁₄ = 1.5 P > 0.05	T ₁₃ = 1.9 P > 0.05	T₁₃ = 3.0 P < 0.001	T ₁₄ = 0.3 P > 0.05	T ₁₃ = 2.5 P > 0.05	T ₁₃ = 2.8 P > 0.05
	IIb	WT	F_(1, 40) = 21.3 P < 0.001	F _(2, 40) = 0.34 P > 0.05	F _(2, 40) = 0.34 P > 0.05	T ₁₃ = 2.4 P > 0.05	T₁₃ = 3.3 P < 0.01	T ₁₃ = 2.3 P > 0.05			
		KIV	F_(1, 40) = 29.2 P < 0.001	F _(2, 40) = 2.86 P > 0.05	F _(2, 41) = 1.1 P > 0.05	T₁₄ = 2.7 P < 0.05	T ₁₂ = 2.3 P > 0.05	T₁₄ = 4.4 P < 0.005			
	IIc	WT	F_(1, 40) = 35.9 P < 0.001	F _(2, 40) = 2.2 P > 0.05	F _(2, 40) = 2.2 P > 0.05	T ₁₃ = 2.1 P > 0.05	T₁₃ = 3.1 P < 0.05	T₁₄ = 5.1 P < 0.001			
		KIV	F_(1, 41) = 32.7 P < 0.001	F _(2, 41) = 0.51 P > 0.05	F _(2, 41) = 0.12 P > 0.05	T₁₄ = 3.0 P < 0.05	T₁₃ = 3.3 P < 0.01	T₁₄ = 3.6 P < 0.01			
	III	WT	F_(1, 40) = 20.3 P < 0.001	F _(2, 40) = 0.10 P > 0.05	F _(2, 40) = 0.10 P > 0.05	T ₁₃ = 2.2 P > 0.05	T₁₃ = 2.8 P < 0.05	T₁₄ = 2.8 P < 0.05			
		KIV	F_(1, 40) = 17.8 P < 0.005	F _(2, 40) = 2.87 P > 0.05	F _(2, 40) = 1.41 P > 0.05	T ₁₄ = 1.6 P > 0.05	T ₁₄ = 1.9 P > 0.05	T₁₄ = 3.9 P < 0.01			
	IV	WT	F_(1, 40) = 7.71 P < 0.01	F_(2, 40) = 3.48 P < 0.05	F_(2, 40) = 3.48 P < 0.05	T₁₃ = 3.2 P < 0.01	T ₁₃ = 1.9 P > 0.05	T ₁₄ = 0.4 P > 0.05	T ₁₄ = 0.9 P > 0.05	T₁₄ = 3.6 P < 0.01	T ₁₄ = 2.4 P > 0.05
		KIV	F_(1, 40) = 9.23 P < 0.01	F _(2, 40) = 0.11 P > 0.05	F _(2, 40) = 0.28 P > 0.05	T ₁₃ = 2.3 P > 0.05	T ₁₃ = 1.6 P > 0.05	T ₁₄ = 1.3 P > 0.05			
	V	WT	F_(1, 22) = 6.10 P < 0.05	F _(2, 22) = 0.23 P > 0.05	F _(2, 22) = 0.23 P > 0.05	T ₁₁ = 2.3 P > 0.05	T ₅ = 0.85 P > 0.05	T ₆ = 1.4 P > 0.05			
		KIV	F _(1, 21) = 1.03 P > 0.05	F _(2, 21) = 1.87 P > 0.05	F _(2, 21) = 1.60 P > 0.05						
	VI	WT	F_(1, 41) = 8.53 P < 0.01	F _(2, 41) = 1.36 P > 0.05	F _(2, 41) = 1.36 P > 0.05	T₁₄ = 2.9 P < 0.05	T ₁₃ = 1.7 P > 0.05	T ₁₄ = 0.5 P > 0.05			
		KIV	F_(1, 41) = 19.4 P < 0.001	F _(2, 41) = 0.02 P > 0.05	F _(2, 41) = 0.45 P > 0.05	T ₁₄ = 2.2 P > 0.05	T₁₃ = 3.3 P < 0.01	T ₁₄ = 2.2 P > 0.05			
	VIIa	WT	F_(1, 41) = 11.3 P < 0.01	F _(2, 41) = 1.36 P > 0.05	F _(2, 41) = 1.36 P > 0.05	T ₁₄ = 1.8 P > 0.05	T ₁₃ = 1.8 P > 0.05	T ₁₄ = 2.2 P > 0.05			
		KIV	F_(1, 41) = 23.4 P < 0.001	F _(2, 41) = 0.04 P > 0.05	F _(2, 41) = 0.70 P > 0.05	T ₁₃ = 2.1 P > 0.05	T₁₃ = 3.7 P < 0.01	T₁₄ = 2.6 P < 0.05			
	VIII	WT	F_(1, 41) = 22.4 P < 0.001	F _(2, 41) = 1.36 P > 0.05	F _(2, 41) = 1.36 P > 0.05	T ₁₄ = 1.7 P > 0.05	T₁₃ = 3.3 P < 0.01	T₁₄ = 3.1 P < 0.05			
		KIV	F_(1, 41) = 21.3 P < 0.001	F _(2, 41) = 0.97 P > 0.05	F _(2, 41) = 0.01 P > 0.05	T₁₃ = 2.7 P < 0.05	T₁₃ = 2.6 P < 0.05	T₁₄ = 2.7 P < 0.05			
	IXa	WT	F_(1, 41) = 13.4 P < 0.01	F _(2, 41) = 0.68 P > 0.05	F _(2, 41) = 0.68 P > 0.05	T ₁₄ = 1.4 P > 0.05	T₁₃ = 2.9 P < 0.05	T ₁₄ = 2.0 P > 0.05			
		KIV	F_(1, 40) = 12.7 P < 0.005	F _(2, 41) = 0.34 P > 0.05	F _(2, 41) = 1.65 P > 0.05	T ₁₃ = 0.9 P > 0.05	T₁₃ = 3.4 P < 0.01	T ₁₄ = 1.9 P > 0.05			
Frontal Cortex	Exo n I	WT	F_(1, 42) = 6.45 P < 0.05	F_(2, 42) = 3.35 P < 0.05	F_(2, 42) = 3.35 P < 0.05	T ₁₄ = 0.5 P > 0.05	T ₁₄ = 1.7 P > 0.05	T₁₄ = 3.1 P < 0.01	T ₁₄ = 2.1 P > 0.05	T₁₄ = 3.6 P < 0.01	T ₁₄ = 1.5 P > 0.05
		KIV	F_(1, 37) = 7.89 P < 0.01	F_(2, 37) = 3.52 P < 0.05	F _(2, 37) = 1.02 P > 0.05	T₁₃ = 2.7 P < 0.05	T ₁₃ = 0.8 P > 0.05	T ₁₃ = 1.3 P > 0.05	T ₁₃ = 2.6 P > 0.05	T ₁₃ = 2.2 P > 0.05	T ₁₄ = 0.4 P > 0.05
	IIa	WT	F_(1, 42) = 8.55 P < 0.01	F _(2, 42) = 0.17 P > 0.05	F _(2, 42) = 0.17 P > 0.05	T ₁₄ = 1.3 P > 0.05	T ₁₄ = 1.7 P > 0.05	T ₁₄ = 2.1 P > 0.05			
		KIV	F _(1, 40) = 3.31 P > 0.05	F _(2, 40) = 0.39 P > 0.05	F _(2, 40) = 0.39 P > 0.05						
	IIb	WT	F _(1, 42) = 2.26 P > 0.05	F _(2, 42) = 0.12 P > 0.05	F _(2, 42) = 0.12 P > 0.05						
		KIV	F_(1, 41) = 5.53 P < 0.05	F _(2, 41) = 2.80 P > 0.05	F _(2, 41) = 2.80 P > 0.05	T₁₃ = 3.2 P < 0.01	T ₁₄ = 0.5 P > 0.05	T ₁₄ = 0.2 P > 0.05	T ₁₃ = 2.7 P > 0.05	T₁₃ = 3.0 P < 0.05	T ₁₄ = 0.3 P > 0.05
	IIc	WT	F_(1, 42) = 9.72 P < 0.05	F _(2, 42) = 0.20 P > 0.05	F _(2, 42) = 0.20 P > 0.05	T ₁₄ = 1.6 P > 0.05	T ₁₄ = 1.5 P > 0.05	T ₁₄ = 2.3 P > 0.05			

	KIV	F_(1, 41) = 21.2 P < 0.001	F_(2, 41) = 5.55 P < 0.01	F_(2, 41) = 5.55 P < 0.01	T₁₃ = 5.2 P < 0.001	T ₁₄ = 1.8 P > 0.05	T ₁₄ = 0.9 P > 0.05	T₁₃ = 3.5 P < 0.01	T₁₃ = 4.4 P < 0.005	T ₁₄ = 0.9 P > 0.05
III	WT	F_(1, 42) = 5.68 P < 0.05	F _(2, 42) = 0.53 P > 0.05	F _(2, 42) = 0.53 P > 0.05	T ₁₄ = 0.7 P > 0.05	T ₁₄ = 2.2 P > 0.05	T ₁₄ = 1.3 P > 0.05			
	KIV	F_(1, 41) = 7.92 P < 0.01	F _(2, 41) = 1.60 P > 0.05	F _(2, 41) = 1.60 P > 0.05	T₁₃ = 2.7 P < 0.05	T ₁₄ = 1.8 P > 0.05	T ₁₄ = 0.3 P > 0.05			
IV	WT	F _(1, 42) = 0.48 P > 0.05	F _(2, 42) = 0.35 P > 0.05	F _(2, 42) = 0.35 P > 0.05						
	KIV	F_(1, 41) = 6.43 P < 0.05	F_(2, 41) = 3.6 P < 0.05	F_(2, 41) = 3.6 P < 0.05	T₁₃ = 2.9 P < 0.05	T ₁₄ = 2.1 P > 0.05	T ₁₄ = 0.7 P > 0.05	T ₁₃ = 0.9 P > 0.05	T₁₃ = 3.6 P < 0.05	T₁₄ = 2.8 P < 0.05
V	WT	F_(1, 42) = 4.8 P < 0.05	F _(2, 42) = 0.37 P > 0.05	F _(2, 42) = 0.37 P > 0.05	T ₁₄ = 1.1 P > 0.05	T ₁₄ = 0.8 P > 0.05	T ₁₄ = 1.9 P > 0.05			
	KIV	F _(1, 41) = 2.44 P > 0.05	F _(2, 41) = 1.90 P > 0.05	F _(2, 41) = 1.90 P > 0.05	T ₁₃ = 2.4 P > 0.05	T ₁₄ = 0.5 P > 0.05	T ₁₄ = 0.2 P > 0.05			
VI	WT	F _(1, 42) = 1.28 P > 0.05	F _(2, 42) = 0.03 P > 0.05	F _(2, 42) = 0.03 P > 0.05						
	KIV	F _(1, 41) = 3.91 P > 0.05	F _(2, 41) = 2.27 P > 0.05	F _(2, 41) = 2.27 P > 0.05	T₁₃ = 2.7 P < 0.05	T ₁₄ = 0.9 P > 0.05	T ₁₄ = 0.2 P > 0.05	T ₁₃ = 1.8 P > 0.05	T₁₃ = 2.9 P < 0.05	T ₁₄ = 1.1 P > 0.05
VIIa	WT	F_(1, 42) = 7.07 P < 0.05	F _(2, 42) = 0.06 P > 0.05	F _(2, 42) = 0.06 P > 0.05	T ₁₄ = 1.4 P > 0.05	T ₁₄ = 1.4 P > 0.05	T ₁₄ = 1.8 P > 0.05			
	KIV	F_(1, 41) = 9.93 P < 0.01	F_(2, 41) = 3.5 P < 0.05	F_(2, 41) = 3.5 P < 0.05	T₁₃ = 3.8 P < 0.05	T ₁₄ = 1.4 P > 0.05	T ₁₄ = 0.2 P > 0.05	T ₁₃ = 2.4 P > 0.05	T₁₃ = 3.7 P < 0.01	T ₁₄ = 1.3 P > 0.05
VIII	WT	F_(1, 42) = 7.12 P < 0.05	F _(2, 42) = 0.22 P > 0.05	F _(2, 42) = 0.22 P > 0.05	T ₁₄ = 1.0 P > 0.05	T ₁₄ = 1.8 P > 0.05	T ₁₄ = 1.8 P > 0.05			
	KIV	F_(1, 41) = 5.24 P < 0.05	F _(2, 41) = 0.47 P > 0.05	F _(2, 41) = 0.47 P > 0.05	T ₁₃ = 2.0 P > 0.05	T ₁₄ = 1.2 P > 0.05	T ₁₄ = 0.7 P > 0.05			
IXa	WT	F_(1, 42) = 6.53 P < 0.05	F _(2, 42) = 0.10 P > 0.05	F _(2, 42) = 0.10 P > 0.05	T ₁₄ = 1.3 P > 0.05	T ₁₄ = 1.3 P > 0.05	T ₁₄ = 1.8 P > 0.05			
	KIV	F _(1, 40) = 1.77 P > 0.05	F _(2, 40) = 1.7 P > 0.05	F _(2, 41) = 2.75 P > 0.05	T₁₂ = 2.5 P < 0.05	T ₁₄ = 1.2 P > 0.05	T ₁₄ = 0.7 P > 0.05	T ₁₂ = 1.9 P > 0.05	T₁₂ = 2.9 P < 0.05	T ₁₄ = 1.0 P > 0.05

b. Genotype x age effects on EET effects

6. Figure 4 Exon-specific BDNF transcription with EET-SCT (T2)

a. EET x age effects

Two-way ANOVA			EET-SCT Effects	Age Effects	EET-SCT X Age Interactions	Post hoc Bonferroni multiple comparisons					
						EET-SCT Effects (EET-SCT vs. SCT-SCT)			Age Effects (ED, YA, OA)		
						ED	YA	OA	EET		
Hippocampus	I	WT	$F_{(1, 41)} = 0.01$ $P > 0.05$	$F_{(2, 41)} = 2.89$ $P > 0.05$	$F_{(2, 41)} = 2.89$ $P > 0.05$						
		KIV	$F_{(1, 36)} = 0.62$ $P < 0.05$	$F_{(2, 36)} = 2.84$ $P > 0.05$	$F_{(2, 39)} = 4.01$ $P < 0.05$	$T_{12} = 1.2$ $P > 0.05$	$T_{12} = 1.0$ $P > 0.05$	$T_{12} = 2.0$ $P > 0.05$	$T_{12} = 3.6$ $P < 0.05$	$T_{14} = 1.1$ $P > 0.05$	$T_{12} = 2.5$ $P > 0.05$
	IIa	WT	$F_{(1, 41)} = 1.23$ $P > 0.05$	$F_{(2, 41)} = 0.17$ $P > 0.05$	$F_{(2, 41)} = 0.17$ $P > 0.05$						
		KIV	$F_{(1, 39)} = 0.01$ $P > 0.05$	$F_{(2, 39)} = 0.57$ $P > 0.05$	$F_{(2, 39)} = 1.09$ $P > 0.05$						
	IIb	WT	$F_{(1, 41)} = 0.14$ $P > 0.05$	$F_{(2, 41)} = 0.01$ $P > 0.05$	$F_{(2, 41)} = 0.01$ $P > 0.05$						
		KIV	$F_{(1, 37)} = 0.02$ $P > 0.05$	$F_{(2, 37)} = 0.93$ $P > 0.05$	$F_{(2, 37)} = 2.26$ $P > 0.05$						
	IIc	WT	$F_{(1, 41)} = 0.06$ $P > 0.05$	$F_{(2, 41)} = 0.09$ $P > 0.05$	$F_{(2, 41)} = 0.09$ $P > 0.05$						
		KIV	$F_{(1, 38)} = 0.27$ $P > 0.05$	$F_{(2, 38)} = 5.36$ $P < 0.05$	$F_{(2, 38)} = 5.36$ $P < 0.05$	$T_{12} = 2.9$ $P < 0.05$	$T_{13} = 1.2$ $P > 0.05$	$T_{13} = 0.9$ $P > 0.05$	$T_{12} = 3.7$ $P < 0.01$	$T_{13} = 3.7$ $P < 0.01$	$T_{13} = 0.2$ $P > 0.05$
	III	WT	$F_{(1, 41)} = 0.29$ $P > 0.05$	$F_{(2, 41)} = 0.27$ $P > 0.05$	$F_{(2, 41)} = 0.27$ $P > 0.05$						
		KIV	$F_{(1, 39)} = 0.01$ $P > 0.05$	$F_{(2, 39)} = 1.14$ $P > 0.05$	$F_{(2, 39)} = 2.12$ $P > 0.05$						
	IV	WT	$F_{(1, 41)} = 0.34$ $P > 0.05$	$F_{(2, 41)} = 0.28$ $P > 0.05$	$F_{(2, 41)} = 0.28$ $P > 0.05$						
		KIV	$F_{(1, 40)} = 0.14$ $P > 0.05$	$F_{(2, 40)} = 0.38$ $P > 0.05$	$F_{(2, 40)} = 0.38$ $P > 0.05$						
	V	WT	$F_{(1, 18)} = 0.01$ $P > 0.05$	$F_{(2, 18)} = 0.58$ $P > 0.05$	$F_{(2, 18)} = 0.58$ $P > 0.05$						
		KIV	$F_{(1, 18)} = 0.11$ $P > 0.05$	$F_{(2, 18)} = 3.71$ $P < 0.05$	$F_{(2, 18)} = 2.2$ $P > 0.05$	$T_6 = 1.9$ $P > 0.05$	$T_6 = 0.6$ $P > 0.05$	$T_6 = 0.8$ $P > 0.05$	$T_6 = 0.7$ $P > 0.05$	$T_6 = 2.7$ $P > 0.05$	$T_6 = 2.0$ $P > 0.05$
	VI	WT	$F_{(1, 41)} = 1.40$ $P > 0.05$	$F_{(2, 41)} = 0.47$ $P > 0.05$	$F_{(2, 41)} = 0.47$ $P > 0.05$						
		KIV	$F_{(1, 39)} = 1.63$ $P > 0.05$	$F_{(2, 39)} = 1.29$ $P > 0.05$	$F_{(2, 39)} = 1.29$ $P > 0.05$						
	VIIa	WT	$F_{(1, 41)} = 0.44$ $P > 0.05$	$F_{(2, 41)} = 0.27$ $P > 0.05$	$F_{(2, 41)} = 0.27$ $P > 0.05$						
		KIV	$F_{(1, 40)} = 0.01$ $P > 0.05$	$F_{(2, 40)} = 7.22$ $P < 0.01$	$F_{(2, 40)} = 7.22$ $P < 0.01$	$T_{13} = 2.9$ $P < 0.05$	$T_{13} = 2.0$ $P > 0.05$	$T_{14} = 1.5$ $P > 0.05$	$T_{12} = 4.8$ $P < 0.005$	$T_{13} = 4.3$ $P < 0.005$	$T_{13} = 0.6$ $P > 0.05$
	VIII	WT	$F_{(1, 41)} = 0.12$ $P > 0.05$	$F_{(2, 41)} = 0.22$ $P > 0.05$	$F_{(2, 41)} = 0.22$ $P > 0.05$						
		KIV	$F_{(1, 40)} = 1.89$ $P > 0.05$	$F_{(2, 40)} = 5.62$ $P < 0.01$	$F_{(2, 40)} = 5.62$ $P < 0.01$	$T_{13} = 3.5$ $P < 0.01$	$T_{13} = 0.2$ $P > 0.05$	$T_{14} = 1.0$ $P > 0.05$	$T_{12} = 3.5$ $P < 0.01$	$T_{13} = 4.4$ $P < 0.005$	$T_{13} = 0.7$ $P > 0.05$
	IXa	WT	$F_{(1, 41)} = 0.21$ $P > 0.05$	$F_{(2, 41)} = 0.76$ $P > 0.05$	$F_{(2, 41)} = 0.76$ $P > 0.05$						
		KIV	$F_{(1, 39)} = 1.77$ $P > 0.05$	$F_{(2, 39)} = 2.38$ $P > 0.05$	$F_{(2, 39)} = 3.69$ $P < 0.05$	$F_{(2, 39)} = 3.69$ $P < 0.05$	$T_{12} = 2.7$ $P < 0.05$	$T_{13} = 1.2$ $P > 0.05$	$T_{14} = 0.8$ $P > 0.05$	$T_{12} = 3.4$ $P < 0.01$	$T_{13} = 1.6$ $P > 0.05$
Frontal Cortex	I	WT	$F_{(1, 40)} = 1.09$ $P > 0.05$	$F_{(2, 40)} = 0.80$ $P > 0.05$	$F_{(2, 42)} = 0.80$ $P > 0.05$						
		KIV	$F_{(1, 41)} = 4.75$ $P < 0.05$	$F_{(2, 41)} = 11.5$ $P < 0.005$	$F_{(2, 41)} = 11.5$ $P < 0.005$	$T_{14} = 4.7$ $P < 0.001$	$T_{13} = 2.2$ $P > 0.05$	$T_{14} = 1.4$ $P > 0.05$	$T_{13} = 6.7$ $P < 0.001$	$T_{14} = 3.3$ $P < 0.05$	$T_{13} = 3.5$ $P < 0.01$
	IIa	WT	$F_{(1, 42)} = 0.10$ $P > 0.05$	$F_{(2, 42)} = 0.21$ $P > 0.05$	$F_{(2, 42)} = 0.21$ $P > 0.05$						
		KIV	$F_{(1, 40)} = 1.62$ $P < 0.05$	$F_{(2, 40)} = 1.32$ $P > 0.05$	$F_{(2, 40)} = 2.18$ $P > 0.05$						
	IIb	WT	$F_{(1, 42)} = 0.08$ $P > 0.05$	$F_{(2, 42)} = 0.12$ $P > 0.05$	$F_{(2, 42)} = 0.12$ $P > 0.05$						
		KIV	$F_{(1, 40)} = 1.16$ $P > 0.05$	$F_{(2, 40)} = 3.77$ $P < 0.05$	$F_{(2, 40)} = 5.98$ $P < 0.01$	$T_{12} = 3.3$ $P < 0.01$	$T_{14} = 1.2$ $P > 0.05$	$T_{14} = 0.4$ $P > 0.05$	$T_{13} = 4.2$ $P < 0.005$	$T_{13} = 3.3$ $P < 0.05$	$T_{14} = 0.9$ $P < 0.01$
	IIc	WT	$F_{(1, 42)} = 0.37$ $P > 0.05$	$F_{(2, 42)} = 0.22$ $P > 0.05$	$F_{(2, 42)} = 0.22$ $P > 0.05$						
		KIV	$F_{(1, 41)} = 6.49$	$F_{(2, 41)} = 3.41$	$F_{(2, 41)} = 3.41$	$T_{13} = 2.3$	$T_{14} = 0.6$	$T_{14} = 2.7$	$T_{13} = 2.9$	$T_{13} = 0.3$	$T_{14} = 3.4$

		P < 0.05	P < 0.05	P < 0.05	P > 0.05	P > 0.05	P < 0.05	P < 0.05	P > 0.05	P < 0.05
III	WT	F _(1, 42) = 0.01 P > 0.05	F _(2, 42) = 0.10 P > 0.05	F _(2, 42) = 0.10 P > 0.05						
	KIV	F _(1, 40) = 2.86 P < 0.05	F_(2, 40) = 3.78 P < 0.05	F_(2, 40) = 4.46 P < 0.05	T ₁₂ = 2.0 P > 0.05	T ₁₄ = 1.5 P > 0.05	T ₁₄ = 2.3 P > 0.05	T₁₃ = 3.1 P < 0.05	T ₁₃ = 0.5 P > 0.05	T₁₄ = 3.8 P < 0.01
IV	WT	F _(1, 42) = 0.39 P > 0.05	F _(2, 42) = 0.12 P > 0.05	F _(2, 42) = 0.12 P > 0.05						
	KIV	F _(1, 41) = 0.58 P < 0.05	F_(2, 41) = 3.68 P < 0.05	F_(2, 41) = 3.68 P < 0.05	T₁₃ = 2.6 P < 0.05	T ₁₄ = 0.7 P > 0.05	T ₁₄ = 0.6 P > 0.05	T₁₃ = 3.3 P < 0.05	T₁₃ = 3.2 P < 0.05	T ₁₄ = 0.1 P > 0.05
V	WT	F _(1, 42) = 0.64 P > 0.05	F _(2, 42) = 0.21 P > 0.05	F _(2, 42) = 0.21 P > 0.05						
	KIV	F_(1, 38) = 5.59 P < 0.01	F _(2, 38) = 2.49 P > 0.05	F _(2, 39) = 3.01 P > 0.05	T ₁₂ = 2.2 P > 0.05	T ₁₃ = 0.6 P > 0.05	T ₁₃ = 2.5 P > 0.05			
VI	WT	F _(1, 42) = 1.13 P > 0.05	F _(2, 42) = 0.06 P > 0.05	F _(2, 42) = 0.06 P > 0.05						
	KIV	F _(1, 40) = 2.09 P > 0.05	F _(2, 40) = 2.41 P > 0.05	F_(2, 40) = 4.47 P < 0.05	T₁₂ = 3.1 P < 0.05	T ₁₄ = 1.0 P > 0.05	T ₁₄ = 0.3 P > 0.05	T₁₃ = 3.6 P < 0.01	T ₁₃ = 2.3 P > 0.05	T ₁₄ = 1.4 P > 0.05
VIIa	WT	F _(1, 42) = 0.17 P > 0.05	F _(2, 42) = 0.10 P > 0.05	F _(2, 42) = 0.10 P > 0.05						
	KIV	F_(1, 40) = 6.18 P < 0.05	F_(2, 40) = 4.51 P < 0.05	F_(2, 40) = 5.73 P < 0.01	T₁₂ = 2.8 P < 0.05	T ₁₄ = 1.5 P > 0.05	T₁₄ = 2.7 P < 0.05	T₁₃ = 3.6 P < 0.01	T ₁₃ = 0.3 P > 0.05	T₁₄ = 4.1 P < 0.01
VIII	WT	F _(1, 42) = 0.73 P > 0.05	F _(2, 42) = 0.10 P > 0.05	F _(2, 42) = 0.10 P > 0.05						
	KIV	F _(1, 40) = 1.45 P < 0.05	F _(2, 40) = 2.19 P > 0.05	F_(2, 40) = 3.75 P < 0.05	T₁₂ = 2.6 P < 0.05	T ₁₄ = 1.2 P > 0.05	T ₁₄ = 0.5 P > 0.05	T₁₃ = 3.4 P < 0.01	T ₁₃ = 1.8 P > 0.05	T ₁₄ = 1.7 P > 0.05
IXa	WT	F _(1, 42) = 1.34 P > 0.05	F _(2, 42) = 0.16 P > 0.05	F _(2, 42) = 0.16 P > 0.05						
	KIV	F _(1, 40) = 2.86 P < 0.05	F_(2, 40) = 3.78 P < 0.05	F_(2, 40) = 4.46 P < 0.05	T ₁₂ = 2.0 P > 0.05	T ₁₄ = 1.5 P > 0.05	T ₁₄ = 2.3 P > 0.05	T₁₃ = 3.1 P < 0.05	T ₁₃ = 0.5 P > 0.05	T₁₄ = 3.8 P < 0.01

b. Genotype x age effects on EET effects

Two-way ANOVA		Genotype Effects	Age Effects	Genotype X Age Interactions	Post hoc Bonferroni multiple comparisons							
					Genotype Effects (WT vs. KIV)			Age Effects (ED, YA, OA)				
					ED	YA	OA	WT		KIV		
								ED vs YA	ED vs OA	ED vs YA	ED vs OA	YA vs OA
Hippocampus	I	F _(1, 40) = 0.42 P > 0.05	F_(2, 40) = 8.66 P < 0.005	F _(2, 40) = 3.02 P > 0.05				T ₁₄ = 1.9 P > 0.05	T ₁₄ = 2.5 P > 0.05	T ₁₄ = 0.7 P > 0.05	T₁₂ = 3.8 P < 0.01	T ₁₂ = 1.2 P > 0.05
	IIa	F _(1, 40) = 0.81 P > 0.05	F _(2, 40) = 1.57 P > 0.05	F _(2, 40) = 0.23 P > 0.05								
	IIb	F _(1, 40) = 0.01 P > 0.05	F _(2, 40) = 2.30 P > 0.05	F _(2, 40) = 1.85 P > 0.05								
	IIc	F _(1, 40) = 0.28 P > 0.05	F_(2, 40) = 3.62 P < 0.05	F_(2, 40) = 5.74 P < 0.01	T ₁₃ = 3.1 P < 0.05	T ₁₄ = 1.2 P > 0.05	T ₁₄ = 1.0 P > 0.05	T ₁₄ = 0.4 P > 0.05	T ₁₄ = 0.5 P > 0.05	T ₁₄ = 0.1 P > 0.05	T₁₂ = 3.7 P < 0.01	T₁₃ = 3.5 P < 0.01
	III	F _(1, 40) = 0.11 P > 0.05	F _(2, 40) = 1.12 P > 0.05	F_(2, 40) = 4.58 P < 0.05	T ₁₄ = 2.4 P > 0.05	T ₁₄ = 1.9 P > 0.05	T ₁₄ = 0.0 P > 0.05	T ₁₄ = 0.8 P > 0.05	T ₁₄ = 0.3 P > 0.05	T ₁₄ = 0.2 P > 0.05	T₁₂ = 3.1 P < 0.05	T ₁₃ = 1.7 P > 0.05
	IV	F _(1, 40) = 0.18 P > 0.05	F _(1, 40) = 0.11 P > 0.05	F _(2, 40) = 0.97 P > 0.05								
	V	F _(1, 18) = 2.62 P > 0.05	F_(2, 18) = 4.62 P < 0.05	F _(2, 18) = 1.54 P > 0.05				T ₆ = 0.5 P > 0.05	T ₆ = 0.7 P > 0.05	T ₆ = 1.2 P > 0.05	T₆ = 3.1 P < 0.05	T ₆ = 2.4 P > 0.05
	VI	F _(1, 40) = 0.01 P > 0.05	F _(1, 40) = 0.27 P > 0.05	F _(2, 40) = 2.37 P > 0.05								
	VIIa	F _(1, 40) = 0.14 P > 0.05	F_(2, 40) = 6.37 P < 0.01	F_(2, 40) = 9.95 P < 0.005	T ₁₄ = 3.7 P < 0.01	T ₁₄ = 2.3 P > 0.05	T ₁₄ = 0.8 P > 0.05	T ₁₄ = 1.0 P > 0.05	T ₁₄ = 0.0 P > 0.05	T ₁₄ = 1.0 P > 0.05	T₁₂ = 5.0 P < 0.005	T₁₃ = 4.5 P < 0.005
	VIII	F _(1, 40) = 1.16 P > 0.05	F_(2, 40) = 6.15 P < 0.01	F_(2, 40) = 4.99 P < 0.05	T ₁₄ = 3.2 P > 0.05	T ₁₄ = 0.7 P > 0.05	T ₁₄ = 0.3 P > 0.05	T ₁₄ = 0.5 P > 0.05	T ₁₄ = 0.8 P > 0.05	T ₁₄ = 3.5 P > 0.05	T₁₂ = 4.3 P < 0.01	T₁₃ = 4.3 P < 0.01

				P < 0.01	P > 0.05	P > 0.05	P > 0.05	P > 0.05	P > 0.05	P < 0.01	P < 0.005	P > 0.05	
	IXa	F _(1, 40) = 0.48 P > 0.05	F _(1, 40) = 1.33 P > 0.05	F_(2, 40) = 0.60 P < 0.01	T ₁₄ = 2.5 P > 0.05	T ₁₄ = 2.3 P > 0.05	T ₁₄ = 1.0 P > 0.05	T ₁₄ = 1.4 P > 0.05	T ₁₄ = 0.1 P > 0.05	T ₁₄ = 1.4 P > 0.05	T₁₂ = 3.4 P < 0.01	T ₁₃ = 1.6 P > 0.05	T ₁₃ = 1.9 P > 0.05
Frontal Cortex	I	F _(1, 41) = 0.74 P > 0.05	F_(2, 41) = 12.3 P < 0.001	F_(2, 41) = 4.66 P < 0.05	T ₁₄ = 2.9 P < 0.05	T ₁₃ = 1.4 P > 0.05	T ₁₄ = 0.1 P > 0.05	T ₁₄ = 1.4 P > 0.05	T ₁₄ = 2.2 P > 0.05	T ₁₄ = 1.4 P > 0.05	T₁₃ = 5.5 P < 0.001	T ₁₄ = 2.7 P > 0.05	T ₁₃ = 2.9 P < 0.05
	IIa	F _(1, 41) = 1.76 P > 0.05	F _(2, 41) = 2.01 P > 0.05	F _(2, 41) = 1.90 P > 0.05									
	IIb	F _(1, 41) = 0.27 P > 0.05	F_(2, 41) = 7.61 P < 0.01	F_(2, 41) = 3.78 P < 0.05	T ₁₃ = 2.5 P > 0.05	T ₁₄ = 1.2 P > 0.05	T ₁₄ = 0.4 P > 0.05	T ₁₄ = 0.8 P > 0.05	T ₁₄ = 0.6 P > 0.05	T ₁₄ = 0.2 P > 0.05	T₁₃ = 4.4 P < 0.005	T ₁₃ = 3.5 P < 0.01	T ₁₄ = 1.0 P > 0.05
	IIc	F_(1, 41) = 9.88 P < 0.01	F_(2, 41) = 4.65 P < 0.05	F _(2, 41) = 2.8 P > 0.05	T ₁₃ = 2.9 P < 0.05	T ₁₄ = 0.1 P > 0.05	T₁₄ = 2.6 P < 0.05	T ₁₄ = 0.0 P > 0.05	T ₁₄ = 0.8 P > 0.05	T ₁₄ = 0.7 P > 0.05	T₁₃ = 3.0 P < 0.05	T ₁₃ = 0.3 P > 0.05	T ₁₄ = 3.4 P < 0.01
	III	F _(1, 41) = 0.05 P > 0.05	F _(2, 41) = 1.51 P > 0.05	F _(2, 41) = 2.37 P > 0.05									
	IV	F _(1, 41) = 0.00 P > 0.05	F _(2, 41) = 1.50 P > 0.05	F_(2, 41) = 3.72 P < 0.05	T ₁₃ = 2.2 P > 0.05	T ₁₄ = 1.1 P > 0.05	T ₁₄ = 1.2 P > 0.05	T ₁₄ = 0.6 P > 0.05	T ₁₄ = 0.6 P > 0.05	T ₁₄ = 0.1 P > 0.05	T ₁₃ = 2.7 P > 0.05	T ₁₃ = 2.7 P > 0.05	T ₁₄ = 0.1 P > 0.05
	V	F _(1, 39) = 1.69 P > 0.05	F _(2, 39) = 2.39 P > 0.05	F _(2, 39) = 2.72 P > 0.05									
	VI	F _(1, 41) = 0.00 P > 0.05	F _(2, 41) = 2.83 P > 0.05	F_(2, 41) = 3.97 P < 0.05	T ₁₃ = 2.2 P > 0.05	T ₁₄ = 1.6 P > 0.05	T ₁₄ = 1.2 P > 0.05	T ₁₄ = 0.2 P > 0.05	T ₁₄ = 0.6 P > 0.05	T ₁₄ = 0.2 P > 0.05	T₁₃ = 3.6 P < 0.01	T ₁₃ = 2.3 P > 0.05	T ₁₄ = 1.3 P > 0.05
	VIIa	F _(1, 41) = 2.93 P > 0.05	F_(2, 41) = 4.52 P < 0.05	F_(2, 41) = 4.96 P < 0.05	T ₁₃ = 2.3 P > 0.05	T ₁₄ = 1.6 P > 0.05	T ₁₄ = 2.2 P > 0.05	T ₁₄ = 0.4 P > 0.05	T ₁₄ = 0.6 P > 0.05	T ₁₄ = 0.2 P > 0.05	T₁₃ = 3.5 P < 0.01	T ₁₃ = 1.7 P > 0.05	T ₁₄ = 3.9 P < 0.01
	VIII	F _(1, 41) = 0.00 P > 0.05	F _(2, 41) = 1.95 P > 0.05	F_(2, 41) = 3.74 P < 0.05	T ₁₃ = 2.0 P > 0.05	T ₁₄ = 1.8 P > 0.05	T ₁₄ = 0.3 P > 0.05	T ₁₄ = 0.6 P > 0.05	T ₁₄ = 0.6 P > 0.05	T ₁₄ = 0.1 P > 0.05	T₁₃ = 3.3 P < 0.01	T ₁₃ = 1.7 P > 0.05	T ₁₄ = 1.6 P > 0.05
	IXa	F _(1, 41) = 0.07 P > 0.05	F _(2, 41) = 2.87 P > 0.05	F_(2, 41) = 4.25 P < 0.05	T ₁₃ = 1.3 P > 0.05	T ₁₄ = 2.2 P > 0.05	T ₁₄ = 1.3 P > 0.05	T ₁₄ = 0.7 P > 0.05	T ₁₄ = 0.6 P > 0.05	T ₁₄ = 0.1 P > 0.05	T₁₃ = 2.8 P < 0.05	T ₁₃ = 0.5 P > 0.05	T ₁₄ = 3.5 P < 0.01