

Experiment	Measurement	Statistical test	Comparison	Statistics	Degrees of freedom	p	Figure
Frequencies of 3'UTR miRNA binding sites in putative targets in KARG vs. Genome	miR-495 targets in KARG vs. Genome	Two-tailed Chi Square	miR-495 % KARG vs. % Genome			<0.0001****	1A
	miR-495 targets in KARG vs. Genome	Two-tailed Chi Square	miR-212/-132 % KARG vs. % Genome			<0.0001****	1A
	miR-212/132 targets in KARG vs. Genome	Two-tailed Chi Square	let-7% KARG vs. % Genome			<0.0001****	1A
Comparison of percentage of 3'UTR miRNA binding sites in putative targets in KARG	miR-495 vs. miR-212/-132 targets in KARG	Two-tailed Chi Square	miR-495 vs. Let-7 % KARG			<0.001****	1A
	miR-495 vs. let-7 targets in KARG	Two-tailed Chi Square	miR-495 vs. Let-7 % KARG			<0.001****	1A
KARG Evidence Scores	Evidence scores	Mann-Whitney	miR-495 KARG targets vs. Whole KARG	U = 36189	Median miR-495 = 2, Median KARG = 2		S1
Dual Luciferase	Bdnf-L 3'UTR	One-way ANOVA	miR vector	F = 39.4	3, 7	< 0.01**	1F
	Bdnf-S 3'UTR	One-way ANOVA	miR vector	F = 9.2	3, 7	< 0.05*	
	CaMK2a 3'UTR	One-way ANOVA	miR vector	F = 156.3	3, 7	< 0.01**	1G
	Arc 3'UTR	One-way ANOVA	miR vector	F = 137.0	3, 7	< 0.01**	
	Empty vector controls	One-way ANOVA	miR vector	F = 1.1	3, 7	ns	S3
NAc miR-495 Acute Cocaine Time Course	NAc miR-495	One-way ANOVA Post-Hocs	Time after cocaine 1 h simple test against time 0/saline 2 h simple test against time 0/saline 4 h simple test against time 0/saline	F = 4.4	6, 42	<0.01** < 0.001**** < 0.05* < 0.05*	2A
Acute Cocaine miR-495 qPCR	mPFC	t test	Coc vs. Saline	t = 0.53	9	ns	2B
	DS	t test	Coc vs. Saline	t = 1.3	12	ns	2C
NAc mRNA Acute cocaine	NAc Bdnf-L	t test	Coc vs. Saline	t = 5.0	7	<0.01**	S4A
	NAc Bdnf-Pan		Coc vs. Saline	t = 3.5	8	<0.01**	S4B
	NAc CaMKIIa		Coc vs. Saline	t = 2.8	10	< 0.05*	2E
Bdnf Ratio	NAc Bdnf-L/Bdnf-Pan mRNA	t test		t = 2.4	7	< 0.05*	2D
Acute Cocaine Westerns NAc	pro-BDNF	t test	Coc vs. Saline	t = 2.8	12	< 0.05*	2F
	matBDNF		Coc vs Saline	t = 2.4	13	< 0.05*	2G
	CaMKIIa		Coc vs. Saline	t = 4.8	10	< 0.001****	2H
Acute Cocaine + NAc LV miRNA qPCR	miR-495	Two-way ANOVA	Virus	F = 4.5	1, 33	< 0.05*	3B
			Treatment	F = 70.1	1, 33	< 0.0001****	
			Virus x Treatment	F = 4.6	1, 33	< 0.05*	
		Post-Hoc Tukey HSD	LV-GFP Saline vs. LV-GFP Cocaine	q = 4.2	33	< 0.05*	
			LV-GFP Saline vs. LV-miR-495 Saline	q = 6.1	33	< 0.001****	
			LV-GFP Saline vs. LV-miR-495 Cocaine	q = 6.0	33	< 0.001****	
	Bdnf-Pan	Two-way ANOVA	Virus	F = 14.2	1, 18	<0.01**	3C
			Treatment	F = 12.5	1, 18	<0.01**	
			Virus x Treatment	F = 10.2	1, 18	<0.01**	
		Post-Hoc Tukey HSD	LV-GFP Saline vs. LV-GFP Cocaine	q = 6.32	18	<0.01**	
			LV-GFP Saline vs. LV-miR-495 Saline	q = 0.4935	18	ns	
			LV-GFP Saline vs. LV-miR-495 Cocaine	q = 0.1959	18	ns	
Bdnf-L	Two-way ANOVA	Virus	F = 15.9	1, 18	< 0.01**	3D	
		Treatment	F = 17.0	1, 18	< 0.001****		
		Virus x Treatment	F = 11.2	1, 18	< 0.001****		
	Post-Hoc Tukey HSD	LV-GFP Saline vs. LV-GFP Cocaine	q = 6.955	18	< 0.001****		
		LV-GFP Saline vs. LV-miR-495 Saline	q = 0.6878	18	ns		
		LV-GFP Saline vs. LV-miR-495 Cocaine	q = 0.1288	18	ns		
Microarray confirmation by qPCR	miR-495 Bdnf Camk2a Arc Stmn2 Gria3	t test	LV-GFP vs. LV-miR-495	t = 15.8	4	<0.01**	4C
			LV-GFP vs. LV-miR-495	t = 11.4	4	<0.01**	
			LV-GFP vs. LV-miR-495	t = 12.4	4	<0.01**	
			LV-GFP vs. LV-miR-495	t = 6.5	4	<0.05*	
			LV-GFP vs. LV-miR-495	t = 4.9	4	<0.05*	
			LV-GFP vs. LV-miR-495	t = 4.4	4	<0.05*	
Cocaine Intake Across Self-Administration	Intake	t test	SA1 vs. SA22	t = 0.46	6.0 (Welch's correction)	ns	S5
NAc miR-495 after Self-Administration	miR-495 qPCR	t-test	NAc Shell vs. NAc Core	t = 0.3	15	ns	S6
NAcSh miR-495 after Self-Administration	miR-495 qPCR	t test	Saline: SA1 vs. SA22	t = 0.84	6	ns	Data not shown
		One-way ANOVA	Days of self-administration	F = 9.30	2, 17	<0.01**	
		Tukey Post-Hoc	SA-22 vs. SA1			ns	
		Trend Analysis	SA1 vs. Saline Yoked	F = 18.23	1, 17	<0.01**	
NAcC miR-495 after Self-Administration	miR-495 qPCR	t test	Saline: SA1 vs. SA22	t = 0.42	7	ns	Data not shown
		One-way ANOVA	Days of self-administration	F = 0.47	2, 20	ns	
Cocaine Fixed Ratio 5	Active lever	Two-way ANOVA	Virus	F = 1.10	1, 20	ns	S8
			Dose	F = 30.43	1.4, 27.2 (Huynh-Feldt)	< 0.01**	
	Virus x Dose		F = 1.65	1.4, 27.2 (Huynh-Feldt)	ns		
	Intake		F = 0.02	1, 20	ns		
	Dose		F = 176.97	1.7, 34.1 (Huynh-Feldt)	< 0.01**		
	Virus x Dose		F = 0.85	1.7, 34.1 (Huynh-Feldt)	ns		
Cocaine Progressive Ratio	Active lever	Two-way ANOVA	Virus	F = 7.14	1, 20	<0.05*	S9A, D
			Dose	F = 8.98	3, 60	< 0.01**	
	Virus x Dose		F = 2.23	3, 60	ns		
	Intake		F = 5.55	1, 20	<0.05*		
	Dose		F = 13.70	2.2, 44.9 (Huynh-Feldt)	<0.01**		
	Virus x Dose		F = 0.65	2.2, 44.9 (Huynh-Feldt)	ns		
Active lever	Intake	Two-way ANOVA	Virus	F = 0.01	1, 20	ns	S9A
			Dose	F = 1.37	1.6, 31.4 (Huynh-Feldt)	ns	
			Virus x Dose	F = 0.47	1.6, 31.4 (Huynh-Feldt)	ns	
			Dose	F = 1.16	1, 14	ns	
			Day	F = 4.08	6, 84	<0.01**	
			Virus x Day	F = 0.51	6, 84	ns	
Active lever	Intake	Two-way ANOVA	Virus	F = 0.23	1, 14	ns	S11
			Virus	F = 0.23	1, 14	ns	

Food pellet Fixed ratio 5	Intake	Two-way ANOVA	Day	F = 8.30	6, 84	<0.01**	Data not shown	
	Inactive lever		Virus x Day	F = 1.84	6, 84	ns		
Food Restricted progressive ratio	Active lever	Two-way ANOVA	Virus	F = 0.02	1, 14	ns	5L, S12	
			Food Restriction	F = 55.26	1, 14	<0.001***		
	Intake	Two-way ANOVA	Virus x Food Restriction	F = 0.003	1, 14	ns	<0.001***	
			Virus	F = 0.06	1, 14	ns		
	Inactive lever	Post-hoc tests for simple effects	Food Restriction	F = 45.97	1, 14	ns	<0.05*	
			Virus x Food Restriction	F = 0.06	1, 14	ns		
			Virus	F = 0.01	1, 14	ns		
			Food Restriction	F = 0.24	1, 14	ns		
				Virus x Food Restriction	F = 5.62	1, 14	ns	Data not shown
				Group difference at each food restriction condition / change across each food restriction condition for each virus group				
Pre-Extinction SA Baseline	Active lever	T test		t = 0.7	17	ns	5G	
Extinction	Active lever	Two-way ANOVA	Virus	F = 3.19	1, 20	0.09	5G	
		Day	F = 19.36	5.0, 100.9 (Huynh-Feldt)	<0.001***			
	Inactive lever	Post-hoc tests for simple effects	Virus x Day	F = 3.17	5.0, 100.9 (Huynh-Feldt)	<0.01**	S9B	
		Two-way ANOVA	Virus	F = 1.46	1, 20	<0.05* 1st 3 sessions		
			Day	F = 2.90	3.3, 66.7 (Huynh-Feldt)	<0.05*		
			Virus x Day	F = 1.48	3.3, 66.7 (Huynh-Feldt)	ns		
Cue Reinstatement	Active lever	Two-way ANOVA	Virus	F = 2.54	1, 20	ns	S10	
			Day	F = 56.17	1, 20	<0.001**		
	Inactive lever		Virus x Day	F = 2.48	1, 20	ns	S8C	
			Virus	F = 0.73	1, 20	ns		
			Day	F = 1.73	1, 20	ns		
			Virus x Day	F = 0.93	1, 20	ns		
Cocaine Reinstatement	Active lever	Two-way ANOVA	Virus	F = 6.55	1, 20	<0.05*	5H	
		Day	F = 38.35	1, 20	<0.001***			
		Virus x Day	F = 6.32	1, 20	<0.05*			
	Inactive lever	Post-hoc tests for simple effects	Group difference during baseline and test day		Virus	F = 1.55	1, 20	<0.05* test day
		Two-way ANOVA	Day	F = 1.55	1, 20	ns	S9D	
		Virus x Day	F = 1.35	1, 20	ns			
NAcSh miRNA and mRNA levels following behavioral testing	miR-495 qPCR	t-test	LV-GFP vs. LV-miR-495	t = 3.70	6	<0.05*	5C	
	Camk2a qPCR	t-test	LV-GFP vs. LV-miR-495	t = 3.33	12	<0.01**	5I	
	Bdnf-L qPCR	t-test	LV-GFP vs. LV-miR-495	t = 3.2	10	<0.01**	5J	
	Bdnf-Pan qPCR	t-test	LV-GFP vs. LV-miR-495	t = 3.2	11	<0.01**	5K	