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Correlations of betanodavirus load in the brain of experimentally infected sea bass (*Dicentrarchus labrax*, L.) with varying levels of resistance to viral nervous necrosis

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Table S1. Data recorded for each separate family.

Family ID	Total fish No / family	Dead fish / family	Cumulative mortality / family %	Average weight dead ± SD	Average weight alive ± SD	Average time of death (hours) ± SD
1-001	30	15	50	18.45±4.58	25.23±6.15	214.4±125.3
1-004	26	7	26.9	17.44±3.65	29.08±7.29	205.1±100.6
2-001	30	14	46.7	15.19±3.46	23.12±6.29	218.9±137.9
3-001	29	19	65.5	13.54±3.87	18.29±3.65	171.4±113.0
3-006	26	18	69.2	12.69±3.57	22.81±8.85	186.0±135.3
4-001	30	15	50	14.38±3.36	22.30±6.34	239.5±90.0
4-008	29	14	48.3	16.22±4.99	22.64±6.06	228.6±126.5
5-002	30	17	56.7	16.96±6.09	23.46±2.75	199.7±106.3
5-025	29	24	82.8	11.39±2.12	14.76±3.02	201.9±93.0
6-002	30	14	46.7	16.06±3.89	24.40±3.61	216.3±107.2
7-002	30	11	36.7	16.13±4.11	24.33±7.81	225.2±140.3
7-012	27	15	55.6	11.27±4.79	25.69±7.45	249.4±162.9
8-003	27	19	70.4	14.63±4.61	19.18±5.36	142.6±61.5
8-009	29	22	75.9	14.37±3.92	20.58±8.47	227.3±156.9
9-003	28	19	67.9	16.53±4.28	26.90±8.47	227.8±134.1
9-012	30	17	56.7	14.14±3.55	23.40±8.16	253.9±126.5
9-017	28	8	28.6	13.99±3.50	21.79±5.50	232.5±155.3
9-029	30	19	63.3	10.74±3.00	14.48±4.38	178.7±112.5
10-003	30	21	70	13.09±2.84	29.70±11.30	163.4±86.3
10-021	29	18	62.1	12.43±3.47	20.20±6.45	195.0±112.9
11-004	28	12	42.9	15.57±4.44	25.57±10.00	219.6±155.5
11-014	30	18	60	13.63±4.74	20.68±4.40	237.8±141.7
12-004	29	11	37.9	14.59±4.87	20.00±7.52	218.8±110.0
13-005	29	17	58.6	16.46±3.13	26.11±5.27	206.5±138.6
14-005	30	18	60	13.24±3.37	22.66±10.08	142.7±59.1
14-015	25	16	64	10.09±4.22	16.34±5.64	196.3±131.2
14-026	30	20	66.7	12.61±2.51	18.98±5.31	182.8±130.1
14-030	28	21	75	15.11±2.74	22.29±6.52	165.7±127.1
15-005	30	18	60	13.42±3.92	25.87±4.29	182.8±108.1
16-005	25	10	40	16.68±4.80	22.79±8.39	194.4±114.5
17-006	20	15	75	12.00±3.51	13.10±2.96	170.2±108.6
18-006	29	12	41.4	12.27±3.28	23.94±6.99	207.3±97.8
19-006	28	19	67.9	14.58±3.62	20.26±7.24	217.7±114.3
19-026	30	16	53.3	12.28±2.41	19.46±5.27	185.0±123.0

Continued

Table S1 continued

Family ID	Total fish No / family	Dead fish / family	Cumulative mortality / family %	Average weight dead ± SD	Average weight alive ± SD	Average time of death (hours) ± SD
19-030	28	22	78.6	13.43±3.22	19.60±4.98	170.6±82.3
20-007	30	23	76.7	18.48±3.58	25.32±7.06	239.5±99.2
21-007	30	16	53.3	13.79±2.00	24.04±10.27	170.5±84.3
21-029	29	19	65.5	11.15±2.96	18.82±5.52	220.2±174.9
22-007	30	13	43.3	18.98±5.05	28.49±7.60	240.6±148.8
23-007	30	14	46.7	16.74±2.87	28.84±7.58	182.0±86.6
24-008	30	20	66.7	15.57±3.89	18.53±4.07	225.4±102.9
25-008	30	17	56.7	15.57±3.69	21.68±4.49	211.3±116.4
25-014	30	19	63.3	14.23±4.25	20.30±4.13	220.0±116.1
26-009	30	20	66.7	13.97±3.65	18.98±4.15	189.9±76.9
26-019	30	22	73.3	14.35±2.60	21.96±6.36	206.3±140.2
27-009	28	16	57.1	13.23±3.00	19.94±5.34	172.0±83.2
28-009	27	16	59.3	14.88±3.91	23.40±9.28	260.8±104.5
29-010	29	16	55.2	18.79±5.69	25.11±9.34	199.0±110.2
30-010	30	15	50	19.29±6.33	22.25±8.77	259.7±114.4
30--021	28	16	57.1	11.95±3.58	19.61±5.19	199.8±134.9
31-011	30	20	66.7	19.93±3.99	28.56±5.28	242.2±135.2
32-011	27	15	55.6	17.31±3.63	29.32±6.35	173.1±56.3
33-011	29	18	62.1	20.54±3.66	27.21±7.10	250.6±98.7
34-012	28	16	57.1	14.39±5.11	24.20±9.58	208.8±101.5
35-012	30	8	26.7	17.88±4.60	26.70±6.14	278.9±152.8
36-013	28	10	35.7	14.02±3.60	24.12±6.49	168.0±104.1
37-013	30	9	30	15.97±4.72	23.31±5.82	182.7±95.5
38-013	30	13	43.3	12.58±1.86	23.42±6.77	161.5±72.7
39-013	28	15	53.6	9.79±2.90	18.22±6.24	223.7±160.3
39-023	28	11	39.3	14.10±3.45	17.68±5.64	234.2±145.2
40-014	28	12	42.9	12.27±2.88	20.07±5.90	191.6±84.7
41-014	30	15	50	11.90±3.33	18.23±5.86	172.0±106.9
42-015	29	23	79.3	10.73±3.01	15.66±3.60	163.6±95.6
43-015	29	25	86.2	11.64±3.20	18.43±5.38	169.2±110.1
44-015	26	15	57.7	10.04±2.93	16.44±4.51	211.1±141.6
45-016	30	11	36.7	12.97±2.82	21.40±3.77	162.5±106.5
46-016	30	18	60	10.32±3.05	19.84±6.50	201.8±137.5
47-016	29	9	31	8.72±2.69	20.79±5.69	158.7±81.7
48-016	30	14	46.7	11.94±3.05	21.48±5.67	217.7±119.7
49-017	30	6	20	10.72±2.63	23.43±5.05	213.3±48.4
49-028	28	13	46.4	11.24±2.39	22.05±5.38	196.0±101.6
50-017	30	9	30	12.19±2.63	22.95±7.60	259.1±154.0
51-017	30	8	26.7	13.71±3.70	21.76±5.94	186.3±67.2
51-025	30	18	60	12.13±2.68	18.63±5.30	242.3±155.1
51-027	29	19	65.5	14.16±3.18	22.69±5.10	270.9±164.3
52-018	28	23	82.1	15.53±5.03	21.20±4.12	251.5±154.6
53-019	30	20	66.7	13.99±4.15	16.64±2.90	185.5±87.7
54-019	28	18	64.3	12.83±3.07	19.79±5.40	218.6±120.0
55-019	26	20	76.9	12.67±4.88	20.28±3.53	264.4±164.7
56-020	24	16	66.7	14.09±3.72	19.80±7.22	218.1±135.4

Continued

Table S1 continued

Family ID	Total fish No / family	Dead fish / family	Cumulative mortality / family %	Average weight dead ± SD	Average weight alive ± SD	Average time of death (hours) ± SD
57-020	29	17	58.6	12.11±2.51	20.71±6.40	164.0±80.4
58-020	30	21	70	12.72±2.37	20.25±4.81	155.2±92.1
59-021	25	20	80	13.62±3.41	18.90±6.56	192.2±134.6
60-021	29	23	79.3	12.84±4.23	22.73±4.18	243.7±146.5
61-022	29	23	79.3	14.61±3.62	19.48±7.26	202.4±94.9
62-022	30	16	53.3	10.93±2.38	21.54±4.94	150.6±84.3
63-024	29	18	62.1	15.12±2.90	20.35±5.14	208.0±119.2
64-026	27	19	70.4	11.84±2.86	20.69±7.79	182.7±91.9
65-026	30	18	60	11.66±2.60	20.14±5.29	202.5±140.8

Table S2. Measurements of viral load in each family.

Family ID	Average brain weight dead fish mg ± SD	Average brain weight alive fish mg ± SD	Average concentration of viral Ag dead fish mg Noda/ mg brain x 10^{-3} ± SD	Average concentration of viral Ag alive fish mg Noda/ mg brain x 10^{-3} ± SD
1-001	79.53±17.15	107±7.00	1.01±1.34	0.90±0.76
1-004	80.43±17.61	101.5±4.95	0.42±0.59	1.89±0.50
2-001	71.71±9.41	0.00±0.00	1.37±3.05	0.00±0.00
3-001	68.89±10.38	97±0.00	0.60±1.04	0.69±0.00
3-006	63.31±10.73	123±0.00	1.90±3.94	0.79±0.00
4-001	66.73±17.09	89.5±8.19	0.73±0.95	0.84±1.01
4-008	70.54±10.94	0.00±0.00	1.38±1.43	0.00±0.00
5-002	69.00±11.99	0.00±0.00	1.06±1.46	0.00±0.00
5-025	56.61±10.47	51.5±2.12	1.64±1.63	0.08±0.01
6-002	64.75±14.88	107±0.00	1.41±1.70	0.03±0.00
7-002	76.70±13.78	97±8.49	0.91±1.46	1.07±0.80
7-012	58.71±16.00	112±0.00	0.95±0.93	0.04±0.00
8-003	72.29±17.51	95±0.00	0.98±1.15	0.61±0.00
8-009	66.18±15.61	0.00±0.00	1.53±1.89	0.00±0.00
9-003	75.16±16.33	111±0.00	1.36±1.51	1.09±0.00
9-012	67.35±13.12	0.00±0.00	0.94±1.79	0.00±0.00
9-017	69.13±16.44	94±0.00	0.89±1.29	0.70±0.00
9-029	47.39±12.99	69±29.70	0.98±1.34	0.93±0.58
10-003	66.52±11.62	84.5±2.12	0.96±1.18	0.04±0.01
10-021	60.13±10.14	86±27.87	1.45±1.59	0.04±0.04
11-004	70.50±12.83	99.33±43.5	1.20±1.16	0.95±0.24
11-014	71.33±13.45	94±0.00	1.16±1.25	0.04±0.00
12-004	72.00±20.56	82±0.00	0.62±0.66	5.60±0.00
13-005	77.56±12.01	63±0.00	1.09±1.40	5.41±0.00
14-005	64.94±15.51	71±0.00	0.84±1.43	2.92±0.00
14-015	62.50±16.14	0±0.00	1.43±2.08	0.00±0.00
14-026	56.10±9.28	62.67±11.9	0.97±1.41	2.42±0.57
14-030	61.29±16.58	46±0.00	1.77±3.94	0.13±0.00
15-005	66.12±14.18	119±0.00	1.02±1.33	0.01±0.00
16-005	74.40±8.51	74±0.00	2.11±2.94	2.59±0.00
17-006	60.08±15.49	0.00±0.00	0.98±0.87	0.00±0.00
18-006	63.83±11.89	0.00±0.00	1.47±1.11	0.00±0.00

Continued

Table S2 continued

Family ID	Average brain weight dead fish mg ± SD	Average brain weight alive fish mg ± SD	Average concentration of viral Ag dead fish mg Noda/ mg brain x 10^{-3} ± SD	Average concentration of viral Ag alive fish mg Noda/ mg brain x 10^{-3} ± SD
19-006	68.74±11.95	82.5±20.51	1.37±1.22	1.36±0.46
19-026	61.63±11.76	79±1.41	1.15±0.94	2.50±0.93
19-030	59.10±10.76	0.00±0.00	1.35±1.36	0.00±0.00
20-007	75.77±11.97	86±0.00	1.11±1.08	0.07±0.00
21-007	68.25±13.12	0.00±0.00	0.95±0.77	0.00±0.00
21-029	58.18±13.63	60±9.64	1.34±1.46	2.45±1.37
22-007	82.69±18.40	0.00±0.00	1.65±1.51	0.00±0.00
23-007	73.79±14.24	0.00±0.00	1.35±1.42	0.00±0.00
24-008	69.06±17.60	81.33±22.4	0.93±1.08	0.94±1.15
25-008	60.94±17.43	88±0.00	1.03±1.89	0.06±0.00
25-014	64.63±12.95	96.5±0.71	2.01±2.48	0.93±0.37
26-009	62.26±11.89	0.00±0.00	1.90±1.51	0.00±0.00
26-019	62.29±15.34	0.00±0.00	1.03±1.65	0.00±0.00
27-009	62.67±11.29	0.00±0.00	1.42±1.33	0.00±0.00
28-009	67.60±12.40	92.00±.,00	1.26±1.47	0.04±0.00
29-010	67.94±23.05	0.00±0.00	2.21±3.28	0.00±0.00
30-010	73.07±16.86	89.00±0.00	1.14±1.19	1.37±0.00
30-021	58.44±14.26	0.00±0.00	0.89±0.99	0.00±0.00
31-011	81.22±17.33	110.0±22.6	0.48±0.69	5.68±6.26
32-011	75.57±13.87	79.00±0.00	0.83±1.02	1.51±0.00
33-011	79.88±17.25	0.00±0.00	0.80±1.05	0.00±0.00
34-012	60.60±13.98	79.00±0.00	0.48±0.65	1.52±0.00
35-012	64.14±15.75	0.00±0.00	0.68±0.76	0.00±0.00
36-013	69.56±8.86	95.60±12.3	0.80±1.11	1.05±1.48
37-013	67.00±9.51	0.00±0.00	2.17±2.36	0.00±0.00
38-013	66.00±13.90	101.0±0.00	0.65±0.63	0.04±0.00
39-013	61.62±22.83	42.00±0.00	0.61±1.08	2.74±0.00
39-023	58.45±12.92	63.00±0.00	1.12±1.09	6.41±0.00
40-014	60.30±12.72	65.50±24.7	1.77±2.13	0.73±0.22
41-014	57.67±12.22	82.50±9.19	0.77±0.94	11.16±13.77
42-015	63.50±11.96	0.00±0.00	1.20±1.63	0.00±0.00
43-015	62.63±13.15	0.00±0.00	1.24±1.61	0.00±0.00
44-015	59.29±10.82	0.00±0.00	1.92±2.09	0.00±0.00
45-016	70.91±7.92	81.25±7.37	1.44±1.65	0.74±0.61
46-016	57.31±14.07	66.00±0.00	1.30±1.55	0.53±0.00
47-016	49.89±17.72	85.00±7.07	1.58±2.22	1.23±0.70
48-016	59.29±14.79	104.00±0.0	1.43±2.65	1.18±0.00
49-017	63.50±14.10	112.00±0.0	1.21±0.88	0.04±0.00
49-028	55.25±10.99	88.00±0.00	1.41±1.74	0.06±0.00
50-017	67.44±11.85	103±14.79	1.27±1.71	0.31±0.55
51-017	62.14±15.03	0.00±0.00	0.97±1.00	0.00±0.00
51-025	58.06±11.96	0.00±0.00	1.06±1.22	0.00±0.00
51-027	64.39±15.45	83.00±0.00	1.10±1.21	0.06±0.00
52-018	63.61±14.18	0.00±0.00	0.81±0.97	0.00±0.00
53-019	64.84±13.37	0.00±0.00	1.20±1.40	0.00±0.00

Continued

Table S2 continued

Family ID	Average brain weight dead fish mg ± SD	Average brain weight alive fish mg ± SD	Average concentration of viral Ag dead fish mg Noda/ mg brain x 10^{-3} ± SD	Average concentration of viral Ag alive fish mg Noda/ mg brain x 10^{-3} ± SD
54-019	61.29±9.12	88.00±0.00	1.07±1.36	0.18±0.00
55-019	52.25±13.70	76.00±0.00	1.12±0.93	0.06±0.00
56-020	63.60±14.27	45.00±0.00	0.50±0.73	0.02±0.00
57-020	61.00±11.33	0.00±0.00	2.65±6.05	0.00±0.00
58-020	59.85±15.46	0.00±0.00	1.66±3.39	0.00±0.00
59-021	62.10±14.07	0.00±0.00	1.08±1.95	0.00±0.00
60-021	60.59±15.73	0.00±0.00	1.49±3.00	0.00±0.00
61-022	63.05±14.29	0.00±0.00	1.07±2.78	0.00±0.00
62-022	52.86±10.60	0.00±0.00	1.13±1.67	0.00±0.00
63-024	71.35±9.97	83.33±18.1	1.01±1.37	1.14±0.20
64-026	60.32±13.03	81.00±33.9	3.56±6.54	0.43±0.51
65-026	53.94±10.54	71.00±9.90	0.97±1.29	1.13±0.54

Table S3. Family ranking (lower to higher cumulative % mortality) and correlation between viral Ag concentration and time of death per family.

Family ID	% Cumulative Mortality per family	Pearson's R ($p<0.05$) Correlation between Ag concentration (mg /mg tissue) and time of death
49-017	20	-0.427
35-012	26.7	-0.765
51-017	26.7	-0.1329
1-004	26.9	-0.2185
9-017	28.6	-0.3285
37-013	30	0.1681
50-017	30	0.33496
47-016	31	0.81739
36-013	35.7	0.5862
7-002	36.7	-0.2967
45-016	36.7	-0.0951
12-004	37.9	-0.6108
39-023	39.3	0.6117
16-005	40	-0.4487
18-006	41.4	-0.1348
11-004	42.9	0.4984
40-014	42.9	0.4249
22-007	43.3	0.105
38-013	43.3	0.20576
49-028	46.4	0.51
2-001	46.7	-0.1146
6-002	46.7	-0.2171
23-007	46.7	0.1673
48-016	46.7	-0.1735
4-008	48.3	0.17886
1-001	50	0.1386
4-001	50	-0.0492
30-010	50	-0.3052

Continued

Table S3 continued

Family ID	% Cumulative Mortality per family	Pearson's R ($p<0.05$) Correlation between Ag concentration (mg /mg tissue) and time of death
41-014	50	0.27448
19-026	53.3	-0.0833
21-007	53.3	0.0181
62-022	53.3	-0.3342
39-013	53.6	0.5411
29-010	55.2	-0.0644
7-012	55.6	-0.2776
32-011	55.6	-0.0813
5-002	56.7	0.03235
9-012	56.7	0.35071
25-008	56.7	-0.0755
27-009	57.1	-0.1863
30-021	57.1	0.2051
34-012	57.1	0.5797
44-015	57.7	-0.2737
13-005	58.6	-0.1571
57-020	58.6	-0.0531
28-009	59.3	0.1587
11-014	60	0.37628
14-005	60	0.20302
15-005	60	-0.0652
46-016	60	0.45329
51-025	60	0.25789
65-026	60	0.35257
10-021	62.1	0.05251
33-011	62.1	0.031
63-024	62.1	0.1954
9-029	63.3	0.67736
25-014	63.3	0.07032
14-015	64	0.27311
54-019	64.3	0.54804
3-001	65.5	0.12934
21-029	65.5	0.007
51-027	65.5	0.1878
14-026	66.7	-0.0276
24-008	66.7	0.0466
26-009	66.7	0.529
31-011	66.7	0.11919
53-019	66.7	-0.0614
56-020	66.7	0.20124
9-003	67.9	0.0542
19-006	67.9	-0.075
3-006	69.2	0.46707
10-003	70	-0.0889
58-020	70	-0.0349
8-003	70.4	0.07716

Continued

Table S3 continued

Family ID	% Cumulative Mortality per family	Pearson's R ($p<0.05$) Correlation between Ag concentration (mg /mg tissue) and time of death
64-026	70.4	-0.1158
26-019	73.3	0.0337
14-030	75	0.13864
17-006	75	-0.0713
8-009	75.9	0.32579
20-007	76.7	0.2928
55-019	76.9	-0.0946
19-030	78.6	-0.1122
42-015	79.3	0.52828
60-021	79.3	-0.1196
61-022	79.3	-0.1115
59-021	80	0.35688
52-018	82.1	-0.0698
5-025	82.8	-0.1391
43-015	86.2	0.78816