S1 Table: Summary

Parameters	Test	Comparison	p value
Body Weight	t-test	Normally fed vs Underfed	p<0.0001
Axon growth of NF neurons in response to Insulin	2 way ANOVA Bonferonni	Concentration Insulin	p<0.05
		Nutrition effect	ns
		Interaction	ns
		Normally fed vs Underfed	ns
	1 way ANOVA Newman Keuls	Insulin concentrations vs Control	ns
Axon growth of GHRH neurons in response to Insulin	2 way ANOVA Bonferonni	Concentration Insulin	p<0.001
		Nutrition effect	p<0.0001
		Interaction	p<0.05
		Normally fed vs Underfed	100 nM p<0.05
			200 nM p<0.01
			1000 nM p<0.001
	1 way ANOVA Newman Keuls	0 vs 1000nM	p<0.01
Axon growth of AgRP neurons in response to Insulin	2 way ANOVA	Concentration Insulin	ns
		Nutrition effect	ns
		Interaction	ns
	1 way ANOVA Newman Keuls	Insulin concentrations vs Control	ns
NF and GHRH axonal growth response to IGF-1 in medium supplemented in B27-Ins	2 way ANOVA Bonferonni	IGF-I concentration	p<0.0001
		Neurons type	p<0.0001
		Interaction	p<0.0001
		NF vs GHRH	50 nM p<0.0001
			100 nM p<0.0001
GHRH Axon growth response to IGF-I stimulation depending of the medium supplementation and nutritional status	2 way ANOVA Bonferonni	IGF-I stimulation	p<0.05
		B27 formulae	p=0.01
		Interaction	ns
		Control vs IGF-I	normally fed p<0.05
			Underfed ns
		B27 formulae	ns
NF and GHRH axonal growth response to IGF-I and PPP	2 way ANOVA Bonferonni	Treatment	p<0.0001
		neurons type	ns
		Control vs IGF-I	NF ns
			GHRH p<0.01
		Control vs PPP	NF p<0.0001
			GHRH p<0.0001
		Control vs IGF/PPP	NF p<0.0001
			GHRH p<0.0001