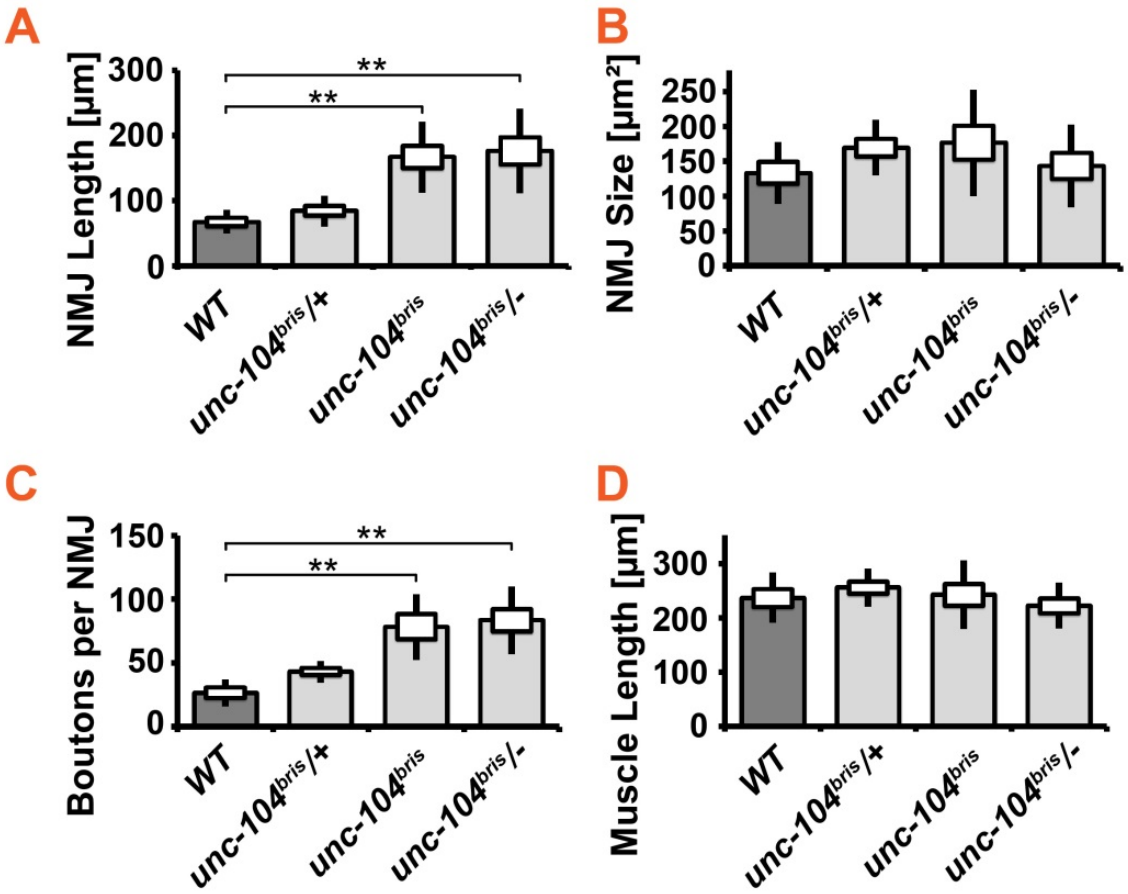

Figure S1 Altered NMJ morphology in unc-104^{bris}/- larvae. Analysis of NMJ 4, Segment A2 of mid third instar Drosophila wild-type, unc-104^{bris}/+, unc-104^{bris}, and unc-104^{bris}/- larvae. Non-normalized raw data of NMJ length **(A)**, NMJ size **(B)**, bouton number **(C)** is shown. Data normalized by (D) the muscle length or area is shown in Figure 8 B,C,D. The SEM is shown as a box, the SD as a black line. ** p<0.01.

File S1

Sequence raw data for genes listed in Figure 2B

unc-104^{bris} R561H

CGCTGCTCAGAAACGATGGTGTGGAGCATGCGCGGGATTCTCACCGAAGAAGACTCCGCATTTGGTCAACCTAAACGAGGATCCCAATC
TGTCTGAGTGTCTGCTTTACTACATCAAGGAGGGTCTAACTCGGTTGGGTACCCATGAAGCAAATGTGCCCCAGGACATTCAGCTCTCCG
GATCGCACATCCTCAAGGAGCACTGCACCTTTGAGAACAAGAACAGCACGGTTACATTGCTGCCACACAAGGATGCTATCATCTATGTAA
ATGGACGCAAGTTGGTTGAACCGGAGGTTCTTAAGACCGGTTCTCACGTGATCCTCGGAAAGAACCACGTGTTCCGCTTTACCAATCCAG
AACAGGCACGCGAATTACGGGATAAGATCGAGACCGAAAATGAGGCTGAGAACGAAGTGGAGAAGACAGACACCCAGCAGGTGGACT
GGAACTTTGCCCAGTGCGAATTGCTCGAGAAGCAAGGCATTGATCTAAAAGCTGAAATGAAGAAGCGTTTAGACAACTTGGAGGAACA
GTACAAGCGGGAGAAACTTCAGGCCGATCAGCAATTCGAGGAGCAGCGCAAAACGTACGAGGCTCGCATCGATGCTTTGCAAAAACAG
GTTAGAAGACAAATCCAATGAA

unc-104^{bris} V772L

AAGGAGCCAGTGCCGTTTCCGTTGAGTTAAAGAAGAAGGTACATAGTTTACGCCTATTACTTAACATAATAGATTAGAGATCATATACTT
AAATATTTATTTCAGGTACAATTCCAATTTACTCTCTTGACCGACACCTTGTACTCTCCTTTGCCGCCTGAGCTGGCATCCACTGTGGCTCCT
TTGCATCAGGAGGATGAGTTCGGAGCTCCACCTGTCTCTAAGACCTTGGTGGCCGTCGAAGTTACCGATACTAAGAACGGAGCCACTCA
CCACTGGTCTCTGGAGAAGTTACGGTAGGTTCTTTTATATCCGGAAATCCATGCGAATTCCTGCTACTCCCTCACATTCATTCTTCTCTGCA
CTTTGGTTAAAATTAAAAAAAAAAAGCTGGCTTTTGATTTGAGTTGAATATTATTTAAATAATACGTGCATGGGGGTTGTAGTTCATGGATT
CTAGTTTCTATCAAACGCTCTAAAATTTGTTGGTTACTTTTATAACTTTGGCTGTAAAAAGCAGAAAAAATCACAA

unc-104^{bris} D1073E

TTCAAGATTTCAACCAAACCAAAACATCGTGCTTAGCCAAAACCGTAGACGTGGGTGCACATGGTAGTGGTCCAAATTTGGGACTACGCA
CTGGCTGACTGATTGGTATGCTCGGTGGCAACATGCGACGTGGTGGTGGCCGGGAAACAAACTCCTGTTTGGCATCCTTATGCAATGGG
TGCGTCTGGTAGTGCCCAAATATCTTGAACATTATGGGTTGGGTCTTCAAATACTCGATGAAGGATTTGGTTACGGGTACAGTTATCTAC
AGAAAAGATAACAGTTAATAATTGATATGGTGGAAAGCTCTTGGTAATCTTGTAATCTTCCACTTACGTTCTGAACATGGTAGAAGCCTA
GAGGAGCACCCGATGCCGAATTCTTGACGGGTTCGGTGGAGAAAGCCTCCTCATGACGATGCAAAAAGCTGTAAAGGTAACAGTTTATA
AACCACAAACCTAAAGTTAATTTCCGAAAGATTACGTACTTGAACTGGCAGAAGATATCGGCATATTCAGCCCCAATACCAGTGGCCTGT
AGCACAGTGACCCGGAAAGTGAACTCCTTGCCCACCTGCAGATGCTCGCCAGGCTCCTCCGAATTTTCGTGGCACTCGGATGCGGAGTTA
GAGTCAATGCCACGACCAGAG

unc-104^{bris} V1170M

ACGTCGTCGAGTCCAGGCAGCCTCAAACGGTAGAAAGATCTATCATCTCCGGGCACCTCCAAAGCCTCGCCTGGGAACAAGCCCAAAGA
TAAGACACAGGCGTCTTCGTCCTGTTCGTCGGATGACTCCGGTGTATTGCGGATACGTCCAACCACCAACTCATTGATGTCCTTCCACTTC
ATCTCGGTTGTGGGCTCATGTACGATAGTAATACGAATGCGCCGCTGGATGCCCTGATGCAAGAGGAACAGTCCGCGGCAGGGAAGAT
CATCGCTGTGCTCCACCACCTGTTGACAAATTTATGTTTGGATTATTGCGTGTGAGACTGGGAAAGATTACATCTGCGCCATACTAACCGA
TGGCACATATTCTCCATTGGGAGCCAATTCACAGATTTCAAACCAAACCAAAACATCGTGCTTAGCCAAAACCGTAGACGTGGGTGCACA
TGGTAGTGGTCCAAATTTGGGACTACGCACTGGCTGACTGATTGGTATGCTCGGTGGCAACATGCGACGTGGTGGTGGCCGGGAAACA
AACTCCTGTTTGGCATCCTTATGCAATGGGTGCGTCTGGTAGTGCCCAAAATATCTTGGA

unc-104^{bris} A1405V

TTGTGACACCAGCTCTACTTATGTGCGCGGCGAGGAGAATCTTCATGGCTGGAGGCCAAGGGGTGACTCCCTGATCTTCGATCACCAGT
GGGAGCTGGAGAAACTCACCAGACTTGAAGAGGTTGGACGCATGCGGCACTTGCTTCTGCTGCGCGAACGTCTGGGCATGGACACCAA
CCCGAATCCGACCACCAAGACCGAGAAGGATGTTTGCAATCTAGCTGCTCGGGCAGTCACATCACCCGTACATATGGTCATTCCACAATC
GCCGCAGACTCCGGTCAAGGACCCACAGCAAATCATTCCAGAACGCGAGTACAACCAACGGGAGCAGGATCTCATGCTTAAATGCTTAA
AATTGGTGCAGGGTGAGTTAATACTGAGACTTACCAAGCGTTCCATTCACTCTATTCTAAATTCATTTAAGGACGCTATACTAAGAGCGA
GGCCAACGATACGCAAACTCAGTCGGATGTTTCGCCTAGCGATGAGGGATGTGCCGATATGACCGTCAGCTGCATCTCCAGCAATTCCAT
GGAGTGAGTAGTCGTTTAGCCACCCGTATAAACACACCACCCACACCAGCACCACCCATCTTAGTTAGCTG

parental R561R

CGGCTGCGCACGTATGATGGATATCAGTTGGCGTATTCTCACCGAAGAAGACTCCGCATTTGGTCAACCTAAACGAGGATCCCAATCTGT
CTGAGTGTCTGCTTTACTACATCAAGGAGGGTCTAACTCGGTTGGGTACCCATGAAGCAAATGTGCCCCAGGACATTCAGCTCTCCGGAT
CGCACATCCTCAAGGAGCACTGCACCTTTGAGAACAAGAACAGCACGGTTACATTGCTGCCACACAAGGATGCTATCATCTATGTAAATG
GACGCAAGTTGGTTGAACCGGAGGTTCTTAAGACCGGTTCTCGCGTGATCCTCGGAAAGAACCACGTGTTCCGCTTTACCAATCCAGAAC
AGGCACGCGAATTACGGGATAAGATCGAGACCGAAAATGAGGCTGAGAACGAAGTGGAGAAGACAGACACCCAGCAGGTGGACTGGA
ACTTTGCCCAGTGCGAATTGCTCGAGAAGCAAGGCATTGATCTAAAAGCTGAAATGAAGAAGCGTTTAGACAACTTGGAGGAACAGTAC
AAGCGGGAGAAACTTCAGGCCGATCAGCAATTCGAGGAGCAGCGCAAAACGTACGAGGCTCGCATCGATGCTTTGCAAACGGGAGGAA
ACCCCCCCCCCCCCCCTGCAGAGGGCACCCCAGAAAACTTAAGAAAAGGAATTTTCTCCCTGAAAAAAACACCCCATTTTAACGATATCTT
TAAGGGGGGGCCCGTGGGTCATCATCTT

parental V772L

AGGAGCCAGTGCCGTTTCCGTTGAGTTAAGAAGAAGGTACATAGTTTACGCCTATTACTTAACATAATAGATTAGAGATCATATACTTAA
ATATTTATTTCAGGTACAATTCCAATTTACTCTCTTGACCGACACCTTGTACTCTCCTTTGCCGCCTGAGCTGGCATCCACTGTGGCTCCTTT
GCATCAGGAGGATGAGTTCGGAGCTCCACCTGTCTCTAAGACCTTGGTGGCCGTCGAAGTTACCGATACTAAGAACGGAGCCACTCACC
ACTGGTCTCTGGAGAAGTTACGGTAGGTTCTTTTATATCCGGAAATCCATGCGAATTCCTGCTACTCCCTCACATTCATTCTTCTCTGCACT
TTGGTTAAAATTAAAAAAAATAGCAGGCTTTTGATTTGAGTTGAATATTATTTAAATAATCCGTGCATGATGGTTGTAAATAATGGATTCC
AATGTCCCTCAAACGCTCTCTCATTTGATGGGTACTTGTATAACTTTGGGTGTAAACATGGGCCCACATAAA

parental D1073E

AATCCAGATTTCAACCAACCAAAACATCGTGCTTAGCCAAAACCGTAGACGTGGGTGCACATGGTAGTGGTCCAAATTTGGGACTACGCA
CTGGCTGACTGATTGGTATGCTCGGTGGCAACATGCGACGTGGTGGTGGCCGGGAAACAAACTCCTGTTTGGCATCCTTATGCAATGGG
TGCGTCTGGTAGTGCCCAAATATCTTGAACATTATGGGTTGGGTCTTCAAATACTCGATGAAGGATTTGGTTACGGGTACAGTTATCTAC
AGAAAAGATAACAGTTAATAATTGATATGGTGGAAAGCTCTTGGTAATCTTGTAATCTTCCACTTACGTTCTGAACATGGTAGAAGCCTA
GAGGAGCACCCGATGCCGAATTCTTGACGGGTTCGGTGGAGAAAGCCTCCTCATGACGATGCAAAAAGCTGTAAAGGTAACAGTTTATA
AACCACAAACCTAAAGTTAATTTCCGAAAGATTACGTACTTGAACTGGCAGAAGATATCGGCATATTCAGCCCCAATACCAGTGGCCTGT
AGCACAGTGACCCGGAAAGTGAACTCCTTGCCCACCTGCAGATGCTCGCCAGGCTCCTCCGAATTTTCGTGGCACTCGGATGCGGAGTTA
GAGTCAATGCCACGACCAGAGTCCACATCCTCAAGTTCTTTTACAAATAATGAATATGAAA

parental V1170M

GTTCTCTGCACATCTCGCTGCTGCTCGATTTTTTGTTCCCGGCCACCACCACGTCGCATGCACATAAAGGCTTCCCTGGTCGAGACGTTCAT
CCATTGCCACCGGGCATACCAATCAGTCAGCCAGTGCGTAGTCCCAAATTTGGACCACTACCATGTGCACCCACGTCTACGGTTTTGGCTA
AGCACGATGTTTTGGTTTGGTTTGAAATCTGTGAATTGGCTCCCAATGGAGAATATGTGCCATCGGTTAGTATGGCGCAGATGTAATCTT
TCCCAGTCTCACACGCAATAATCCAAACATAAATTTGTCAACAGGTGGTGGAGCACAGCGATGATCTTCCCTGCCGCGGACTGTTCCTCTT
GCATCAGGGCATCCAGCGGCGCATTCGTATTACTATCGTACATGAGCCCACAACCGAGATGAAGTGGAAGGACATCAATGAGTTGGTGG
TTGGACGTATCCGCAATACACCGGAGTCATCCGACGAACAGGACGAAGACGCCTGTGTCTTATCTTTGGGCTTGTTCCCAGGCGAGGCTT
TGGAGGTGCCCGGAGATGATAGATCTTTCTACCGTTTTGAGGCTGCCTGGGACTCGAGTCTGCACAACTCGGCCACTGCTCAAGAAGGA
ACGAAATCTTGGTCTCGCACTGCACGCGGGAAAC

parental A1405V

ATGTACCAGCTCTACTTATGTGCGCGGCGAGTCAGAATCTTCATGGCTGGAGGCCAAGGGGTGACTCCCTGATCTTCGATCACCAGTGG
GAGCTGGAGAAACTCACCAGACTTGAAGAGGTTGGACGCATGCGGCACTTGCTTCTGCTGCGCGAACGTCTGGGCATGGACACCAACCC
GAATCCGACCACCAAGACCGAGAAGGATGTTTGCAATCTAGCTGCTCGGGCAGTCACATCACCCGTACATATGGTCATTCCACAATCGCC
GCAGACTCCGGTCAAGGACCCACAGCAAATCATTCCAGAACGCGAGTACAACCAACGGGAGCAGGATCTCATGCTTAAATGCTTAAAAT
TGGTGCAGGGTGAGTTAATACTGAGACTTACCAAGCGTTCCATTCACTCTATTCTAAATTCATTTAAGGACGCTATACTAAGAGCGAGGC
CAACGATACGCAAACTCAGTCGGATGTTTCGCCTAGCGATGAGGGATGTGCCGATATGACCGTCAGCTGCATCTCCAGCAATTCCATGGA
GTGAGTAGTCGTTTAGCCACCCGTATAAACACACCACCCACACCAGCACCACCCATCTTAGTTAGCTGGACTCCCCCTTCCGCAAACCTTC
CTTAAATCCGGGTTTAGGGGCGAAAACCATCCAAACTGATTTGCGAACGTGGCTCCTCTTAGTAGGGCTTAA

Table S1 Statistical tests used in this study

Figure: 2E

Number:	Genotype:	n:
1	w^{1118};; **(WT)**	5
2	;*unc-104*^{bris}/*unc-104*^{bris} **(*unc-104*^{bris})**	6

Test: Student's two-tailed t-test

p-Value:

	1
1	
2	n.s.

Figure: 2F

Number:	Genotype:	n:
1	*elav*^{C155}*-Gal4 /+; ;UAS-unc-104*^{mCherry}/+ **(control)**	9
2	;*unc-104*^{bris}/*unc-104*^{d11024};*UAS-unc-104*^{mCherry}/+ **(*unc-104*^{bris}/-)**	10
3	*elav*^{C155}*-Gal4/+;unc-104*^{bris}/*unc-104*^{d11024};*UAS-unc-104*^{mCherry}/+ **(rescue)**	9

Test: One-Way ANOVA followed by Tukey's Multiple Comparison test

p-Value:

	1	2	3
1		***	n.s.
2			***
3			

Figure: 4A

Number:	Genotype:	n:
1	w^{1118};; **(WT)**	6
2	;*unc-104*^{bris}/*unc-104*^{bris} **(*unc*^{bris})**	8
3	;*unc-104*^{bris}/*unc-104*^{d11024} **(*unc-104*^{bris}/-)**	8
4	*elavX-Gal4 /+; ;UAS-unc-104*^{mCherry}/+ **(control)**	6
5	*elavX-Gal4 /+;unc-104*^{bris}/*unc-104*^{d11024} ;*UAS-unc-104*^{mCherry}/+ **(rescue)**	6

Test: One-Way ANOVA followed by Tukey's Multiple Comparison test

p-Value:

	1
1	
2	***
3	***
4	n.s.
5	n.s.

1-2.5 mm

	1
1	
2	***
3	***
4	n.s.
5	n.s.

2.6-4 mm

Figure: **6C**

Number:	**Genotype:**	**n:**
1	*elav ^{C155}-Gal4 /+; ;UAS-unc-104 ^{mCherry}/+* **(control)**	9
2	*;unc-104 ^{bris} /unc-104 ^{d11024};UAS-unc-104 ^{mCherry}/+* **(*unc-104 ^{bris}*/-)**	10
3	*elav ^{C155}-Gal4/+;unc-104 ^{bris} /unc-104 ^{d11024};UAS-unc-104 ^{mCherry}/+* **(rescue)**	9

Test: Kruskal-Wallis H-test followed by Mann-Whitney pairwise comparison test

p-Value: (Bonferroni corrected)

	1	**2**	**3**
1		***	**n.s.**
2			**
3			

Figure: **6D**

Number:	**Genotype:**	**n:**
1	*elav ^{C155}-Gal4 /+; ;UAS-unc-104 ^{mCherry}/+* **(control)**	9
2	*;unc-104 ^{bris} /unc-104 ^{d11024};UAS-unc-104 ^{mCherry}/+* **(*unc-104 ^{bris}*/-)**	10
3	*elav ^{C155}-Gal4/+;unc-104 ^{bris} /unc-104 ^{d11024};UAS-unc-104 ^{mCherry}/+* **(rescue)**	9

Test: Kruskal-Wallis H-test followed by Mann-Whitney pairwise comparison test

p-Value: (Bonferroni corrected)

	1	**2**	**3**
1		**	**n.s.**
2			*
3			

Figure: **7B**

Number:	**Genotype:**	**n:**
1	*elav ^{C155}-Gal4 /+;;* **(control)**	9
2	*elav ^{C155}-Gal4 /+;unc-104 ^{bris} /unc-104 ^{d11024}* **(*unc-104 ^{bris}*/-)**	8
3	*elav ^{C155}-Gal4 /+;unc-104 ^{bris} /unc-104 ^{d11024};UAS-Brp* **(unc-104^{bris}/-; Brp↑)**	8

Test: Kruskal-Wallis H-test followed by Mann-Whitney pairwise comparison test

p-Value: (Bonferroni corrected)

	1	**2**	**3**
1		*	**n.s.**
2			**
3			

Figure: **7C**

Number:	**Genotype:**	**n:**
1	*elav ^{C155}-Gal4 /+;;* **(control)**	9
2	*elav ^{C155}-Gal4 /+;unc-104 ^{bris} /unc-104 ^{d11024}* **(*unc-104 ^{bris} /-*)**	8
3	*elav ^{C155}-Gal4 /+;unc-104 ^{bris} /unc-104 ^{d11024} ;UAS-Brp/+* **(*unc-104 ^{bris} /-; Brp ↑*)**	8

Test: Kruskal-Wallis H-test followed by Mann-Whitney pairwise comparison test

p-Value: (Bonferroni corrected)

	1	**2**	**3**
1		**	n.s.
2			**
3			

Figure: **7D**

Number:	**Genotype:**	**n:**
1	*elav ^{C155}-Gal4 /+;;* **(control)**	9
2	*elav ^{C155}-Gal4 /+;unc-104 ^{bris} /unc-104 ^{d11024}* **(*unc-104 ^{bris} /-*)**	8
3	*elav ^{C155}-Gal4 /+;unc-104 ^{bris} /unc-104 ^{d11024} ;UAS-Brp/+* **(*unc-104 ^{bris} /-; Brp ↑*)**	8

Test: Kruskal-Wallis H-test followed by Mann-Whitney pairwise comparison test

p-Value: (Bonferroni corrected)

	1	**2**	**3**
1		**	**
2			*
3			

Figure: **8B**

Number:	**Genotype:**	**n:**
1	*w ^{1118} ;;* **(WT)**	7
2	*;unc-104 ^{bris} /+* **(*unc-104 ^{bris} /+*)**	9
3	*;unc-104 ^{bris} /unc-104 ^{bris}* **(*unc-104 ^{bris}*)**	7
4	*;unc-104 ^{bris} /unc-104 ^{d11024}* **(*unc-104 ^{bris} /-*)**	9

Test: Kruskal-Wallis H-test followed by Mann-Whitney pairwise comparison test

p-Value: (Bonferroni corrected)

	1	**2**	**3**	**4**
1		n.s.	*	**
2			n.s.	**
3				n.s.
4				

Figure: **8C**

Number:	**Genotype:**	**n:**
1	w^{1118};; **(WT)**	7
2	;*unc-104*^{bris}/+ **(*unc-104*^{bris}/+)**	9
3	;*unc-104*^{bris}/*unc-104*^{bris} **(*unc-104*^{bris})**	7
4	;*unc-104*^{bris}/*unc-104*^{d11024} **(*unc-104*^{bris}/-)**	9

Test: Kruskal-Wallis H-test followed by Mann-Whitney pairwise comparison test

p-Value: (Bonferroni corrected)

	1	**2**	**3**	**4**
1		**n.s.**	**n.s.**	**n.s.**
2			**n.s.**	**n.s.**
3				**n.s.**
4				

Figure: **8D**

Number:	**Genotype:**	**n:**
1	w^{1118};; **(WT)**	7
2	;*unc-104*^{bris}/+ **(*unc-104*^{bris}/+)**	9
3	;*unc-104*^{bris}/*unc-104*^{bris} **(*unc-104*^{bris})**	7
4	;*unc-104*^{bris}/*unc-104*^{d11024} **(*unc-104*^{bris}/-)**	9

Test: Kruskal-Wallis H-test followed by Mann-Whitney pairwise comparison test

p-Value: (Bonferroni corrected)

	1	**2**	**3**	**4**
1		**n.s.**	*	**
2			*	*
3				**n.s.**
4				

Figure: **8F**

Number:	**Genotype:**	**n:**
1	w^{1118};; **(WT)**	8
2	;*unc-104*^{bris}/+ **(*unc-104*^{bris}/+)**	10
3	;*unc-104*^{bris}/*unc-104*^{bris} **(*unc-104*^{bris})**	10
4	;*unc-104*^{bris}/*unc-104*^{d11024} **(*unc-104*^{bris}/-)**	10

Test: One-Way ANOVA followed by Tukey's Multiple Comparison test

p-Value: (Bonferroni corrected)

	1	**2**	**3**	**4**
1		***	***	***
2			***	***
3				**n.s.**
4				

Figure: **8G**

Number:	**Genotype:**	**n:**
1	w^{1118};; **(WT)**	8
2	;*unc-104*^{bris}/+ **(*unc-104*^{bris}/+)**	10
3	;*unc-104*^{bris}/*unc-104*^{bris} **(*unc-104*^{bris})**	10
4	;*unc-104*^{bris}/*unc-104*^{d11024} **(*unc-104*^{bris}/-)**	10

Test: One-Way ANOVA followed by Tukey's Multiple Comparison test

p-Value: (Bonferroni corrected)

	1	**2**	**3**	**4**
1		**	***	***
2			***	***
3				**n.s.**
4				

Figure: **8I**

Number:	**Genotype:**	**n:**
1	w^{1118};; **(WT)**	10
2	;*unc-104*^{bris}/+ **(*unc-104*^{bris}/+)**	10
3	;*unc-104*^{bris}/*unc-104*^{bris} **(*unc-104*^{bris})**	10
4	;*unc-104*^{bris}/*unc-104*^{d11024} **(*unc-104*^{bris}/-)**	10

Test: Kruskal-Wallis H-test followed by Mann-Whitney pairwise comparison test

p-Value: (Bonferroni corrected)

	1	**2**	**3**	**4**
1		**n.s.**	**	**
2			**	**
3				**
4				

Figure: **8J**

Number:	**Genotype:**	**n:**
1	w^{1118};; **(WT)**	10
2	;*unc-104*^{bris}/+ **(*unc-104*^{bris}/+)**	10
3	;*unc-104*^{bris}/*unc-104*^{bris} **(*unc-104*^{bris})**	10
4	;*unc-104*^{bris}/*unc-104*^{d11024} **(*unc-104*^{bris}/-)**	10

Test: Kruskal-Wallis H-test followed by Mann-Whitney pairwise comparison test

p-Value: (Bonferroni corrected)

	1	**2**	**3**	**4**
1		**n.s.**	*	*
2			**n.s.**	*
3				**n.s.**
4				

Figure: **8K**

Number:	Genotype:	n:
1	*w*^{1118}*;;* **(WT)**	8
2	*;unc-104*^{bris}*/+* **(*unc-104*^{bris}*/+*)**	10
3	*;unc-104*^{bris}*/unc-104*^{bris} **(*unc-104*^{bris})**	10
4	*;unc-104*^{bris}*/unc-104*^{d11024} **(*unc-104*^{bris}*/-*)**	10

Test: Kruskal-Wallis H-test followed by Dunn's Multiple Comparison test

p-Value:

	1	2	3	4
1		n.s.	*	***
2			*	***
3				n.s.
4				

Figure: **9B**

Number:	Genotype:	n:
1	*elav*^{C155}*-Gal4 /+; ;UAS-unc-104*^{mCherry}*/+* **(control)**	9
2	*;unc-104*^{bris}*/unc-104*^{d11024}*;UAS-unc-104*^{mCherry}*/+* **(*unc-104*^{bris}*/-*)**	11
3	*elav*^{C155}*-Gal4/+;unc-104*^{bris}*/unc-104*^{d11024}*;UAS-unc-104*^{mCherry}*/+* **(rescue)**	8

Test: Kruskal-Wallis H-test followed by Mann-Whitney pairwise comparison test

p-Value: (Bonferroni corrected)

	1	2	3
1		**	n.s.
2			**
3			

Figure: **9C**

Number:	Genotype:	n:
1	*elav*^{C155}*-Gal4 /+; ;UAS-unc-104*^{mCherry}*/+* **(control)**	9
2	*;unc-104*^{bris}*/unc-104*^{d11024}*;UAS-unc-104*^{mCherry}*/+* **(*unc-104*^{bris}*/-*)**	11
3	*elav*^{C155}*-Gal4/+;unc-104*^{bris}*/unc-104*^{d11024}*;UAS-unc-104*^{mCherry}*/+* **(rescue)**	8

Test: Kruskal-Wallis H-test followed by Mann-Whitney pairwise comparison test

p-Value: (Bonferroni corrected)

	1	2	3
1		n.s.	n.s.
2			n.s.
3			

Figure: **9D**

Number:	Genotype:	n:
1	*elav ^{C155}-Gal4 /+; ;UAS-unc-104 ^{mCherry}/+* **(control)**	9
2	*;unc-104 ^{bris} /unc-104 ^{d11024};UAS-unc-104 ^{mCherry}/+* **(*unc-104 ^{bris}*/-)**	11
3	*elav ^{C155}-Gal4/+;unc-104 ^{bris} /unc-104 ^{d11024};UAS-unc-104 ^{mCherry}/+* **(rescue)**	8

Test: Kruskal-Wallis H-test followed by Mann-Whitney pairwise comparison test

p-Value: (Bonferroni corrected)

	1	2	3
1		**	n.s.
2			**
3			

Figure: **9F**

Number:	Genotype:	n:
1	*elav ^{C155}-Gal4 /+; ;UAS-unc-104 ^{mCherry}/+* **(control)**	9
2	*;unc-104 ^{bris} /unc-104 ^{d11024};UAS-unc-104 ^{mCherry}/+* **(*unc-104 ^{bris}*/-)**	10
3	*elav ^{C155}-Gal4/+;unc-104 ^{bris} /unc-104 ^{d11024};UAS-unc-104 ^{mCherry}/+* **(rescue)**	9

Test: One-Way ANOVA followed by Tukey's Multiple Comparison test

p-Value:

	1	2	3
1		***	n.s.
2			***
3			

Figure: **9G**

Number:	Genotype:	n:
1	*elav ^{C155}-Gal4 /+; ;UAS-unc-104 ^{mCherry}/+* **(control)**	9
2	*;unc-104 ^{bris} /unc-104 ^{d11024};UAS-unc-104 ^{mCherry}/+* **(*unc-104 ^{bris}*/-)**	10
3	*elav ^{C155}-Gal4/+;unc-104 ^{bris} /unc-104 ^{d11024};UAS-unc-104 ^{mCherry}/+* **(rescue)**	9

Test: One-Way ANOVA followed by Tukey's Multiple Comparison test

p-Value:

	1	2	3
1		***	n.s.
2			***
3			

Figure: **11B**

Number:	Genotype:	n:
1	*elav^{C155}-Gal4 /+;unc-104^{bris}/unc-104^{d11024}* (***unc-104^{bris}/-***)	8
2	*elav^{C155}-Gal4 /+;unc-104^{bris}/unc-104$^{d11024;}$ UAS-Brp-RNAi* (***Brp↓***)	8
3	*elav^{C155}-Gal4 /+;unc-104^{bris}/unc-104$^{d11024;}$ UAS-Brp* (***Brp↑***)	8

Test: One-Way ANOVA followed by Tukey's Multiple Comparison test

p-Value:

	1	2	3
1		n.s.	n.s.
2			n.s.
3			

Figure: **11C**

Number:	Genotype:	n:
1	*elav^{C155}-Gal4 /+;unc-104^{bris}/unc-104^{d11024}* (***unc-104^{bris}/-***)	8
2	*elav^{C155}-Gal4 /+;unc-104^{bris}/unc-104$^{d11024;}$ UAS-Brp-RNAi* (***Brp↓***)	8
3	*elav^{C155}-Gal4 /+;unc-104^{bris}/unc-104$^{d11024;}$ UAS-Brp* (***Brp↑***)	8

Test: One-Way ANOVA followed by Tukey's Multiple Comparison test

p-Value:

	1	2	3
1		n.s.	n.s.
2			n.s.
3			

Figure: **11D**

Number:	Genotype:	n:
1	*elav^{C155}-Gal4 /+;unc-104^{bris}/unc-104^{d11024}* (***unc-104^{bris}/-***)	8
2	*elav^{C155}-Gal4 /+;unc-104^{bris}/unc-104$^{d11024;}$ UAS-Brp-RNAi* (***Brp↓***)	8
3	*elav^{C155}-Gal4 /+;unc-104^{bris}/unc-104$^{d11024;}$ UAS-Brp* (***Brp↑***)	8

Test: One-Way ANOVA followed by Tukey's Multiple Comparison test

p-Value:

	1	2	3
1		n.s.	n.s.
2			n.s.
3			

Figure: **11E**

Number:	Genotype:	n:
1	*elav^{C155}-Gal4 /+;unc-104^{bris}/unc-104^{d11024}* **(*unc-104^{bris}/-*)**	8
2	*elav^{C155}-Gal4 /+;unc-104^{bris}/unc-104$^{d11024;}$ UAS-Brp-RNAi* **(*Brp*↓)**	8
3	*elav^{C155}-Gal4 /+;unc-104^{bris}/unc-104$^{d11024;}$ UAS-Brp* **(*Brp*↑)**	8

Test: One-Way ANOVA followed by Tukey's Multiple Comparison test

p-Value:

	1	2	3
1		n.s.	n.s.
2			n.s.
3			

Figure: **11F**

Number:	Genotype:	n:
1	*elav^{C155}-Gal4 /+;unc-104^{bris}/unc-104^{d11024}* **(*unc-104^{bris}/-*)**	8
2	*elav^{C155}-Gal4 /+;unc-104^{bris}/unc-104$^{d11024;}$ UAS-Brp-RNAi* **(*Brp*↓)**	8
3	*elav^{C155}-Gal4 /+;unc-104^{bris}/unc-104$^{d11024;}$ UAS-Brp* **(*Brp*↑)**	8

Test: One-Way ANOVA followed by Tukey's Multiple Comparison test

p-Value:

	1	2	3
1		n.s.	n.s.
2			n.s.
3			