All statistics for manuscript Haugland et al. 2019

Figure no	Test used	Page	n		df	p-value
			exact number	defined as		
p-Stat5						
2E	One-way ANOVA of number of p-Stat5 positive DAPI celles	5	15,12,12	cells	F(2,36) = 6.34	**0.004**
	Bonferroni's comparison between GH and control	5	15,12	cells	t(36) = 2.59	**0.013 (1-tailed)**
	Bonferroni's comparison between aGH and control	5	12,12	cells	t(36) = 0.70	0.48 (1-tailed)
Suppl 3	One-way ANOVA of number of p-Stat5 positive DAPI celles	5	9,18,12	cells	F(2.36) = 3.68	**0.035**
	Bonferroni's comparison between GH and control	5	9,18	cells	t(36) = 2.61	**0.020 (1-tailed)**
	Bonferroni's comparison between aGH and control	5	18,12	cells	t(36) = 0.25	0.49 (1-tailed)
SPINE DENSITY STATISTICS					All t values are absolute values	
3C	Jonckheere-Terpstra Test neuron level	6	22, 8, 15	neurons	JT = 530	**<0.001**
	Mann-Whitney U aGH vs control	6	22, 8	neurons	Z = 1.92	**0.03 (1-tailed)**
	Mann-Whitney U control vs GH	6	8, 15	neurons	Z = 2.58	**0.005 (1-tailed)**
	Jonckheere-Terpstra Test animal level	6	4, 3, 3	rats	JT= 32	**0.003**
3D	One-way ANOVA, percentage of filopodial-like spines	6	22, 8, 15	neurons	F(2,42) = 0.79	0.46
	One-way ANOVA, percentage of immature spines	6	22, 8, 15	neurons	F(2,42) = 23.7	**<0.001**
	Post-hoc contrast t-test GH vs control	6	8, 15	neurons	t (42) = 6.36	**0.036 (1-tailed)**
	Post-hoc contrast t-test aGH vs control	6	22, 8	neurons	t (42) = 11.4	**<0.001 (1-tailed)**
3D	One-way ANOVA, percentage of mature spines	6	22, 8, 15	neurons	F(2,42) = 21.3	**<0.001**
	Post-hoc contrast t-test GH vs control	6	8, 15	neurons	t (42) = 11.84	**0.003 (1-tailed)**
	Post-hoc contrast t-test aGH vs control	6	22, 8	neurons	t (42) = 8.12	**0.019 (1-tailed)**
WATER MAZE STATISTICS						
	No difference between merged control groups in water maze	7				
	Two-way ANOVA Zone x Group interaction Day 6	7	7, 6	rats in each group	F(3,33) = 0.24	0.87
	Two-way ANOVA Zone x Group interaction Day 12	7	7, 6	rats in each group	F(3,33) = 0.50	0.68
	Two-way ANOVA Zone x Group interaction Day 13	7	7, 6	rats in each group	F(3,33) = 1.64	0.20
	Two-way ANOVA Zone x Group interaction Day 14	7	7, 6	rats in each group	F(3,33) = 0.24	0.87
4A	Repeated measures ANOVA effect of Day 1-5	7	13, 8, 8	rats in each group	F(4,104) = 40.97	**<0.001**
4A	Repeated measures ANOVA Day x Group interaction Day 1-5	7	13, 8, 8	rats in each group	F(8, 104) = 1.76	0.094
4A	One-way ANOVA Latency Day 1	7	13, 8, 8	rats in each group	F(2,26) = 1.42	0.260
4B	Two-way ANOVA effect of SW target Zone	7	13, 8, 8	rats in each group	F(3,78) = 29.11	**<0.001**
4B	Two-way ANOVA SW Zone x Group interaction	7	13, 8, 8	rats in each group	F(6,78) = 3.59	**0.003**
4B	One-way ANOVA of time in SW zone	7	13, 8, 8	rats in each group	F(2,26)=4.61	**0.019**
4B	Post-hoc orthogonal comparison GH vs control	7	8, 13	rats in each group	t(26) = 0.34	0.370 (1-tailed)
4B	Post-hoc orthogonal comparison aGH vs other two groups	7	8, 21	rats in each group	t(26)=2.95	**0.004 (1-tailed)**
4D	Repeated measures ANOVA effect of Day 12-13	7	13, 8, 7	rats in each group	F(1,25) = 10.80	**0.003**
4D	Repeated measures ANOVA Day x Group interaction Day 12-13	7	13, 8, 7	rats in each group	F(2,25) = 1.30	0.291
4E	Two-way ANOVA effect of Zone	7	13, 8, 8	rats in each group	F(3,78) = 10.92	**<0.001**
4E	Two-way ANOVA Zone x Group interaction	7	13, 8, 8	rats in each group	F(6,78) = 0.48	0.82
4E	One-way ANOVA, only time in platform zone (south west)	7	13, 8, 8	rats in each group	F(2,26) = 0.28	0.76
4F	Two-way ANOVA effect of Zone	7-8	13, 8, 8	rats in each group	F(3,78) = 8.74	**<0.001**
4F	Two-way ANOVA Zone x Group interaction	7-8	13, 8, 8	rats in each group	F(6,78) = 2.54	**0.027**
4F	One-way ANOVA of time in old platform zone (south west)	7-8	13, 8, 8	rats in each group	F(2,26) = 1.96	0.162
4F	One-way ANOVA of time in new platform zone (north east)	7-8	13, 8, 8	rats in each group	F(2,26) = 3.64	**0.041**
4F	Post-hoc orthogonal comparison GH vs control (north east)	7-8	8, 13	rats in each group	t(26)=0.50	0.310 (1-tailed)
4F	Post-hoc orthogonal comparison aGH vs other two groups (north east)	7-8	8, 21	rats in each group	t(26)=2.69	**0.006 (1-tailed)**
4G	Two-way ANOVA effect of Zone	8	13, 8, 8	rats in each group	F(3,75) = 22.98	**<0.001**
4G	Two-way ANOVA Zone x Group interaction	8	13, 8, 8	rats in each group	F(3,75) = 1.25	0.292
SPONTANEOUS LOCATION RECOGNITION (SLR) STATISTICS						
	Comparison between unoperated and AAV controls before groups were merged					
	Student's t test of discrimination ratio, condition: square arena & 3 hours	8	6, 6	rats in each group	t(10) = 0.21	0.84 (2-tailed)
	Student's t test of discrimination ratio, condition: square arena & 24 hours	8	6, 7	rats in each group	t(11) = 0.36	0.73 (2-tailed)
	Student's t test of discrimination ratio, condition: circular arena & 3 hours (no unoperated controls for condition circular arena & 24 hours)	8	5, 6	rats in each group	t(9) = 0.21	0.84 (2-tailed)
5B	**Condition square arena, 3 hours delay**					
	Paired samples t-test, time with novel and familiar obj, GH group	9	8	rats in each group	t(7) = 3.78	**0.004 (1-tailed)**
	Paired samples t-test, time with novel and familiar obj, aGH group	9	8	rats in each group	t(7) = 3.41	**0.006 (1-tailed)**
	Paired samples t-test, time with novel and familiar obj, control group	9	12	rats in each group	t(11) = 2.50	**0.015 (1-tailed)**
	One-way ANOVA of discrimination ratio	9	8, 8, 12	rats in each group	F(2,25) = 1.16	0.330
5C	**Condition square arena, 24 hours delay**					
	Paired samples t-test, time with novel and familiar obj, GH group	9	8	rats in each group	t(7) = 2.56	**0.019 (1-tailed)**
	Paired samples t-test, time with novel and familiar obj, aGH group	9	8	rats in each group	t(7) = 1.23	0.129 (1-tailed)
	Paired samples t-test, time with novel and familiar obj, control group	9	13	rats in each group	t(12) = 0.01	0.496 (1-tailed)
	One-way ANOVA of discrimination ratio (DR)	9	8, 8, 13	rats in each group	F(2,26) = 3.36	**0.050**
	Post-hoc orthogonal comparison of DR, aGH vs control group	9	8, 13	rats in each group	t(26) = 0.12	0.878 (2-tailed)
	Post-hoc orthogonal comparison of DR, GH vs the other two groups	9	8, 8, 13	rats in each group	t(26) = 2.59	**0.016 (2-tailed)**
5E	**Condition circular arena, 3 hours delay**					
	Paired samples t-test, time with novel and familiar obj, GH group	10	8	rats in each group	t(7) = 1.27	0.123 (1-tailed)
	Paired samples t-test, time with novel and familiar obj, aGH group	10	8	rats in each group	t(7) = 0.30	0.378 (1-tailed)
	Paired samples t-test, time with novel and familiar obj, control group	10	13	rats in each group	t(12) = 0.04	0.483 (1-tailed)
	One-way ANOVA of discrimination ratio (DR)	10	8, 8, 13	rats in each group	F(2,26) = 0.70	0.507

5F	**Condition circular arena, 24 hours delay**					
	Paired samples t-test, time with novel and familiar obj, GH group	10	8	rats in each group	t(7) = 1.69	0.068 (1-tailed)
	Paired samples t-test, time with novel and familiar obj, aGH group	10	8	rats in each group	t(7) = 0.20	0.423 (1-tailed)
	Paired samples t-test, time with novel and familiar obj, control group	10	6	rats in each group	t(5) = 0.16	0.439 (1-tailed)
	One-way ANOVA of discrimination ratio (DR)	10	8, 8, 6	rats in each group	F(2,19) = 0.43	0.659
6C	One-way ANOVA of exploration time in all four corners sample phase before 3 h dela	8	16, 16, 13, 13	object corners	F(3,54) = 0.64	0.592
no figure	One-way ANOVA of exploration time in all four corners sample phase before 24 h de	8	14, 14, 15, 15	object corners	F(3,54) = 1.18	0.328
6E	Two-way ANOVA of exploration time, Effect of Obj location, before 3 h delay	9	8, 8, 13	rats in each group	F(1,26) = 0.04	0.852
	Two-way ANOVA of exploration time, Group X Obj location interaction, before 3 h de	9	8, 8, 13	rats in each group	F(2,26) = 0.68	0.516
6F	Two-way ANOVA of exploration time, Effect of Obj location, before 24 h delay	9	8, 8, 13	rats in each group	F(1,26) = 0.06	0.813
	Two-way ANOVA of exploration time, Group X Obj location interaction, before 24 h c	9	8, 8, 13	rats in each group	F(2,26) = 1.84	0.178
6H	Two-way ANOVA of exploration time, Effect of Obj location, before 3 h delay	9	8, 8, 13	rats in each group	F(2,52) = 0.60	0.552
	Two-way ANOVA of exploration time, Group X Obj location interaction, before 3 h de	9	8, 8, 13	rats in each group	F(4,52) = 0.32	0.822
6I	Two-way ANOVA of exploration time, Effect of Obj location, before 24 h delay	9	8, 8, 6	rats in each group	F(2,38) = 0.57	0.570
	Two-way ANOVA of exploration time, Group X Obj location interaction, before 24 h c	9	8, 8, 6	rats in each group	F(4,38) = 1.05	0.385

OTHER						
Suppl 2A	Repeated measures ANOVA Weight X Group interaction	7	15,12,10	rats	F(2,34) = 0.67	0.519
Suppl 2B	Two-way ANOVA Swim speed X Group interaction	7	13,7,7	rats	F(5,120) = 1.07	0.387
Suppl 2C	Two-way ANOVA Path length X Group interaction	7	13,7,7	rats	F(5,120) = 0.43	0.929