

SUPPLEMENTARY TABLE 1

Figure Number	Test Used	n			
1C	One-Way ANOVA	5 per group			
Figure 1C ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Genotype	24103	2	12052	F (2, 12) = 324.2	P < 0.0001
Residual	446.1	12	37.17		
Total	24549	14			
Figure 1C Multiple Comparisons	Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value	
Tukey's multiple comparisons test					
Control vs. DG, 4 Wks	58.4	48.11 to 68.69	Yes	< 0.0001	
Control vs. DG, 8 Wks	97.56	87.27 to 107.8	Yes	< 0.0001	
DG, 4 Wks vs. DG, 8 Wks	39.16	28.87 to 49.45	Yes	< 0.0001	

Figure Number	Test Used	n			
1D	One-Way ANOVA	6 for control group 5 per group for others			
Figure 1D ANOVA TABLE	SS	DF	MS	F (DFn, DFd)	P value
Genotype	13.07	2	6.533	F (2, 13) = 0.2804	P = 0.7600
Residual	302.9	13	23.3		
Total	316	15			
ANOVA NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number	Test Used	n		
1F	Kaplan-Meier Survival Analysis with Bonferroni correction and Mantel-Cox p-values	27 for Control Vehicle 26 for Control Fluoxetine 19 for POMC-Cre/fl1A Vehicle 21 for POMC-Cre/fl1A Fluoxetine		
Comparisons	4 Total Comparisons, so .05/4=.0125; p<0.0125 for significance			
Comparison	Chi-Square	P-Value	Significant?	
Control Vehicle vs Control Fluoxetine	31.611	< 0.0001	Yes	
POMC-Cre/fl1A Vehicle vs POMC-Cre/fl1A Fluoxetine	0.44	0.5071	No	
Control Vehicle vs POMC-Cre/fl1A Vehicle	0.172	0.6782	No	
Control Fluoxetine vs POMC-Cre/fl1A Fluoxetine	19.568	< 0.0001	Yes	

Figure Number	Test Used	n			
1G - Open Arm Entries	Two-Way ANOVA	27 for Control Vehicle 26 for Control Fluoxetine 19 for POMC-Cre/fl1A Vehicle 21 for POMC-Cre/fl1A Fluoxetine			
Figure 1G - Open Arm Entries ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	53.82	1	53.82	F (1, 89) = 8.120	P = 0.0054
Genotype	14.74	1	14.74	F (1, 89) = 2.224	P = 0.1394
Treatment	64.47	1	64.47	F (1, 89) = 9.728	P = 0.0024
Residual	589.8	89	6.627		

Figure 1G - Open Arm Entries Multiple Comparisons

Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value
Control Vehicle vs Control Fluoxetine	-3.221	-5.073 to -1.369	Yes	< 0.0001
Control Vehicle vs POMC-Cre/fl1A Vehicle	-0.7329	-2.751 to 1.285	No	0.7775
Control Vehicle vs. POMC-Cre/fl1A Fluoxetine	-0.8783	-2.839 to 1.083	No	0.6456
Control Fluoxetine vs. POMC-Cre/fl1A Vehicle	2.488	0.4535 to 4.522	Yes	0.0101
Control Fluoxetine vs. POMC-Cre/fl1A Fluoxetine	2.342	0.3649 to 4.320	Yes	0.0135
POMC-Cre/fl1A Vehicle vs. POMC-Cre/fl1A Fluoxetine	-0.1454	-2.280 to 1.989	No	0.998

Figure Number
1G - Open Arm Duration

Test Used
Two-Way ANOVA

n
27 for Control Vehicle
26 for Control Fluoxetine
19 for POMC-Cre/fl1A Vehicle
21 for POMC-Cre/fl1A Fluoxetine

Figure 1G - Open Arm Duration ANOVA TABLE

	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	8764	1	8764	F (1, 89) = 6.435	P = 0.0129
Genotype	2362	1	2362	F (1, 89) = 1.734	P = 0.1912
Treatment	12726	1	12726	F (1, 89) = 9.344	P = 0.0030
Residual	121222	89	1362		

Figure 1G - Open Arm Duration Multiple Comparisons

Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value
Control Vehicle vs Control Fluoxetine	-43.27	-69.82 to -16.72	Yes	0.0003
Control Vehicle vs POMC-Cre/fl1A Vehicle	-9.436	-38.37 to 19.50	No	0.8284
Control Vehicle vs. POMC-Cre/fl1A Fluoxetine	-13.46	-41.57 to 14.66	No	0.5948
Control Fluoxetine vs. POMC-Cre/fl1A Vehicle	33.83	4.670 to 63.00	Yes	0.0162
Control Fluoxetine vs. POMC-Cre/fl1A Fluoxetine	29.81	1.461 to 58.16	Yes	0.0354
POMC-Cre/fl1A Vehicle vs. POMC-Cre/fl1A Fluoxetine	-4.023	-34.62 to 26.57	No	0.9859

Figure Number
1H

Test Used
Two-Way ANOVA

n
27 for Control Vehicle
25 for Control Fluoxetine
18 for POMC-Cre/fl1A Vehicle
20 for POMC-Cre/fl1A Fluoxetine

Figure 1H ANOVA TABLE

	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	21054	1	21054	F (1, 86) = 9.769	P = 0.0024
Genotype	13703	1	13703	F (1, 86) = 6.358	P = 0.0135
Treatment	75582	1	75582	F (1, 86) = 35.07	P < 0.0001
Residual	185353	86	2155		

Figure 1H Multiple Comparisons

Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value
Control Vehicle vs Control Fluoxetine	89.74	55.98 to 123.5	Yes	< 0.0001
Control Vehicle vs POMC-Cre/fl1A Vehicle	5.991	-31.02 to 43.00	No	0.9742
Control Vehicle vs. POMC-Cre/fl1A Fluoxetine	33.73	-2.157 to 69.61	No	0.0732
Control Fluoxetine vs. POMC-Cre/fl1A Vehicle	-83.75	-121.3 to -46.15	Yes	< 0.0001
Control Fluoxetine vs. POMC-Cre/fl1A Fluoxetine	-56.01	-92.50 to -19.52	Yes	0.0007
POMC-Cre/fl1A Vehicle vs. POMC-Cre/fl1A Fluoxetine	27.74	-11.78 to 67.25	No	0.2624

Figure Number	Test Used	n			
2C	Student's t-test	5 per group			
F test to compare variances					
Control (AAV8-CamKII-GFP) vs AAV-CamKII-Cre	F, DFn, Dfd	P value	Significant?	Welch's correction necessary	
	12.59, 4, 4	0.0309	Yes		
Figure 2C Student's t-test with Welch's correction					
Control (AAV8-CamKII-GFP) vs AAV-CamKII-Cre	P value	Significant?	One or two tailed?	Welch corrected t, df	
	0.001	Yes	Two-tailed	t=7.430 df=4.632	

Figure Number	Test Used	n			
2D	Student's t-test	5 per group			
F test to compare variances					
Control (AAV8-CamKII-GFP) vs AAV-CamKII-Cre	F, DFn, Dfd	P value	Significant?		
	1.042, 4, 4	0.9689	No		
Figure 2D Student's t-test					
Control (AAV8-CamKII-GFP) vs AAV-CamKII-Cre	P value	Significant?	One or two tailed?	t, df	
	0.7593	No	Two-tailed	t=0.317 df=8	

Figure Number	Test Used	n	
2E	Kaplan-Meier Survival Analysis with Bonferroni correction and Mantel-Cox p-values	14 for AAV8-CamKII-GFP/fl1A Vehicle 14 for AAV8-CamKII-GFP/fl1A Fluoxetine 14 for AAV8-CamKII-Cre/fl1A Vehicle 16 for AAV8-CamKII-Cre/fl1A Fluoxetine	
Comparisons			
4 Total Comparisons, so .05/4=.0125; p<0.0125 for significance			
Comparison	Chi-Square	P-Value	Significant?
AAV8-CamKII-GFP/fl1A Vehicle vs AAV8-CamKII-GFP/fl1A Fluoxetine	12.333	0.0004	Yes
AAV8-CamKII-Cre/fl1A Vehicle vs AAV8-CamKII-Cre/fl1A Fluoxetine	0.931	0.3345	No
AAV8-CamKII-GFP/fl1A Vehicle vs AAV8-CamKII-Cre/fl1A Vehicle	1.628	0.202	No
AAV8-CamKII-GFP/fl1A Fluoxetine vs AAV8-CamKII-Cre/fl1A Fluoxetine	11.482	0.0007	Yes

Figure Number	Test Used	n				
2F - Open Arm Entries	Two-Way ANOVA	14 for AAV8-CamKII-GFP/fl1A Vehicle 14 for AAV8-CamKII-GFP/fl1A Fluoxetine 14 for AAV8-CamKII-Cre/fl1A Vehicle 15 for AAV8-CamKII-Cre/fl1A Fluoxetine				
Figure 2F - Open Arm Entries ANOVA TABLE						
	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value	
Interaction	56.95	1	56.95	F (1, 53) = 13.95	P = 0.0005	
Virus	38.43	1	38.43	F (1, 53) = 9.410	P = 0.0034	
Treatment	38.43	1	38.43	F (1, 53) = 9.410	P = 0.0034	
Residual	216.4	53	4.084			
Figure 2F - Open Arm Entries Multiple Comparisons						
Tukey's multiple comparisons test						
	Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value		
AAV8-CamKII-GFP/fl1A Vehicle vs AAV8-CamKII-GFP/fl1A Fluoxetine	-3.643	-5.669 to -1.617	Yes	< 0.0001		
AAV8-CamKII-GFP/fl1A Vehicle vs AAV8-CamKII-Cre/fl1A Vehicle	-0.3571	-2.383 to 1.669	No	0.9658		
AAV8-CamKII-GFP/fl1A Vehicle vs AAV8-CamKII-Cre/fl1A Fluoxetine	0	-1.992 to 1.992	No	> 0.9999		
AAV8-CamKII-GFP/fl1A Fluoxetine vs AAV8-CamKII-Cre/fl1A Vehicle	3.286	1.260 to 5.312	Yes	0.0004		
AAV8-CamKII-GFP/fl1A Fluoxetine vs AAV8-CamKII-Cre/fl1A Fluoxetine	3.643	1.651 to 5.635	Yes	< 0.0001		
AAV8-CamKII-Cre/fl1A Vehicle vs AAV8-CamKII-Cre/fl1A Fluoxetine	0.3571	-1.635 to 2.349	No	0.9641		

Figure Number	Test Used	n			
2F - Open Arm Duration	Two-Way ANOVA	14 for AAV8-CamKII-GFP/fl1A Vehicle	14 for AAV8-CamKII-GFP/fl1A Fluoxetine	14 for AAV8-CamKII-Cre/fl1A Vehicle	15 for AAV8-CamKII-Cre/fl1A Fluoxetine
Figure 2F - Open Arm Duration ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	2329	1	2329	F (1, 53) = 13.00	P = 0.0007
Virus	1231	1	1231	F (1, 53) = 6.871	P = 0.0114
Treatment	1202	1	1202	F (1, 53) = 6.712	P = 0.0123
Residual	9492	53	179.1		
Figure 2F - Open Arm Duration Multiple Comparisons					
Tukey's multiple comparisons test					
	Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value	
AAV8-CamKII-GFP/fl1A Vehicle vs AAV8-CamKII-GFP/fl1A Fluoxetine	-21.98	-35.40 to -8.562	Yes	0.0004	
AAV8-CamKII-GFP/fl1A Vehicle vs AAV8-CamKII-Cre/fl1A Vehicle	-3.493	-16.91 to 9.924	No	0.9003	
AAV8-CamKII-GFP/fl1A Vehicle vs AAV8-CamKII-Cre/fl1A Fluoxetine	0.1076	-13.08 to 13.30	No	> 0.9999	
AAV8-CamKII-GFP/fl1A Fluoxetine vs AAV8-CamKII-Cre/fl1A Vehicle	18.49	5.069 to 31.90	Yes	0.0032	
AAV8-CamKII-GFP/fl1A Fluoxetine vs AAV8-CamKII-Cre/fl1A Fluoxetine	22.09	8.895 to 35.28	Yes	0.0003	
AAV8-CamKII-Cre/fl1A Vehicle vs AAV8-CamKII-Cre/fl1A Fluoxetine	3.6	-9.591 to 16.79	No	0.8871	

Figure Number	Test Used	n			
2G	Two-Way ANOVA	14 for AAV8-CamKII-GFP/fl1A Vehicle	14 for AAV8-CamKII-GFP/fl1A Fluoxetine	14 for AAV8-CamKII-Cre/fl1A Vehicle	16 for AAV8-CamKII-Cre/fl1A Fluoxetine
Figure 2G ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	14256	1	14256	F (1, 54) = 5.385	P = 0.0241
Virus	15548	1	15548	F (1, 54) = 5.873	P = 0.0188
Treatment	12698	1	12698	F (1, 54) = 4.797	P = 0.0328
Residual	142948	54	2647		
Figure 2G Multiple Comparisons					
Tukey's multiple comparisons test					
	Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value	
AAV8-CamKII-GFP/fl1A Vehicle vs AAV8-CamKII-GFP/fl1A Fluoxetine	61.05	9.500 to 112.6	Yes	0.0142	
AAV8-CamKII-GFP/fl1A Vehicle vs AAV8-CamKII-Cre/fl1A Vehicle	-1.393	-52.94 to 50.16	No	0.9999	
AAV8-CamKII-GFP/fl1A Vehicle vs AAV8-CamKII-Cre/fl1A Fluoxetine	-3.158	-53.07 to 46.76	No	0.9983	
AAV8-CamKII-GFP/fl1A Fluoxetine vs AAV8-CamKII-Cre/fl1A Vehicle	-62.44	-114.0 to -10.89	Yes	0.0116	
AAV8-CamKII-GFP/fl1A Fluoxetine vs AAV8-CamKII-Cre/fl1A Fluoxetine	-64.21	-114.1 to -14.29	Yes	0.0066	
AAV8-CamKII-Cre/fl1A Vehicle vs AAV8-CamKII-Cre/fl1A Fluoxetine	-1.765	-51.68 to 48.15	No	0.9997	

Figure Number	Test Used	n		
3B	Kaplan-Meier Survival Analysis with Bonferroni correction and Mantel-Cox p-values	15 per group		
Comparisons	9 Total Comparisons, so .05/9=.0056; p<0.0056 for significance			
Comparison (All Mice are Nestin-CreER)	Chi-Square	P-Value	Significant?	
Vehicle Vehicle vs Vehicle Fluoxetine (8 wks)	20.399	<0.0001	Yes	
Vehicle Vehicle vs Vehicle Fluoxetine (11 wks)	13.573	0.0002	Yes	

Vehicle Fluoxetine (8 wks) vs Vehicle Fluoxetine (11 wks)	0.462	0.4967	No
Tamoxifen (8 wks) Vehicle vs Tamoxifen (8wks) Fluoxetine (8 wks)	11.222	0.0008	Yes
Tamoxifen (8 wks) Vehicle vs Tamoxifen (8wks) Fluoxetine (11 wks)	18.435	<0.0001	Yes
Tamoxifen (8 wks) Fluoxetine (8 wks) vs Tamoxifen (8wks) Fluoxetine (11 wks)	0.131	0.7175	No
Vehicle Vehicle vs Tamoxifen (8 wks) Vehicle	0.037	0.8481	No
Vehicle Fluoxetine (8 wks) vs Tamoxifen (8 wks) Fluoxetine (8 wks)	0.27	0.6032	No
Vehicle Fluoxetine (11 wks) vs Tamoxifen (8 wks) Fluoxetine (11 wks)	0.123	0.7256	No

Figure Number	Test Used	n			
3C - Open Arm Entries	Two-Way ANOVA	15 per group			
Figure 3C - Open Arm Entries ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	3.356	2	1.678	F (2, 84) = 0.1399	P = 0.8696
Pretreatment	0.04444	1	0.04444	F (1, 84) = 0.003706	P = 0.9516
Treatment	411.1	2	205.5	F (2, 84) = 17.14	P < 0.0001
Residual	1007	84	11.99		
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number	Test Used	n			
3C - Open Arm Duration	Two-Way ANOVA	15 per group			
Figure 3C - Open Arm Duration ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	141.54	2	70.77	F (2, 84) = 0.109	P = 0.8967
Pretreatment	3.803	1	3.803	F (1, 84) = 0.006	P = 0.9391
Treatment	47814.5	2	23907.3	F (2, 84) = 36.88	P < 0.0001
Residual	54448.2	84	648.2		
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number	Test Used	n			
3D	Two-Way ANOVA	15 per group			
Figure 3D ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	483.5	2	241.7	F (2, 84) = 0.156	P = 0.8557
Pretreatment	240.1	1	240.1	F (1, 84) = 0.155	P = 0.6948
Treatment	154161.2	2	77080.6	F (2, 84) = 49.77	P < 0.0001
Residual		84			
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number	Test Used	n		
4D	Kaplan-Meier Survival Analysis with Bonferroni correction and Mantel-Cox p-values	17 for 1A KO Vehicle		
Comparisons		15 for 1A KO Fluoxetine		
		13 for DG-1A+ Vehicle		
		17 for DG-1A+ Fluoxetine		
4 Total Comparisons, so .05/4=0.0125; p<0.0125 for significance				
Comparison	Chi-Square	P-Value	Significant?	
1A KO Vehicle vs 1A KO Fluoxetine	0.109	0.7412	No	
DG-1A+ Vehicle vs DG-1A+ Fluoxetine	7.064	0.0079	Yes	

1A KO Vehicle vs DG-1A+ Vehicle	0.025	0.8734	No
1A KO Fluoxetine vs DG-1A+ Fluoxetine	10.136	0.0015	Yes

Figure Number	Test Used	n			
4E - Open Arm Entries	Two-Way ANOVA	17 for 1A KO Vehicle 15 for 1A KO Fluoxetine 13 for DG-1A+ Vehicle 17 for DG-1A+ Fluoxetine			
Figure 4E - Open Arm Entries ANOVA TABLE					
	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	77.2	1	77.2	F (1, 58) = 7.204	P = 0.0095
Genotype	107.7	1	107.7	F (1, 58) = 10.05	P = 0.0024
Treatment	80.19	1	80.19	F (1, 58) = 7.483	P = 0.0082
Residual	621.6	58	10.72		
Figure 4E - Open Arm Entries Multiple Comparisons					
Tukey's multiple comparisons test		Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value
1A KO Vehicle vs 1A KO Fluoxetine		-0.04314	-3.111 to 3.024	No	> 0.9999
1A KO Vehicle vs DG-1A+ Vehicle		-0.4072	-3.598 to 2.783	No	0.9866
1A KO Vehicle vs DG-1A+ Fluoxetine		-4.941	-7.911 to -1.971	Yes	0.0003
1A KO Fluoxetine vs DG-1A+ Vehicle		-0.3641	-3.645 to 2.917	No	0.9911
1A KO Fluoxetine vs DG-1A+ Fluoxetine		-4.898	-7.966 to -1.831	Yes	0.0005
DG-1A+ Vehicle vs DG-1A+ Fluoxetine		-4.534	-7.724 to -1.344	Yes	0.0022

Figure Number	Test Used	n			
4E - Open Arm Duration	Two-Way ANOVA	17 for 1A KO Vehicle 15 for 1A KO Fluoxetine 13 for DG-1A+ Vehicle 17 for DG-1A+ Fluoxetine			
Figure 4E - Open Arm Duration ANOVA TABLE					
	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	944.9	1	944.9	F (1, 58) = 6.773	P = 0.0117
Genotype	711.1	1	711.1	F (1, 58) = 5.097	P = 0.0277
Treatment	654.5	1	654.5	F (1, 58) = 4.692	P = 0.0344
Residual	8091	58	139.5		
Figure 4E - Open Arm Duration Multiple Comparisons					
Tukey's multiple comparisons test		Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value
1A KO Vehicle vs 1A KO Fluoxetine		1.318	-9.750 to 12.39	No	0.9891
1A KO Vehicle vs DG-1A+ Vehicle		1.041	-10.47 to 12.55	No	0.9951
1A KO Vehicle vs DG-1A+ Fluoxetine		-13.35	-24.07 to -2.637	Yes	0.0089
1A KO Fluoxetine vs DG-1A+ Vehicle		-0.2769	-12.12 to 11.56	No	> 0.9999
1A KO Fluoxetine vs DG-1A+ Fluoxetine		-14.67	-25.74 to -3.603	Yes	0.0048
DG-1A+ Vehicle vs DG-1A+ Fluoxetine		-14.39	-25.90 to -2.883	Yes	0.0086

Figure Number	Test Used	n		
4F	Two-Way ANOVA	17 for 1A KO Vehicle 15 for 1A KO Fluoxetine 13 for DG-1A+ Vehicle 17 for DG-1A+ Fluoxetine		

Figure 4F ANOVA TABLE						
	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value	
Interaction	6388	1	6388	F (1, 58) = 4.848	P = 0.0317	
Genotype	5006	1	5006	F (1, 58) = 3.799	P = 0.0561	
Treatment	25417	1	25417	F (1, 58) = 19.29	P < 0.0001	
Residual	76421	58	1318			
Figure 4F Multiple Comparisons						
Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value		
1A KO Vehicle vs 1A KO Fluoxetine	20.32	-13.70 to 54.33	No	0.3978		
1A KO Vehicle vs DG-1A+ Vehicle	-2.344	-37.72 to 33.03	No	0.9981		
1A KO Vehicle vs DG-1A+ Fluoxetine	58.82	25.89 to 91.76	Yes	< 0.0001		
1A KO Fluoxetine vs DG-1A+ Vehicle	-22.66	-59.04 to 13.72	No	0.3606		
1A KO Fluoxetine vs DG-1A+ Fluoxetine	38.51	4.493 to 72.52	Yes	0.0205		
DG-1A+ Vehicle vs DG-1A+ Fluoxetine	61.17	25.79 to 96.54	Yes	0.0001		

Figure Number 5B						
Figure Number	Test Used	n				
5B	Two-Way ANOVA	8 per group				
Figure 5B ANOVA TABLE						
	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value	
Interaction	26335	1	26335	F (1, 28) = 10.66	P = 0.0029	
Genotype	22366	1	22366	F (1, 28) = 9.049	P = 0.0055	
Treatment	355325	1	355325	F (1, 28) = 143.8	P < 0.0001	
Residual	69204	28	2472			
Figure 5B Multiple Comparisons						
Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value		
Control Vehicle vs Control Fluoxetine	-268.1	-336.0 to -200.3	Yes	< 0.0001		
Control Vehicle vs POMC-Cre/fl1A Vehicle	-4.5	-72.37 to 63.37	No	0.9978		
Control Vehicle vs. POMC-Cre/fl1A Fluoxetine	-157.9	-225.7 to -90.01	Yes	< 0.0001		
Control Fluoxetine vs. POMC-Cre/fl1A Vehicle	263.6	195.8 to 331.5	Yes	< 0.0001		
Control Fluoxetine vs. POMC-Cre/fl1A Fluoxetine	110.3	42.38 to 178.1	Yes	0.0007		
POMC-Cre/fl1A Vehicle vs. POMC-Cre/fl1A Fluoxetine	-153.4	-221.2 to -85.51	Yes	< 0.0001		

Figure Number 5C						
Figure Number	Test Used	n				
5C	Two-Way ANOVA	8 per group				
Figure 5C ANOVA TABLE						
	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value	
Interaction	2.61E+06	1	2.61E+06	F (1, 28) = 5.292	P = 0.0291	
Genotype	1.97E+06	1	1.97E+06	F (1, 28) = 3.996	P = 0.0554	
Treatment	4.79E+07	1	4.79E+07	F (1, 28) = 97.02	P < 0.0001	
Residual	1.38E+07	28	493425			
Figure 5C Multiple Comparisons						
Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value		
Control Vehicle vs Control Fluoxetine	-3018	-3976 to -2059	Yes	< 0.0001		
Control Vehicle vs POMC-Cre/fl1A Vehicle	-74.88	-1034 to 884.1	No	0.9965		
Control Vehicle vs. POMC-Cre/fl1A Fluoxetine	-1950	-2909 to -990.8	Yes	< 0.0001		
Control Fluoxetine vs. POMC-Cre/fl1A Vehicle	2943	1984 to 3902	Yes	< 0.0001		
Control Fluoxetine vs. POMC-Cre/fl1A Fluoxetine	1068	108.8 to 2027	Yes	0.0247		
POMC-Cre/fl1A Vehicle vs. POMC-Cre/fl1A Fluoxetine	-1875	-2834 to -915.9	Yes	< 0.0001		

Figure Number 5D	Test Used Two-Way ANOVA	n 8 per group			
Figure 5D ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	686206	1	686206	F (1, 28) = 4.954	P = 0.0343
Genotype	650370	1	650370	F (1, 28) = 4.695	P = 0.0389
Treatment	9.13E+06	1	9.13E+06	F (1, 28) = 65.89	P < 0.0001
Residual	3.88E+06	28	138518		
Figure 5D Multiple Comparisons					
Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value	
Control Vehicle vs Control Fluoxetine	-1361	-1869 to -852.9	Yes	< 0.0001	
Control Vehicle vs POMC-Cre/fl1A Vehicle	-7.75	-515.8 to 500.3	No	> 0.9999	
Control Vehicle vs. POMC-Cre/fl1A Fluoxetine	-783	-1291 to -274.9	Yes	0.0013	
Control Fluoxetine vs. POMC-Cre/fl1A Vehicle	1353	845.2 to 1861	Yes	< 0.0001	
Control Fluoxetine vs. POMC-Cre/fl1A Fluoxetine	578	69.92 to 1086	Yes	0.0212	
POMC-Cre/fl1A Vehicle vs. POMC-Cre/fl1A Fluoxetine	-775.3	-1283 to -267.2	Yes	0.0015	

Figure Number 5F	Test Used Two-Way ANOVA	n 8 per group			
Figure 5F ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	488.6	2	244.3	F (2, 42) = 0.1382	P = 0.8713
Pretreatment	526.7	1	526.7	F (1, 42) = 0.2979	P = 0.5881
Treatment	378664	2	189332	F (2, 42) = 107.1	P < 0.0001
Residual	74264	42	1768		
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number 5G	Test Used Two-Way ANOVA	n 8 per group			
Figure 5G ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	1.29E+06	2	644786	F (2, 42) = 0.9504	P = 0.3947
Pretreatment	109634	1	109634	F (1, 42) = 0.1616	P = 0.6897
Treatment	3.19E+08	2	1.60E+08	F (2, 42) = 235.1	P < 0.0001
Residual	2.85E+07	42	678432		
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number 5H	Test Used Two-Way ANOVA	n 8 per group			
Figure 5H ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	3344	2	1672	F (2, 42) = 0.007296	P = 0.9927
Pretreatment	8454	1	8454	F (1, 42) = 0.03688	P = 0.8486
Treatment	7.87E+07	2	3.94E+07	F (2, 42) = 171.8	P < 0.0001
Residual	9.63E+06	42	229190		
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number	Test Used	n			
5J	Two-Way ANOVA	8 per group			
Figure 5J ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	26450	1	26450	F (1, 28) = 23.70	P < 0.0001
Genotype	23762	1	23762	F (1, 28) = 21.29	P < 0.0001
Treatment	25313	1	25313	F (1, 28) = 22.68	P < 0.0001
Residual	31249	28	1116		
Figure 5J Multiple Comparisons					
Tukey's multiple comparisons test		Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value
1A KO Vehicle vs 1A KO Fluoxetine		1.25	-44.36 to 46.86	No	0.9998
1A KO Vehicle vs DG-1A+ Vehicle		3	-42.61 to 48.61	No	0.9979
1A KO Vehicle vs DG-1A+ Fluoxetine		-110.8	-156.4 to -65.14	Yes	< 0.0001
1A KO Fluoxetine vs DG-1A+ Vehicle		1.75	-43.86 to 47.36	No	0.9996
1A KO Fluoxetine vs DG-1A+ Fluoxetine		-112	-157.6 to -66.39	Yes	< 0.0001
DG-1A+ Vehicle vs DG-1A+ Fluoxetine		-113.8	-159.4 to -68.14	Yes	< 0.0001

Figure Number	Test Used	n			
5K	Two-Way ANOVA	8 per group			
Figure 5K ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	2.25E+06	1	2.25E+06	F (1, 28) = 6.311	P = 0.0180
Genotype	1.23E+06	1	1.23E+06	F (1, 28) = 3.458	P = 0.0735
Treatment	4.11E+06	1	4.11E+06	F (1, 28) = 11.52	P = 0.0021
Residual	9.99E+06	28	356910		
Figure 5K Multiple Comparisons					
Tukey's multiple comparisons test		Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value
1A KO Vehicle vs 1A KO Fluoxetine		-186.3	-1002 to 629.3	No	0.9237
1A KO Vehicle vs DG-1A+ Vehicle		137.9	-677.7 to 953.4	No	0.9668
1A KO Vehicle vs DG-1A+ Fluoxetine		-1110	-1925 to -294.1	Yes	0.0047
1A KO Fluoxetine vs DG-1A+ Vehicle		324.1	-491.4 to 1140	No	0.7013
1A KO Fluoxetine vs DG-1A+ Fluoxetine		-923.4	-1739 to -107.8	Yes	0.0219
DG-1A+ Vehicle vs DG-1A+ Fluoxetine		-1248	-2063 to -431.9	Yes	0.0014

Figure Number	Test Used	n			
5L	Two-Way ANOVA	8 per group			
Figure 5L ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	251518	1	251518	F (1, 28) = 8.031	P = 0.0084
Genotype	255077	1	255077	F (1, 28) = 8.144	P = 0.0080
Treatment	145935	1	145935	F (1, 28) = 4.659	P = 0.0396
Residual	876965	28	31320		
Figure 5L Multiple Comparisons					
Tukey's multiple comparisons test		Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value
1A KO Vehicle vs 1A KO Fluoxetine		42.25	-199.3 to 283.8	No	0.9634
1A KO Vehicle vs DG-1A+ Vehicle		-1.25	-242.8 to 240.3	No	> 0.9999
1A KO Vehicle vs DG-1A+ Fluoxetine		-313.6	-555.2 to -72.03	Yes	0.0072
1A KO Fluoxetine vs DG-1A+ Vehicle		-43.5	-285.1 to 198.1	No	0.9603

1A KO Fluoxetine vs DG-1A+ Fluoxetine	-355.9	-597.5 to -114.3	Yes	0.0021
DG-1A+ Vehicle vs DG-1A+ Fluoxetine	-312.4	-554.0 to -70.78	Yes	0.0075

Figure Number	Test Used	n			
6B	Two-Way ANOVA	6 per group			
Figure 6B ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	4.905	1	4.905	F (1, 20) = 0.005228	P = 0.9431
Genotype	84.49	1	84.49	F (1, 20) = 0.09005	P = 0.7672
Treatment	3667	1	3667	F (1, 20) = 3.908	P = 0.0620
Residual	18765	20	938.2		
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number	Test Used	n			
6C	Two-Way ANOVA	6 per group			
Figure 6C ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	34594	1	34594	F (1, 20) = 5.585	P = 0.0284
Genotype	66543	1	66543	F (1, 20) = 10.74	P = 0.0038
Treatment	40459	1	40459	F (1, 20) = 6.531	P = 0.0188
Residual	123891	20	6195		
Figure 6C Multiple Comparisons	Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value	
Tukey's multiple comparisons test					
Control Vehicle vs Control Fluoxetine	158	30.86 to 285.2	Yes	0.0117	
Control Vehicle vs POMC-Cre/fl1A Vehicle	-29.38	-156.6 to 97.81	No	0.9155	
Control Vehicle vs. POMC-Cre/fl1A Fluoxetine	-23.2	-150.4 to 104.0	No	0.9556	
Control Fluoxetine vs. POMC-Cre/fl1A Vehicle	-187.4	-314.6 to -60.24	Yes	0.0027	
Control Fluoxetine vs. POMC-Cre/fl1A Fluoxetine	-181.2	-308.4 to -54.06	Yes	0.0037	
POMC-Cre/fl1A Vehicle vs. POMC-Cre/fl1A Fluoxetine	6.185	-121.0 to 133.4	No	0.9991	

Figure Number	Test Used	n			
6E	Two-Way ANOVA	6 per group			
Figure 6E ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	2.847	2	1.423	F (2, 30) = 0.006506	P = 0.9935
Genotype	38.67	1	38.67	F (1, 30) = 0.1767	P = 0.6772
Treatment	1418	2	709	F (2, 30) = 3.241	P = 0.0532
Residual	6564	30	218.8		
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number	Test Used	n			
6F	Two-Way ANOVA	6 per group			
Figure 6F ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	846.6	2	423.3	F (2, 30) = 0.1473	P = 0.8637
Genotype	10.86	1	10.86	F (1, 30) = 0.003777	P = 0.9514
Treatment	281787	2	140894	F (2, 30) = 49.02	P < 0.0001

Residual	86233	30	2874
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INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS

Figure Number 6H	Test Used Two-Way ANOVA	n 6 per group
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Figure 6H ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	108.4	1	108.4	F (1, 20) = 0.04255	P = 0.8387
Genotype	737	1	737	F (1, 20) = 0.2894	P = 0.5966
Treatment	0.04167	1	0.04167	F (1, 20) = 1.636E-5	P = 0.9968
Residual	50939	20	2547		

INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS

Figure Number 6I	Test Used Two-Way ANOVA	n 6 per group
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Figure 6I ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	25026	1	25026	F (1, 20) = 8.878	P = 0.0074
Genotype	20126	1	20126	F (1, 20) = 7.140	P = 0.0146
Treatment	13490	1	13490	F (1, 20) = 4.786	P = 0.0407
Residual	56375	20	2819		

Figure 6I Multiple Comparisons

Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value
1A KO Vehicle vs 1A KO Fluoxetine	-17.17	-103.0 to 68.63	No	0.9427
1A KO Vehicle vs DG-1A+ Vehicle	-6.667	-92.46 to 79.13	No	0.9962
1A KO Vehicle vs DG-1A+ Fluoxetine	105.3	19.54 to 191.1	Yes	0.0128
1A KO Fluoxetine vs DG-1A+ Vehicle	10.5	-75.29 to 96.29	No	0.9858
1A KO Fluoxetine vs DG-1A+ Fluoxetine	122.5	36.71 to 208.3	Yes	0.0036
DG-1A+ Vehicle vs DG-1A+ Fluoxetine	112	26.21 to 197.8	Yes	0.0079

Figure Number 7B	Test Used Two-Way ANOVA	n 3 per group
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Figure 7B ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	507	1	507	F (1, 8) = 10.68	P = 0.0114
Genotype	337.1	1	337.1	F (1, 8) = 7.102	P = 0.0286
Treatment	2369	1	2369	F (1, 8) = 49.91	P = 0.0001
Residual	379.7	8	47.46		

Figure 7B Multiple Comparisons

Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value
Control Vehicle vs Control Fluoxetine	-41.1	-59.11 to -23.09	Yes	0.0004
Control Vehicle vs POMC-Cre/fl1A Vehicle	-2.4	-20.41 to 15.61	No	0.9723
Control Vehicle vs. POMC-Cre/fl1A Fluoxetine	-17.5	-35.51 to 0.5131	No	0.0569
Control Fluoxetine vs. POMC-Cre/fl1A Vehicle	38.7	20.69 to 56.71	Yes	0.0006
Control Fluoxetine vs. POMC-Cre/fl1A Fluoxetine	23.6	5.587 to 41.61	Yes	0.0128
POMC-Cre/fl1A Vehicle vs. POMC-Cre/fl1A Fluoxetine	-15.1	-33.11 to 2.913	No	0.1038

Figure Number 7C	Test Used Two-Way ANOVA	n 3 per group			
Figure 7C ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	255.8	1	255.8	F (1, 8) = 6.749	P = 0.0317
Genotype	250.3	1	250.3	F (1, 8) = 6.604	P = 0.0331
Treatment	2431	1	2431	F (1, 8) = 64.15	P < 0.0001
Residual	303.2	8	37.9		
Figure 7C Multiple Comparisons Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value	
Control Vehicle vs Control Fluoxetine	-37.7	-53.80 to -21.60	Yes	0.0003	
Control Vehicle vs POMC-Cre/fl1A Vehicle	-0.1	-16.20 to 16.00	No	> 0.9999	
Control Vehicle vs. POMC-Cre/fl1A Fluoxetine	-19.33	-35.43 to -3.237	Yes	0.0205	
Control Fluoxetine vs. POMC-Cre/fl1A Vehicle	37.6	21.50 to 53.70	Yes	0.0003	
Control Fluoxetine vs. POMC-Cre/fl1A Fluoxetine	18.37	2.271 to 34.46	Yes	0.0266	
POMC-Cre/fl1A Vehicle vs. POMC-Cre/fl1A Fluoxetine	-19.23	-35.33 to -3.137	Yes	0.021	

Figure Number Supplementary 1B Comparisons	Test Used Kaplan-Meier Survival Analysis with Bonferroni correction and Mantel-Cox p-values			n
4 Total Comparisons, so .05/4=0.0125; p<0.0125 for significance				16 for WT Vehicle 16 for WT Fluoxetine 17 for fl1A Vehicle 17 for fl1A Fluoxetine
Comparison	Chi-Square	P-Value	Significant?	
WT Vehicle vs WT Fluoxetine	14.666	0.0001	Yes	
fl1A Vehicle vs fl1A Fluoxetine	20.804	< 0.0001	Yes	
WT Vehicle vs fl1A Vehicle	0.018	0.8937	No	
WT Fluoxetine vs fl1A Fluoxetine	0.041	0.8393	No	

Figure Number Supplementary 1C - % Weight Loss	Test Used Two-Way ANOVA	n 16 for WT Vehicle 16 for WT Fluoxetine 17 for fl1A Vehicle 17 for fl1A Fluoxetine			
Supplementary 1C - % Weight Loss ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	7.86E-05	1	7.86E-05	F (1, 62) = 6.598E-5	0.9935
Genotype	0.011	1	0.011	F (1, 62) = 0.009	0.9239
Treatment	0.108	1	0.108	F (1, 62) = 0.091	0.764
Residual	73.876	62	1.192		
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number Supplementary 1C - Consumption	Test Used Two-Way ANOVA	n 16 for WT Vehicle 16 for WT Fluoxetine 17 for fl1A Vehicle 17 for fl1A Fluoxetine			
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Figure Number	Test Used	n
Supplementary 1C - Consumption ANOVA TABLE	Two-Way ANOVA	16 for WT Vehicle 16 for WT Fluoxetine 17 for fl1A Vehicle 17 for fl1A Fluoxetine
Interaction	Sum of Squares	DF
Genotype	Mean of Squares	F (DFn, DFd)
Treatment	P value	
Residual		

INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS

Figure Number	Test Used	n
Supplementary 1D - Open Arm Entries	Two-Way ANOVA	16 for WT Vehicle 16 for WT Fluoxetine 17 for fl1A Vehicle 17 for fl1A Fluoxetine
Supplementary 1D - Open Arm Entries ANOVA TABLE	Sum of Squares	DF
Interaction	Mean of Squares	F (DFn, DFd)
Genotype	P value	
Treatment		
Residual		

INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS

Figure Number	Test Used	n
Supplementary 1D - Open Arm Duration	Two-Way ANOVA	16 for WT Vehicle 16 for WT Fluoxetine 17 for fl1A Vehicle 17 for fl1A Fluoxetine
Supplementary 1D - Open Arm Duration ANOVA TABLE	Sum of Squares	DF
Interaction	Mean of Squares	F (DFn, DFd)
Genotype	P value	
Treatment		
Residual		

INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS

Figure Number	Test Used	n
Supplementary 1E	Two-Way ANOVA	16 for WT Vehicle 16 for WT Fluoxetine 17 for fl1A Vehicle 17 for fl1A Fluoxetine
Supplementary 1E ANOVA TABLE	Sum of Squares	DF
Interaction	Mean of Squares	F (DFn, DFd)
Genotype	P value	
Treatment		
Residual		

INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS

Figure Number Supplementary 1F	Test Used Two-Way ANOVA	n 8 per group			
Supplementary 1F ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	371.281	1	371.281	F (1, 28) = 0.148	0.7038
Genotype	16.531	1	16.531	F (1, 28) = 0.007	0.936
Treatment	601430.281	1	601430.281	F (1, 28) = 239.002	< 0.0001
Residual	70459.875	28	2516.424		
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number Supplementary 1G	Test Used Two-Way ANOVA	n 8 per group			
Supplementary 1G ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	18963.781	1	18963.781	F (1, 28) = 0.027	0.871
Genotype	7657.031	1	7657.031	F (1, 28) = 0.011	0.9178
Treatment	69092951.28	1	69092951.28	F (1, 28) = 97.857	< 0.0001
Residual	19769689.88	28	706060.031		
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number Supplementary 1H	Test Used Two-Way ANOVA	n 8 per group			
Supplementary 1H ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	1845.281	1	1845.281	F (1, 28) = 0.022	0.8844
Genotype	2363.281	1	2363.281	F (1, 28) = 0.028	0.8694
Treatment	15544494.03	1	15544494.03	F (1, 28) = 181.216	< 0.0001
Residual	2401808.625	28	85778.879		
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number Supplementary 2B - % Weight Loss	Test Used Two-Way ANOVA	n 27 for Control Vehicle 26 for Control Fluoxetine 19 for POMC-Cre/fl1A Vehicle 21 for POMC-Cre/fl1A Fluoxetine			
Supplementary 2B - % Weight Loss ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	0.036	1	0.036	F (1, 89) = 0.012	0.912
Genotype	0.466	1	0.466	F (1, 89) = 0.158	0.6922
Treatment	0.111	1	0.111	F (1, 89) = 0.038	0.8467
Residual	262.689	89	2.952		
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number	Test Used	n
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Figure Number	Test Used	n
Supplementary 2B - Consumption	Two-Way ANOVA	27 for Control Vehicle 26 for Control Fluoxetine 19 for POMC-Cre/fl1A Vehicle 21 for POMC-Cre/fl1A Fluoxetine

Supplementary 2B - Consumption ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	2.93E-07	1	2.93E-07	F (1, 89) = 0.024	0.877
Genotype	7.78E-07	1	7.78E-07	F (1, 89) = 0.064	0.8009
Treatment	6.46E-08	1	6.46E-08	F (1, 89) = 0.005	0.9421
Residual	0.001	89	1.22E-05		

INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS

Figure Number	Test Used	n
Supplementary 2D - % Weight Loss	Two-Way ANOVA	14 for AAV8-CamKII-GFP/fl1A Vehicle 14 for AAV8-CamKII-GFP/fl1A Fluoxetine 14 for AAV8-CamKII-Cre/fl1A Vehicle 16 for AAV8-CamKII-Cre/fl1A Fluoxetine

Supplementary 2D - % Weight Loss ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	1.577	1	1.577	F (1, 54) = 1.684	0.1999
Virus	1.411	1	1.411	F (1, 54) = 1.507	0.2249
Treatment	1.023	1	1.023	F (1, 54) = 1.092	0.3006
Residual	50.571	54	0.937		

INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS

Figure Number	Test Used	n
Supplementary 2D - Consumption	Two-Way ANOVA	14 for AAV8-CamKII-GFP/fl1A Vehicle 14 for AAV8-CamKII-GFP/fl1A Fluoxetine 14 for AAV8-CamKII-Cre/fl1A Vehicle 16 for AAV8-CamKII-Cre/fl1A Fluoxetine

Supplementary 2D - Consumption ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	1.25E-06	1	1.25E-06	F (1, 54) = 1.247	0.269
Virus	4.54E-07	1	4.54E-07	F (1, 54) = 0.453	0.5039
Treatment	7.94E-07	1	7.94E-07	F (1, 54) = 0.792	0.3776
Residual	5.42E-05	54			

INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS

Figure Number	Test Used	n
Supplementary 2F - % Weight Loss	Two-Way ANOVA	15 per group

Supplementary 2F - % Weight Loss ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	0.102	2	0.051	F (2, 84) = 0.018	0.9821
Pretreatment	0.908	1	0.908	F (1, 84) = 0.321	0.5725
Treatment	0.347	2	0.174	F (2, 84) = 0.061	0.9405
Residual	237.589	84	2.828		

INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS

Figure Number	Test Used	n			
Supplementary 2F - Consumption	Two-Way ANOVA	15 per group			
Supplementary 2F - Consumption ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	2.67E-07	2	1.33E-07	F (2, 84) = 0.011	0.9894
Pretreatment	1.60E-06	1	1.60E-06	F (1, 84) = 0.128	0.7214
Treatment	1.16E-06	2	5.78E-07	F (2, 84) = 0.046	0.9549
Residual	0.001	84	1.25E-05		
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number	Test Used	n			
Supplementary 2H - % Weight Loss	Two-Way ANOVA	17 for 1A KO Vehicle 15 for 1A KO Fluoxetine 13 for DG-1A+ Vehicle 17 for DG-1A+ Fluoxetine			
Supplementary 2H - % Weight Loss ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	0.088	1	0.088	F (1, 58) = 0.023	0.8798
Genotype	0.02	1	0.02	F (1, 58) = 0.005	0.9419
Treatment	0.017	1	0.017	F (1, 58) = 0.004	0.9474
Residual	220.766	58	3.806		
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number	Test Used	n			
Supplementary 2H - Consumption	Two-Way ANOVA	17 for 1A KO Vehicle 15 for 1A KO Fluoxetine 13 for DG-1A+ Vehicle 17 for DG-1A+ Fluoxetine			
Supplementary 2H - Consumption ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	1.91E-07	1	1.91E-07	F (1, 58) = 0.016	0.9002
Genotype	5.30E-10	1	5.30E-10	F (1, 58) = 4.3975E-5	0.9947
Treatment	2.52E-06	1	2.52E-06	F (1, 58) = 0.209	0.649
Residual	0.001	58			
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number	Test Used	n		
Supplementary 4B Comparisons	Kaplan-Meier Survival Analysis with Bonferroni correction and Mantel-Cox p-values	15 per group		
4 Total Comparisons, so .05/4=.0125; p<0.0125 for significance				
Comparison (All Mice are Nestin-CreER)	Chi-Square	P-Value	Significant?	
Vehicle Vehicle vs Vehicle Fluoxetine (8 wks)	13.631	0.0002	Yes	
Tamoxifen (8 wks) Vehicle vs Tamoxifen (8wks) Fluoxetine (8 wks)	19.787	< 0.0001	Yes	
Vehicle Vehicle vs Tamoxifen (8 wks) Vehicle	0.099	0.7533	No	

Vehicle Fluoxetine (8 wks) vs Tamoxifen (8 wks) Fluoxetine (8 wks)

0.44

0.5073

No

Figure Number	Test Used	n			
Supplementary 4C - % Weight Loss	Two-Way ANOVA	15 per group			
Supplementary 4C - % Weight Loss ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	0.819	1	0.819	F (1, 56) = 0.244	0.6235
Pretreatment	0.023	1	0.023	F (1, 56) = 0.007	0.9346
Treatment	0.098	1	0.098	F (1, 56) = 0.029	0.8647
Residual	188.215	56	3.361		
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number	Test Used	n			
Supplementary 4C - Consumption	Two-Way ANOVA	15 per group			
Supplementary 4C - Consumption ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	1.50E-07	1	1.50E-07	F (1, 56) = 0.015	0.9015
Pretreatment	1.50E-07	1	1.50E-07	F (1, 56) = 0.015	0.9015
Treatment	4.17E-07	1	4.17E-07	F (1, 56) = 0.043	0.8366
Residual	0.001	56	9.71E-06		
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number	Test Used	n			
Supplementary 4D - Open Arm Entries	Two-Way ANOVA	15 per group			
Supplementary 4D - Open Arm Entries ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	0.15	1	0.15	F (1, 56) = 0.013	0.9102
Pretreatment	1.35	1	1.35	F (1, 56) = 0.116	0.7352
Treatment	220.417	1	220.417	F (1, 56) = 18.866	< 0.0001
Residual	654.267	56	11.683		
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number	Test Used	n			
Supplementary 4D - Open Arm Duration	Two-Way ANOVA	15 per group			
Supplementary 4D - Open Arm Duration ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	4.988	1	4.988	F (1, 56) = 0.012	0.9147
Pretreatment	26.268	1	26.268	F (1, 56) = 0.061	0.8058
Treatment	37715.308	1	37715.308	F (1, 56) = 87.619	< 0.0001
Residual	24105.005	56	430.447		
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number	Test Used	n			
Supplementary 4E	Two-Way ANOVA	15 per group			

	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Supplementary 4E					
Interaction	135	1	135	F (1, 56) = 0.112	0.7392
Pretreatment	29.4	1	29.4	F (1, 56) = 0.024	0.8765
Treatment	107357.4	1	107357.4	F (1, 56) = 89.029	< 0.0001
Residual	67528.933	56	1205.874		

INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS

Figure Number	Test Used	n			
Supplementary 4F	Two-Way ANOVA	8 per group			
Supplementary 4F	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	63.281	1	63.281	F (1, 28) = 0.009	0.9271
Pretreatment	16.531	1	16.531	F (1, 28) = 0.002	0.9627
Treatment	320600.281	1	320600.281	F (1, 28) = 43.228	< 0.0001
Residual	207659.875	28	7416.424		

INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS

Figure Number	Test Used	n			
Supplementary 4G	Two-Way ANOVA	8 per group			
Supplementary 4G	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	140185.125	1	140185.125	F (1, 28) = 0.093	0.7625
Pretreatment	178802	1	178802	F (1, 28) = 0.119	0.7329
Treatment	269886144.5	1	269886144.5	F (1, 28) = 179.305	< 0.0001
Residual	42145000.25	28	1505178.58		

INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS

Figure Number	Test Used	n			
Supplementary 4H	Two-Way ANOVA	8 per group			
Supplementary 4H	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	4851.125	1	4851.125	F (1, 28) = 0.015	0.9042
Pretreatment	4371.125	1	4371.125	F (1, 28) = 0.013	0.9091
Treatment	63867602	1	63867602	F (1, 28) = 194.001	< 0.0001
Residual	9217945.75	28	329212.348		

INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS

Figure Number	Test Used	n			
Supplementary 7B	Kaplan-Meier Survival Analysis with Bonferroni correction and Mantel-Cox p-values	15 per group			
Comparisons	4 Total Comparisons, so .05/4=.0125; p<0.0125 for significance				
Comparison (All Mice are Nestin-CreER)	Chi-Square	P-Value	Significant?		
WT Vehicle vs WT Fluoxetine	8.487	0.0036	Yes		

1A KO Vehicle vs 1A KO Fluoxetine	0.26	0.6098	No
WT Vehicle vs 1A KO Vehicle	7.81	0.0052	Yes
WT Fluoxetine vs 1A KO Fluoxetine	18.39	< 0.0001	Yes

Figure Number	Test Used	n			
Supplementary 7C - % Weight Loss	Two-Way ANOVA	15 per group			
Supplementary 7C - % Weight Loss ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	0.005	1	0.005	F (1, 56) = 0.004	0.9508
Genotype	0.295	1	0.295	F (1, 56) = 0.225	0.6371
Treatment	0.011	1	0.011	F (1, 56) = 0.008	0.9276
Residual	73.508	56	1.313		
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number	Test Used	n			
Supplementary 7C - Consumption	Two-Way ANOVA	15 per group			
Supplementary 7C - Consumption ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	8.17E-07	1	8.17E-07	F (1, 56) = 0.073	0.7877
Genotype	1.50E-07	1	1.50E-07	F (1, 56) = 0.013	0.9081
Treatment	4.17E-07	1	4.17E-07	F (1, 56) = 0.037	0.8475
Residual	0.001	56	1.12E-05		
INTERACTION NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS					

Figure Number	Test Used	n			
Supplementary 7D - Open Arm Entries	Two-Way ANOVA	15 per group			
Supplementary 7D - Open Arm Entries ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	228.2	1	228.2	F (1, 56) = 10.21	P = 0.0023
Genotype	1612	1	1612	F (1, 56) = 72.14	P < 0.0001
Treatment	205.4	1	205.4	F (1, 56) = 9.190	P = 0.0037
Residual	1251	56	22.35		
Supplementary Figure 7D - Open Arm Entries Multiple Comparisons					
Tukey's multiple comparisons test		Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value
WT Vehicle vs WT Fluoxetine		-7.6	-12.17 to -3.030	Yes	0.0003
WT Vehicle vs 1A KO Vehicle		6.467	1.896 to 11.04	Yes	0.0023
WT Vehicle vs 1A KO Fluoxetine		6.667	2.096 to 11.24	Yes	0.0016
WT Fluoxetine vs 1A KO Vehicle		14.07	9.496 to 18.64	Yes	< 0.0001
WT Fluoxetine vs 1A KO Fluoxetine		14.27	9.696 to 18.84	Yes	< 0.0001
1A KO Vehicle vs 1A KO Fluoxetine		0.2	-4.370 to 4.770	No	0.9994

Figure Number	Test Used	n			
Supplementary 7D - Open Arm Duration	Two-Way ANOVA	15 per group			
Supplementary 7D - Open Arm Duration ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	7482	1	7482	F (1, 56) = 39.92	P < 0.0001

Genotype	25792	1	25792	F (1, 56) = 137.6	P < 0.0001
Treatment	7437	1	7437	F (1, 56) = 39.68	P < 0.0001
Residual	10496	56	187.4		

Supplementary Figure 7D - Open Arm Duration Multiple Comparisons

Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value
WT Vehicle vs WT Fluoxetine	-44.6	-57.84 to -31.36	Yes	< 0.0001
WT Vehicle vs 1A KO Vehicle	19.13	5.896 to 32.37	Yes	0.0018
WT Vehicle vs 1A KO Fluoxetine	19.2	5.963 to 32.44	Yes	0.0017
WT Fluoxetine vs 1A KO Vehicle	63.73	50.50 to 76.97	Yes	< 0.0001
WT Fluoxetine vs 1A KO Fluoxetine	63.8	50.56 to 77.04	Yes	< 0.0001
1A KO Vehicle vs 1A KO Fluoxetine	0.06667	-13.17 to 13.30	No	> 0.9999

Figure Number
Supplementary 7E

Test Used
Two-Way ANOVA

n
15 per group

Supplementary 7E ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	14947	1	14947	F (1, 56) = 7.246	P = 0.0094
Genotype	12819	1	12819	F (1, 56) = 6.214	P = 0.0157
Treatment	44010	1	44010	F (1, 56) = 21.34	P < 0.0001
Residual	115517	56	2063		

Supplementary Figure 7E Multiple Comparisons

Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value
WT Vehicle vs WT Fluoxetine	85.73	41.82 to 129.6	Yes	< 0.0001
WT Vehicle vs 1A KO Vehicle	2.333	-41.58 to 46.25	No	0.999
WT Vehicle vs 1A KO Fluoxetine	24.93	-18.98 to 68.85	No	0.4423
WT Fluoxetine vs 1A KO Vehicle	-83.4	-127.3 to -39.49	Yes	< 0.0001
WT Fluoxetine vs 1A KO Fluoxetine	-60.8	-104.7 to -16.89	Yes	0.003
1A KO Vehicle vs 1A KO Fluoxetine	22.6	-21.31 to 66.51	No	0.5277

Figure Number
Supplementary 7F

Test Used
Two-Way ANOVA

n
8 per group

Supplementary 7F ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	186661	1	186661	F (1, 28) = 23.70	P < 0.0001
Genotype	186355	1	186355	F (1, 28) = 23.66	P < 0.0001
Treatment	185745	1	185745	F (1, 28) = 23.58	P < 0.0001
Residual	220569	28	7877		

Supplementary Figure 7F Multiple Comparisons

Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value
WT Vehicle vs WT Fluoxetine	-305.1	-426.3 to -184.0	Yes	< 0.0001
WT Vehicle vs 1A KO Vehicle	-0.125	-121.3 to 121.0	No	> 0.9999
WT Vehicle vs 1A KO Fluoxetine	0.25	-120.9 to 121.4	No	> 0.9999
WT Fluoxetine vs 1A KO Vehicle	305	183.8 to 426.2	Yes	< 0.0001
WT Fluoxetine vs 1A KO Fluoxetine	305.4	184.2 to 426.5	Yes	< 0.0001
1A KO Vehicle vs 1A KO Fluoxetine	0.375	-120.8 to 121.5	No	> 0.9999

Figure Number
Supplementary 7G

Test Used
Two-Way ANOVA

n
8 per group

Supplementary 7G ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	6.62E+07	1	6.62E+07	F (1, 28) = 79.56	P < 0.0001
Genotype	6.45E+07	1	6.45E+07	F (1, 28) = 77.04	P < 0.0001
Treatment	7.45E+07	1	7.45E+07	F (1, 28) = 88.95	P < 0.0001
Residual	2.35E+07	28	2.35E+07		

Supplementary Figure 7G Multiple Comparisons	Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value
Tukey's multiple comparisons test				
WT Vehicle vs WT Fluoxetine	-5937	-7186 to -4688	Yes	< 0.0001
WT Vehicle vs 1A KO Vehicle	-46	-1295 to 1203	No	0.9996
WT Vehicle vs 1A KO Fluoxetine	-211.6	-1461 to 1038	No	0.9666
WT Fluoxetine vs 1A KO Vehicle	5891	4642 to 7140	Yes	< 0.0001
WT Fluoxetine vs 1A KO Fluoxetine	5725	4476 to 6975	Yes	< 0.0001
1A KO Vehicle vs 1A KO Fluoxetine	-165.6	-1415 to 1084	No	0.9834

Figure Number	Test Used	n
Supplementary 7H	Two-Way ANOVA	8 per group

Supplementary 7H ANOVA TABLE	Sum of Squares	DF	Mean of Squares	F (DFn, DFd)	P value
Interaction	1.53E+07	1	1.53E+07	F (1, 28) = 78.04	P < 0.0001
Genotype	8.62E+06	1	8.62E+06	F (1, 28) = 44.06	P < 0.0001
Treatment	1.44E+07	1	1.44E+07	F (1, 28) = 73.53	P < 0.0001
Residual	5.48E+06	28	5.48E+06		

Supplementary Figure 7H Multiple Comparisons	Mean Diff.	95% CI of diff.	Significant?	Adjusted P Value
Tukey's multiple comparisons test				
WT Vehicle vs WT Fluoxetine	-2723	-3326 to -2119	Yes	< 0.0001
WT Vehicle vs 1A KO Vehicle	-343.5	-947.4 to 260.4	No	0.4208
WT Vehicle vs 1A KO Fluoxetine	-303	-906.9 to 300.9	No	0.5279
WT Fluoxetine vs 1A KO Vehicle	2379	1775 to 2983	Yes	< 0.0001
WT Fluoxetine vs 1A KO Fluoxetine	2420	1816 to 3023	Yes	< 0.0001
1A KO Vehicle vs 1A KO Fluoxetine	40.5	-563.4 to 644.4	No	0.9978

Figure Number	Test Used	n
Supplementary 8A	Student's t-test	6 per group

F test to compare variances	F, DFn, Dfd	P value	Significant?
Control vs POMC-Cre/fl1A	2.000, 5, 5	0.465	No

Supplementary 8A Student's t-test	P value	Significant?	One or two tailed?	t, df
Control vs POMC-Cre/fl1A	0.9222	No	Two-tailed	t=0.1002 df=10

Figure Number	Test Used	n
Supplementary 8B	One-Way ANOVA	6 per group

Supplementary 8B ANOVA TABLE	SS	DF	MS	F (DFn, DFd)	P value
Treatment	1578	2	788.9	F (2, 15) = 0.1989	P = 0.8218
Residual	59509	15	3967		
Total	61087	17			

ANOVA NOT SIGNIFICANT -- NO MULTIPLE COMPARISONS

Figure Number	Test Used	n		
Supplementary 8C	Student's t-test	6 per group		
F test to compare variances 1A KO vs DG-1A+	F, DFn, Dfd 4.233, 5, 5	P value 0.1393	Significant? No	
Supplementary 8C Student's t-test 1A KO vs DG-1A+	P value 0.6347	Significant? No	One or two tailed? Two-tailed	t, df t=0.4901 df=10