

Experiment	Fig.	Genotype or Condition	Speed, mm/sec (SEM)	Statistical Test	Test Result	Post-hoc	Post-hoc Results	
Tetanus in <i>TH-GAL4</i> neurons	1C	<i>TH-GAL4/+; UAS-TeTx/+</i>	1.80 (0.190)	1-way RM ANOVA	P<0.0005	Dunnett	vs. <i>TH-GAL4/+; UAS-TeTx/+</i> ; P<0.01 P<0.01 P<0.01 P<0.01	
		<i>TH-GAL4/+; UAS-IMP/+</i>	3.55 (0.405)					
		<i>TH-GAL4/+</i>	2.76 (0.324)					
		<i>UAS-TeTx/+</i>	3.59 (0.349)					
		<i>UAS-IMP/+</i>	2.72 (0.265)					
Tetanus in <i>Ddc(HL7)-GAL4</i> neurons	1C	<i>Ddc(HL7)-GAL4/+; UAS-TeTx/+</i>	2.39 (0.312)	2-sample t-test	P=0.0026			
		<i>Ddc(HL7)-GAL4/+; UAS-IMP/+</i>	4.34 (0.385)					
Tetanus in <i>Ddc(HL5)-GAL4</i> neurons	1C	<i>Ddc(HL5)-GAL4/+; UAS-TeTx/+</i>	5.79 (0.826)	2-sample t-test	P=0.450			
		<i>Ddc(HL5)-GAL4/+; UAS-IMP/+</i>	6.54 (0.320)					
<i>DAT<sup>fmn</sup></i> hyperactivity	SF1A	<i>fmn/fmn</i>	1.97 (0.096)	Paired t-test	P<0.0005			
		Control	3.67 (0.228)					
3IY treatment	SF1C	3IY	3.07 (0.182)	Paired t-test	P=0.0234			
		Control	3.61 (0.309)					
Tetanus in <i>c346</i> neurons	2F	<i>c346/Y; UAS-TeTx/+</i>	5.20 (0.900)	1-way ANOVA	P=0.0026	Tukey	P<0.01 <i>c346/TeTx</i> vs. <i>c346/IMP</i> P<0.05 <i>c346/TeTx</i> vs. <i>c346/Y</i> P>0.05 <i>c346/IMP</i> vs. <i>c346/Y</i>	
		<i>c346/Y; UAS-IMP/+</i>	8.88 (0.407)					
		<i>c346/Y</i>	8.52 (0.534)					
<i>DAT</i> overexpression	2J,K	<i>TH-GAL4/+; UAS-DAT/+</i>	4.22 (0.235)	2-sample t-test	P<0.0005			
		<i>TH-GAL4/+</i>	2.59 (0.095)					
<i>DAT</i> overexpression	2J,K	<i>c346/Y; UAS-DAT/+</i>	5.77 (0.203)	2-sample t-test	P=0.0013			
		<i>c346/Y</i>	4.46 (0.293)					
Tetanus in Central Complex	3A	<i>5.30/+; UAS-TeTx/+</i>	3.14 (0.315)	1-way ANOVA	P=0.0008	Tukey	P<0.001 <i>5.30/TeTx</i> vs. <i>5.30/IMP</i> P<0.01 <i>5.30/TeTx</i> vs. <i>5.30/+</i> P>0.05 <i>5.30/IMP</i> vs. <i>5.30/+</i>	
		<i>5.30/+; UAS-IMP/+</i>	6.85 (0.831)					
		<i>5.30/+</i>	5.94 (0.481)					
			<i>11.148/+; UAS-TeTx/+</i>	3.70 (0.182)	1-way ANOVA	P=0.0051	Tukey	P<0.05 <i>11.148/TeTx</i> vs. <i>11.148/IMP</i> P<0.05 <i>11.148/TeTx</i> vs. <i>11.148/+</i> P=0.136 <i>11.148/IMP</i> vs. <i>11.148/+</i>
			<i>11.148/+; UAS-IMP/+</i>	6.00 (0.679)				
			<i>11.148/+</i>	5.86 (0.726)				
			<i>c819/+; UAS-TeTx/+</i>	6.92 (0.521)	1-way ANOVA	P=0.0024	Tukey	P<0.05 <i>c819/TeTx</i> vs. <i>c819/IMP</i> P<0.01 <i>c819/TeTx</i> vs. <i>c819/+</i> P>0.05 <i>c819/IMP</i> vs. <i>c819/+</i>
			<i>c819/+; UAS-IMP/+</i>	8.72 (0.279)				
			<i>c819/+</i>	10.40 (0.750)				
			<i>189Y/+; UAS-TeTx/+</i>	8.97 (0.325)	1-way ANOVA	P=0.0337	Tukey	P>0.05 <i>189Y/TeTx</i> vs. <i>189Y/IMP</i> P<0.05 <i>189Y/TeTx</i> vs. <i>189Y/+</i> P<0.05 <i>189Y/IMP</i> vs. <i>189Y/+</i>
			<i>189Y/+; UAS-IMP/+</i>	8.45 (0.510)				
			<i>189Y/+</i>	7.10 (0.631)				
			<i>c561/Y; UAS-TeTx/+</i>	8.14 (0.508)	1-way ANOVA	P=0.0448	Tukey	P>0.05 for all comparisons
			<i>c561/Y; UAS-IMP/+</i>	8.59 (0.637)				
			<i>c561/Y</i>	7.12 (0.245)				
		<i>c232/+; UAS-TeTx/+</i>	8.44 (0.766)	1-way ANOVA	P=0.9939			
		<i>c232/+; UAS-IMP/+</i>	8.55 (0.450)					
		<i>c232/+</i>	8.39 (1.330)					
<i>DopR<sup>f02676</sup></i> hyperactivity	5D	<i>f02676/f02676</i>	2.28 (0.227)	1-way ANOVA	P=0.0014	Tukey	P<0.001 <i>f02676/f02676</i> vs. <i>+/+</i> P>0.05 for others	
		<i>f02676/+</i>	2.99 (0.221)					
		<i>+/+</i>	3.52 (0.207)					
<i>f02676</i> Excision	5E	<i>f02676/f02676</i>	2.65 (0.232)	1-way RM ANOVA	P=0.0024	Dunnett	vs. <i>f02676/f02676</i> ; P<0.01 P<0.05 P<0.01	
		Excision 1	3.49 (0.226)					
		Excision 2	3.48 (0.197)					
		Control	3.67 (0.228)					
<i>DopR(PL00420)</i> hyperactivity	5F	<i>PL00420/PL00420</i>	2.18 (0.222)	2-sample t-test	P=0.0368			
		Control	2.94 (0.262)					
<i>DopR</i> allelic complementation	5G	<i>DfED5634/+</i>	5.67 (0.302)	1-way ANOVA	P<0.0005	Dunnett	vs. <i>DfED5634</i> ; P<0.01 P<0.01	
		<i>DfED5634/f02676</i>	2.60 (0.205)					
		<i>DfED5634/dumb1</i>	3.03 (0.514)					
<i>DopR</i> Rescue	6A	<i>f02676/f02676</i>	2.67 (0.140)	1-way ANOVA	P<0.0005	Dunnett	vs. <i>f02676/f02676</i> ; P<0.05 P<0.05 P<0.01 P<0.01 P<0.01 P<0.01 P>0.05 P<0.01 P>0.05 P<0.01 P>0.05 P<0.01 P>0.05	
		<i>11.148/+</i>	3.81 (0.260)					
		<i>11.148/+; f02676/f02676</i>	3.90 (0.341)					
		<i>5.30/+</i>	5.37 (0.230)					
		<i>5.30/+; f02676/f02676</i>	4.14 (0.189)					
		<i>c232/+</i>	4.51 (0.596)					
		<i>c232/+; f02676/f02676</i>	2.64 (0.403)					
		<i>189Y/+</i>	5.48 (0.408)					
		<i>189Y/+; f02676/f02676</i>	3.58 (0.376)					
		<i>17d/+</i>	4.20 (0.637)					
		<i>17d/+; f02676/f02676</i>	2.29 (0.355)					
		<i>201Y/+</i>	5.40 (0.418)					
		<i>201Y/+; f02676/f02676</i>	2.64 (0.240)					
		<i>DopR</i> overexpression	SF7G					<i>11.148/+; f02676/+</i>
<i>11.148/+</i>	3.04 (0.398)							
<i>f02676/+</i>	1.95 (0.176)							
<i>DopR</i> overexpression	SF7G	<i>elav-GAL4(3E1)/+; UAS-DopR/+</i>	3.76 (0.618)	1-way RM ANOVA	P=0.2416			
		<i>elav-GAL4(3E1)/+</i>	3.70 (0.340)					
		<i>UAS-DopR/+</i>	3.20 (0.553)					