

## Salinity influences the disease-induced mortality of the oyster *Crassostrea gigas* and infectivity of the ostreid herpesvirus 1 (OsHV-1)

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Table S1: Results of the split-plot ANOVA investigating the effect of salinity (10, 15, 25, 35‰) and time (days 1 to 8 since the start of acclimation) and their interaction on the filtration rate of oysters. Significant p-values ( $p < 0.05$ ) are in bold.

Source of variation	d.f	Sum square	Mean square	F	p
<b>Main plot</b>					
Salinity	3	12.4	4.1	340.0	<b>&lt; 0.001</b>
Error: Tank × Salinity	20	0.2	0.01		
<b>Subplot</b>					
Time	7	4.5	0.6	79.1	<b>&lt; 0.001</b>
Salinity × Time	21	11.5	0.5	67.1	<b>&lt; 0.001</b>
Error: Tank × Salinity × Time	140	1.14	0.01		

Table S2: Results of a one-way ANOVA investigating the effect of salinity (10, 15, 25, 35‰) on the body mass of oysters. Significant p-values ( $p < 0.05$ ) are in bold.

Source of variation	d.f	Sum square	Mean square	F	p
Salinity	3	0.493	0.2	25.45	<b>&lt; 0.001</b>
Error: Tank x Salinity	20	0.129	0.006		

Table S3: Odds of oyster mortality as a function of salinity (10, 15, 25, 35‰), acclimation (acclimated: A, non-acclimated: NA), and time (days 0 to 6 and 7 to 17). Custom hazard ratios were produced with exponentiated contrasts. The table also contains the standard error (SE) of the hazard ratio estimate and the confidence interval (CI) of the hazard ratio, the Wald  $\chi^2$  statistic and the resulting p-value. Significant p-values ( $p < 0.05$ ) are in bold.

Contrast Variable	Odds ratio	SE	95 % CI	Khi-2 de Wald	Pr > Khi-2
<i>day 0 - day 6</i>					
10 A vs 15 A	0.036	0.015	0.016 - 0.083	62.3	<b>&lt; 0.001</b>
10 A vs 25 A	0.006	0.003	0.003 - 0.014	142.9	<b>&lt; 0.001</b>
10 A vs 35 A	0.009	0.004	0.004 - 0.023	109.5	<b>&lt; 0.001</b>
15 A vs 25 A	0.171	0.013	0.147 - 0.199	519.7	<b>&lt; 0.001</b>
15 A vs 35 A	0.259	0.041	0.190 - 0.352	74.1	<b>&lt; 0.001</b>
25 A vs 35 A	1.516	0.259	1.084 - 2.119	5.9	<b>0.015</b>
10 NA vs 15 NA	0.693	0.184	0.411 - 1.166	1.9	0.167
10 NA vs 25 NA	0.112	0.023	0.075 - 0.166	117.0	<b>&lt; 0.001</b>
10 NA vs 35 NA	0.123	0.020	0.090 - 0.168	172.0	<b>&lt; 0.001</b>
15 NA vs 25 NA	0.161	0.041	0.099 - 0.249	52.8	<b>&lt; 0.001</b>
15 NA vs 35 NA	0.177	0.039	0.115 - 0.272	62.8	<b>&lt; 0.001</b>
25 NA vs 35 NA	1.098	0.154	0.834 - 1.446	0.4	0.504
10 A vs 10 NA	0.070	0.033	0.027 - 0.179	30.8	<b>&lt; 0.001</b>
15 A vs 15 NA	1.328	0.279	0.880 - 2.003	1.8	0.177
25 A vs 25 NA	1.255	0.127	1.030 - 1.529	5.1	<b>0.024</b>
35 A vs 35 NA	0.909	0.107	0.722 - 1.145	0.7	0.419
<i>day 7 - day 17</i>					
10 A vs 15 A	0.177	0.045	0.108 - 0.290	47.4	<b>&lt; 0.001</b>
10 A vs 25 A	0.138	0.033	0.086 - 0.220	68.2	<b>&lt; 0.001</b>
10 A vs 35 A	0.366	0.121	0.191 - 0.700	9.2	<b>0.002</b>
15 A vs 25 A	0.775	0.069	0.651 - 0.922	8.2	<b>0.004</b>
15 A vs 35 A	2.061	0.502	1.278 - 3.323	8.8	<b>0.003</b>
25 A vs 35 A	2.659	0.619	1.685 - 4.197	17.6	<b>&lt; 0.001</b>
10 NA vs 15 NA	3.185	0.183	2.846 - 3.565	406.0	<b>&lt; 0.001</b>
10 NA vs 25 NA	3.064	0.468	2.271 - 4.132	53.8	<b>&lt; 0.001</b>
10 NA vs 35 NA	3.803	0.902	2.390 - 6.053	31.8	<b>&lt; 0.001</b>
15 NA vs 25 NA	0.962	0.129	0.739 - 1.251	0.1	0.772
15 NA vs 35 NA	1.194	0.273	0.763 - 1.870	0.6	0.438
25 NA vs 35 NA	1.242	0.328	0.739 - 2.085	0.7	0.414
10 A vs 10 NA	0.031	0.007	0.019 - 0.049	214.8	<b>&lt; 0.001</b>
15 A vs 15 NA	0.551	0.039	0.479 - 0.634	69.3	<b>&lt; 0.001</b>
25 A vs 25 NA	0.684	0.083	0.539 - 0.867	9.8	<b>0.002</b>
35 A vs 35 NA	0.319	0.039	0.252 - 0.405	87.9	<b>&lt; 0.001</b>

Table S4: Results of the split-split plot ANOVA investigating the effect of salinity (10, 15, 25, 35‰), exposure to the source of infection (exposed, control) acclimation (acclimated, non-acclimated) and time (days 2 and 4) and their interactions on the level of OsHV-1 DNA in oyster tissues. Data were log (x+1) transformed. Significant p-values (p<0.05) are in bold.

Source of variation	d.f	Sum square	Mean square	F	p
<b>Mainplot</b>					
Salinity	3	108.8	36.3	36.12	<b>&lt; 0.001</b>
Infection	1	222.8	222.8	221.96	<b>&lt; 0.001</b>
Salinity × Infection	3	115.0	38.3	38.19	<b>&lt; 0.001</b>
Error: Tank × Salinity × Infection	16	16.1	1.0		
<b>Subplot</b>					
Acclim	1	0.01	0.01	0.02	0.885
Salinity × Acclim	3	0.8	0.3	0.49	0.693
Infection × Acclim	1	2.7	2.7	5.19	<b>0.037</b>
Salinity × Infection × Acclim	3	17.7	5.9	11.49	<b>&lt; 0.001</b>
Error: Tank × Salinity × Infection × Acclim	16	8.2	0.5		
<b>Sub-subplot</b>					
Time	1	63.0	63.0	50.86	<b>&lt; 0.001</b>
Salinity × Time	3	10.8	3.6	2.90	0.050
Infection × Time	1	9.6	9.6	7.76	<b>0.009</b>
Acclim × Time	1	0.02	0.02	0.02	0.895
Salinity × Infection × Time	3	5.7	1.9	1.53	0.226
Salinity × Acclim × Time	3	3.4	1.1	0.92	0.443
Infection × Acclim × Time	1	0.2	0.2	0.18	0.679
Salinity × Infection × Acclim × Time	3	5.6	1.9	1.51	0.232
Error: Tank × Salinity × Infection × Acclim × Time	32	39.6	1.2		

Table S5: Results of the split-plot ANOVA investigating the effect of salinity, exposure to the source of infection, acclimation and their interactions on the OsHV-1 gene expression in oyster tissues at day 2. Significant p-values ( $p < 0.05$ ) are in bold.

Source of variation	d.f	ORF72		ORF75		ORF87		ORF117	
		F	p	F	p	F	p	F	p
<b>Main plot</b>									
Salinity	3	23.9	<b>&lt; 0.001</b>	43.0	<b>&lt; 0.001</b>	26.6	<b>&lt; 0.001</b>	16.0	<b>&lt; 0.001</b>
Infection	1	257.8	<b>&lt; 0.001</b>	371.1	<b>&lt; 0.001</b>	305.8	<b>&lt; 0.001</b>	212.4	<b>&lt; 0.001</b>
Acclim	1	0.8	0.389	0.7	0.419	1.0	0.333	0.6	0.463
Salinity $\times$ Infection	3	26.3	<b>&lt; 0.001</b>	26.4	<b>&lt; 0.001</b>	28.1	<b>&lt; 0.001</b>	20.6	<b>&lt; 0.001</b>
Error : Tank $\times$ Salinity $\times$ Infection	15								
<b>Subplot</b>									
Acclim	1	0.8	0.376	0.1	0.731	0.1	0.777	0.6	0.441
Salinity $\times$ Acclim	3	0.5	0.688	0.4	0.789	1.0	0.406	0.5	0.71
Infection $\times$ Acclim	1	0.3	0.615	0.6	0.442	0.01	0.91	0.2	0.657
Salinity $\times$ Infection $\times$ Acclim	3	2.4	0.109	0.6	0.639	1.7	0.201	1.2	0.342
Error : Tank $\times$ Salinity $\times$ Infection $\times$ Acclim	15								

Table S6: Results of the split-plot ANOVA investigating the effect of salinity (10, 25‰), time (days 2 and 4) and their interaction on the level of OsHV-1 DNA in oyster tissues. Data were log (x+1) transformed. Significant p-values ( $p < 0.05$ ) are in bold.

Source of variation	d.f	Sum square	Mean square	F	p
<b>Main plot</b>					
Salinity	1	32.4	32.4	26.53	<b>0.007</b>
Error: Tank $\times$ Salinity	4	4.9	1.2		
<b>Subplot</b>					
Time	1	5.1	5.1	11.26	<b>0.028</b>
Salinity $\times$ Time	1	1.1	1.1	2.51	0.188
Error: Tank $\times$ Salinity $\times$ Time	4	1.8	0.5		

Table S7: Results of the ANOVA investigating the effect of salinity (10, 25‰) on the OsHV-1 gene expression in oyster tissues at day 2. Significant p-values ( $p < 0.05$ ) are in bold.

OsHV-1 genes	Source of variation	d.f	Sum square	Mean square	F	p
ORF72	Salinity	1	214.80	214.80	12.67	<b>0.024</b>
	Residuals	4	67.82	16.96		
ORF75	Salinity	1	211.10	211.10	20.95	<b>0.010</b>
	Residuals	4	40.30	10.07		
ORF87	Salinity	1	209.81	209.81	16.4	<b>0.016</b>
	Residuals	4	51.17	12.79		
ORF117	Salinity	1	208.74	208.74	11.5	<b>0.028</b>
	Residuals	4	72.59	18.15		