***Supplementary materials***

**Table 1:** Haematological parameters **(**red blood cells (RBC x 106/µL), white blood cells (WBC x 104/µL), haematocrit (Ht %),haemoglobin (Hg, g/dL), mean corpuscular volume (MCV µm3), mean corpuscular haemoglobin (MCH, pg/cell) and mean corpuscular haemoglobin concentration (MCHC, g/100 mL)) of European sea bass (*Dicentrarchus labrax*) after bacterial bath-challenge with 5 x 105 CFU mL-1 *T. maritimum*. Data are expressed as mean ± SEM (n=12 per treatment). Different capital letters in the same row stand for differences between control and mock-challenge and lower case letters indicate significant differences between control and challenged groups, while (\*) represents statistical differences between mock and challenged fish at each sampling point (One-way ANOVA or Kruskal-Wallis; p≤0.05).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Control** | **Mock-challenged** | | | | **Challenged** | | | |
|  | **0 h** | **6 h** | **24 h** | **48 h** | **72 h** | **6 h** | **24 h** | **48 h** | **72 h** |
| **RBC**  **(x106/µL)** | 2.47± 0.06Aa | 2.53±0.07A\* | 2.49±0.10A\* | 2.03±0.14B\* | 2.60±0.13A | 1.85±0.07b\* | 2.10±0.08b\* | 1.58±0.04c\* | 2.34±0.07a |
| **WBC (x104/µL)** | 2.48±0.22Bb | 2.72±0.34AB | 2.93±0.20AB\* | 2.70±0.16AB | 3.66±0.32A | 2.05±0.26b | 2.23±0.20b\* | 2.47±0.22b | 4.20±0.31a |
| **Ht (%)** | 32.17±0.64Bab | 35.58±0.94B\* | 36.75±1.73AB\* | 35.90±1.68AB\* | 41.27±1.28A\* | 30.58±1.21ab\* | 29.50±1.63ab\* | 28.92±1.00b\* | 33.36±0.75a\* |
| **Hg (g/dL)** | 1.44±0.05B | 1.61±0.07AB\* | 1.56±0.06AB | 1.37±0.09B | 1.84±0.09A | 1.37±0.06\* | 1.66±0.07 | 1.46±0.08 | 1.55±0.12 |
| **MCV (µm3)** | 130.63±2.73c | 141.54±4.39\* | 148.48±5.85 | 169.23±12.58 | 161.63±11.05 | 167.37±9.11ab\* | 142.22±8.99abc | 168.56±3.97a | 147.51±5.35bc |
| **MCH (pg/cell)** | 5.87±0.26Bc | 6.38±0.25AB\* | 6.33±0.26AB\* | 6.31±0.36AB\* | 7.29±0.36A | 7.40±0.28b\* | 7.94±0.35ab\* | 9.15±2.76a\* | 6.61±0.45bc |
| **MCHC**  **(g/100 mL)** | 4.50±0.20b | 4.54±0.19 | 4.32±0.22\* | 4.06±0.25\* | 4.61±0.39 | 4.50±0.20b | 5.70±0.26a\* | 5.14±0.36ab\* | 4.57±0.39ab |

**Table 2:** Absolute values (x 104/µL) of peripheral blood leukocytes (neutrophils, monocytes, lymphocytes and thrombocytes) of European sea bass (*Dicentrarchus labrax*) after bacterial bath-challenge with 5 x 105 CFU mL-1 *T. maritimum*. Data are expressed as mean ± SEM (n=12 per treatment). Different capital letters in the same row stand for differences between control and mock-challenge and lower case letters indicate significant differences between control and challenged groups, while (\*) represents statistical differences between mock and challenged fish at each sampling point (One-way ANOVA or Kruskal-Wallis; p≤0.05).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Control** | **Mock-challenged** | | | | **Challenged** | | | |
|  | **0 h** | **6 h** | **24 h** | **48 h** | **72 h** | **6 h** | **24 h** | **48 h** | **72 h** |
| **Neutrophils (x104/µL)** | 3.24E-02±0.01Cc | 1.80E-01±0.03A | 1.41E-01±0.03AB\* | 6.48E-02±0.02BC\* | 5.38E-02±0.01BC\* | 2.17E-01±0.03b | 4.90E-02±0.01c\* | 1.53E-01±0.03b\* | 5.66E-01±0.06a\* |
| **Monocytes (x104/µL)** | 8.42E-03±0.00b | 1.51E-02±0.00 | 2.18E-02±0.01 | 9.55E-03±0.00\* | 1.58E-02±0.01\* | 2.05E-02±0.01b | 1.91E-02±0.01b | 6.73E-02±0.02a\* | 7.33E-02±0.02a\* |
| **Lymphocytes (x104/µL)** | 1.05E+00±0.12Bb | 1.33E+00±0.13AB | 1.70E+00±0.13A\* | 1.04E+00±0.14B | 1.83E+00±0.25A | 1.39E+00±0.17ab | 1.26E+00±0.14b\* | 8.64E-01±0.10b | 1.83E+00±0.25a |
| **Thrombocytes (x104/µL)** | 1.37E+00±0.17a | 1.19E+00±0.23\* | 1.07E+00±0.12 | 1.58E+00±0.16 | 1.44E+00±0.23 | 5.14E-01±0.10b\* | 9.05E-01±0.10ab | 1.38E+00±0.19a | 1.23E+00±0.15a |

**Table 3:** Immune parameters (antiprotease (%) and proteases activities (%), peroxidase (units/mL), lysozyme (units/mL), bactericidal activity (%) and nitrite concentration (µM)) of plasma of European sea bass (*Dicentrarchus labrax*) after bacterial bath-challenge with 5 x 105 CFU mL-1 *T. maritimum*. Data are expressed as mean ± SEM (n=12 per treatment). Different capital letters in the same row stand for differences between control and mock-challenge and lower case letters indicate significant differences between control and challenged groups, while (\*) represents statistical differences between mock and challenged fish at each sampling point (One-way ANOVA or Kruskal-Wallis; p≤0.05).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Control** | **Mock-challenged** | | | | **Challenged** | | | |
|  | **0 h** | **6 h** | **24 h** | **48 h** | **72 h** | **6 h** | **24 h** | **48 h** | **72 h** |
| **Antiprotease (%)** | 96.31± 0.28Bb | 97.38±0.47AB | 97.77±0.28A | 96.83±0.15AB\* | 96.91±0.30AB\* | 96.82±0.42b | 90.87±4.22b | 98.00±0.21a\* | 97.96±0.19a\* |
| **Protease (%)** | 10.46±0.69ab | 10.12±0.67 | 11.28±0.73 | 9.07±0.46\* | 11.11±0.57\* | 8.69±0.27bc | 12.52±0.90a | 7.76±0.22c\* | 9.16±0.61bc\* |
| **Peroxidase (units/mL)** | 4.08±0.62Bb | 2.58±0.31B | 3.56±0.55B | 9.93±1.28A | 6.23±1.31AB | 3.85±0.95b | 5.27±0.95ab | 8.80±1.34a | 8.51±1.48ab |
| **Lysozyme (units/mL)** | 7.64±0.87ABa | 11.09±0.81A\* | 9.13±1.00AB\* | 8.10±1.19AB\* | 6.31±0.77B\* | 7.04±0.65a\* | 4.35±0.57b\* | 3.09±0.42b\* | 4.13±0.45b\* |
| **Bactericidal act (%)** | 26.13±2.49Bab | 24.74±2.05B\* | 24.45±1.98B\* | 15.03±1.94A | 31.82±2.65AB\* | 16.66±2.03bc\* | 9.80±2.09c\* | 14.36±1.68c | 31.82±2.65a\* |
| **NO (µM)** | 0.11±0.01Bc | 0.10±0.01B | 0.13±0.01B | 0.23±0.03A | 0.18±0.02A | 0.08±0.01d | 0.13±0.02bcd | 0.24±0.03a | 0.17±0.01ab |

**Table 4:** Oxidative stress biomarkers (catalase activity (CAT), superoxide dismutase activity (SOD), lipid peroxidation (LPO), glutathione-S-transferase (GST), reduced: oxidized glutathione ratio (GSH/GSSG ratio), reduced (GSH) and oxidized glutathione (GSSG) activity of liver of European sea bass (*Dicentrarchus labrax*) after bacterial bath-challenge with 5 x 105 CFU mL-1 *T. maritimum*. Data are expressed as mean ± SEM (n=12 per treatment). Different capital letters in the same row stand for differences between control and mock-challenge and lower case letters indicate significant differences between control and challenged groups, while (\*) represents statistical differences between mock and challenged fish at each sampling point (One-way ANOVA or Kruskal-Wallis; p≤0.05).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Control** | **Mock-challenged** | | | | **Challenged** | | | |
|  | **0 h** | **6 h** | **24 h** | **48 h** | **72 h** | **6 h** | **24 h** | **48 h** | **72 h** |
| **CAT (U/mg protein)** | 217.45±4.40Aa | 173.54±14.75AB | 156.38±5.79B | 154.03±10.53B | 137.37±6.44B | 185.67±12.98a | 139.30±9.93b | 132.33±11.38b | 139.55±9.70b |
| **SOD (U/mg protein)** | 9.51±0.55Bc | 12.51±1.08AB\* | 13.41±0.87A | 15.71±0.81A\* | 14.13±0.92A\* | 17.67±1.47a\* | 14.64±4.54ab | 12.57±0.71b\* | 11.64±0.51bc\* |
| **LPO (nmol/g wet tissue)** | 33.82±2.27 | 38.43±3.30\* | 36.53±4.12 | 50.11±5.67\* | 43.78±5.63 | 29.12±1.80\* | 33.36±1.91 | 28.98±2.56\* | 43.67±4.71 |
| **GST (nmol/mg protein)** | 194.90±8.93ABa | 196.29±10.01AB | 212.64±8.66A\* | 169.51±9.51B | 162.14±12.09B | 180.17±9.57a | 181.29±9.35a\* | 167.10±6.86ab | 130.71±9.64b |
| **GSH/GSSG ratio** | 45.29±5.38B | 37.42±4.56B | 44.10±4.73B | 82.56±14.33A | 40.15±3.42B | 39.45±4.69 | 54.19±4.80 | 60.94±13.59 | 42.54±3.20 |
| **GSH (µM)** | 6039.70±214.87Aa | 5038.26±285.31AB | 5320.99±328.45AB | 5146.05±365.65AB | 4373.64±272.44B | 5133.91±450.02ab | 5230.67±439.80ab | 6129.85±504.89ab | 4642.90±196.25b |
| **GSSG (µM)** | 145.71±17.17A | 138.74±9.72A | 114.06±12.05A | 65.20±8.36B\* | 107.82±6.33A | 106.84±15.22 | 89.20±7.58 | 89.20±23.01\* | 109.77±9.22 |

**Table 5:** Quantitative expression of *tlr2*, *tlr9*, *nod1*, *nod2*, *nf-κB*, *stat3*, *bcl2-like*, *il-6* and *tnfα* for gills of European sea bass (*Dicentrarchus labrax*) after bacterial bath-challenge with 5 x 105 CFU mL-1 *T. maritimum*. Data are expressed as mean ± SEM (n=12 per treatment). Different capital letters in the same row stand for differences between control and mock-challenge and lower case letters indicate significant differences between control and challenged groups, while (\*) represents statistical differences between mock and challenged fish at each sampling point (One-way ANOVA or Kruskal-Wallis; p≤0.05).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Control** | **Mock-challenged** | | | | **Challenged** | | | |
| **Genes** | **0 h** | **6 h** | **24 h** | **48 h** | **72 h** | **6 h** | **24 h** | **48 h** | **72 h** |
| ***tlr2*** | 1.04±0.09Bbc | 1.74±0.17A\* | 1.71±0.10A\* | 1.86±0.19A\* | 2.05±0.09A\* | 1.00±0.14bc\* | 0.64±0.14c\* | 1.28±0.12ab\* | 2.05±0.09a\* |
| ***tlr9*** | 1.01±0.05Ba | 1.59±0.13A\* | 1.07±0.06B\* | 1.12±0.05B\* | 1.37±0.08A\* | 0.83±0.09ab\* | 0.61±0.07c\* | 0.68±0.04bc\* | 0.81±0.08ab\* |
| ***nod1*** | 1.02±0.06Bb | 1.11±0.07AB\* | 0.99±0.09B | 1.13±0.06AB\* | 1.40±0.09A\* | 1.57±0.13a\* | 1.03±0.09b | 0.88±0.07b\* | 0.86±0.06b\* |
| ***nod2*** | 1.03±0.08a | 0.95±0.04\* | 1.00±0.07\* | 1.00±0.04\* | 1.11±0.08\* | 0.72±0.11bc\* | 0.61±0.05c\* | 0.71±0.02bc\* | 0.82±0.06ab\* |
| ***nf-κB*** | 1.01±0.04ABa | 1.01±0.05AB\* | 0.88±0.06B | 0.99±0.05AB\* | 1.11±0.06A\* | 1.45±0.16a\* | 0.74±0.05b | 0.68±0.03b\* | 0.78±0.05b\* |
| ***stat3*** | 1.02±0.06Ab | 0.99±0.05AB\* | 0.80±0.06B\* | 1.01±0.06A | 1.04±0.05A | 2.22±0.19a\* | 1.25±0.06b\* | 1.08±0.08b | 1.15±0.08b |
| ***bcl2-like*** | 1.01±0.05ABa | 0.98±0.04AB | 0.87±0.06B | 0.90±0.03B\* | 1.12±0.06A\* | 0.87±0.06ab | 0.77±0.06b | 0.69±0.03b\* | 0.69±0.04b\* |
| ***il-6*** | 1.03±0.08ABa | 1.17±0.08A | 0.89±0.08B | 0.86±0.03B\* | 0.95±0.06AB\* | 1.15±0.10a | 1.12±0.17ab | 0.62±0.03c\* | 0.62±0.03c\* |
| ***tnfα*** | 1.04±0.09Bab | 1.43±0.11B\* | 1.28±0.13B\* | 1.85±0.16A\* | 2.28±0.19A\* | 1.71±0.27a\* | 0.86±0.18b\* | 1.02±0.11ab\* | 0.82±0.09b\* |

**Table 6:** Quantitative expression of *tlr2*, *tlr9*, *nod1*, *nod2*, *nf-κB*, *stat3*, *bcl2-like*, *il-6* and *tnfα* for skin of European sea bass (*Dicentrarchus labrax*) after bacterial bath-challenge with 5 x 105 CFU mL-1 *T. maritimum*. Data are expressed as mean ± SEM (n=12 per treatment). Different capital letters in the same row stand for differences between control and mock-challenge and lower case letters indicate significant differences between control and challenged groups, while (\*) represents statistical differences between mock and challenged fish at each sampling point (One-way ANOVA or Kruskal-Wallis; p≤0.05).

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Genes** | **Control** | **Mock-challenged** | | | | **Challenged** | | | | |
| **0 h** | **6 h** | **24 h** | **48 h** | **72 h** | **6 h** | **24 h** | **48 h** | **72 h** |
| ***tlr2*** | 1.10±0.14Bb | 1.09± 0.13B | 1.62± 0.12A\* | 1.75± 0.14A | 1.75± 0.18A | 0.84± 0.13c | 0.46± 0.12c\* | 1.56± 0.24ab | 2.27± 0.23a |
| ***tlr9*** | 1.05±0.10 | 1.20± 0.09\* | 1.11± 0.15\* | 0.82± 0.08 | 0.98± 0.08 | 0.89± 0.08\* | 0.72± 0.08\* | 0.81± 0.13 | 1.06± 0.13 |
| ***nod1*** | 1.10±0.15Aab | 0.93± 0.10AB | 0.70± 0.07ABC\* | 0.59± 0.06C | 0.63± 0.06BC | 1.27± 0.18a | 1.20± 0.16a\* | 0.71± 0.07bc | 0.68± 0.06c |
| ***nod2*** | 1.13±0.20Bb | 1.26± 0.15B\* | 2.43± 0.21A\* | 2.00± 0.17A | 2.11± 0.21A | 2.10± 0.22a\* | 1.16± 0.24bc\* | 1.64± 0.12ac | 2.10± 0.31a |
| ***nf-κB*** | 1.01±0.05Ab | 0.78± 0.05B\* | 0.62± 0.04B\* | 0.70± 0.04B | 0.70± 0.04B | 1.29± 0.08ab\* | 1.38± 0.18ab\* | 0.75± 0.03d | 0.90± 0.11cd |
| ***stat3*** | 1.06±0.10Aab | 0.84± 0.07AB\* | 0.78± 0.07AB\* | 0.61± 0.05B\* | 0.71± 0.06B | 1.20± 0.06a\* | 1.35± 0.09a\* | 0.92± 0.08bc\* | 0.83± 0.07c |
| ***bcl2-like*** | 1.02±0.06a | 1.02± 0.10\* | 0.82± 0.05\* | 0.79± 0.03 | 0.86± 0.05 | 0.72± 0.04bc\* | 0.58± 0.05c\* | 0.68± 0.05bc | 0.81± 0.06ab |
| ***il-6*** | 1.06±0.12Bb | 2.22± 0.25A | 0.72± 0.04B | 1.01± 0.10B | 0.76± 0.06B | 1.80± 0.22a | 0.85± 0.14b | 0.82± 0.07b | 0.99± 0.18b |
| ***tnfα*** | 1.11±0.16AB | 1.47± 0.21AB | 0.94± 0.14B\* | 1.52± 0.16A | 1.21± 0.10AB | 1.49± 0.18 | 1.69± 0.18\* | 1.47± 0.16 | 1.87± 0.44 |

**Table 7:** Quantitative expression of *tlr2*, *tlr9*, *nod1*, *nod2*, *nf-κB*, *stat3*, *bcl2-like*, *il-6* and *tnfα* for posterior-intestine of European sea bass (*Dicentrarchus labrax*) after bacterial bath-challenge with 5 x 105 CFU mL-1 *T. maritimum*. Data are expressed as mean ± SEM (n=12 per treatment). Different capital letters in the same row stand for differences between control and mock-challenge and lower case letters indicate significant differences between control and challenged groups, while (\*) represents statistical differences between mock and challenged fish at each sampling point (One-way ANOVA or Kruskal-Wallis; p≤0.05).

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Genes** | **Control** | **Mock-challenged** | | | | **Challenged** | | | | |
| **0 h** | **6 h** | **24 h** | **48 h** | **72 h** | **6 h** | **24 h** | **48 h** | **72 h** |
| ***tlr2*** | 1.01±0.05ab | 1.07±0.06\* | 1.17±0.07\* | 1.17±0.09 | 1.22±0.08 | 0.81±0.07bc\* | 0.68±0.08c\* | 0.99±0.12ab | 1.09±0.09a |
| ***tlr9*** | 1.02±0.06B | 1.55±0.11A\* | 1.57±0.10A\* | 1.38±0.19AB | 1.43±0.13A | 1.07±0.12\* | 0.94±0.12\* | 1.01±0.11 | 1.38±0.15 |
| ***nod1*** | 1.04±0.09 | 0.91±0.05 | 0.99±0.06 | 1.07±0.07 | 1.21±0.12 | 1.00±0.08 | 1.40±0.23 | 1.01±0.05 | 1.03±0.09 |
| ***nod2*** | 1.05±0.10B | 1.59±0.18AB\* | 1.91±0.17A\* | 1.07±0.11B | 1.51±0.18AB | 0.86±0.12\* | 1.41±0.46\* | 1.04±0.13 | 1.44±0.14 |
| ***nf-κB*** | 1.05±0.10Aa | 0.74±0.05B\* | 0.64±0.04B\* | 0.59±0.05B | 0.60±0.03B | 1.07±0.10a\* | 1.04±0.14a\* | 0.60±0.06b | 0.63±0.03b |
| ***stat3*** | 1.02±0.07 | 0.87±0.05\* | 0.86±0.04\* | 1.01±0.09 | 0.88±0.06 | 1.12±0.06\* | 1.19±0.11\* | 0.92±0.06 | 0.88±0.06 |
| ***bcl2-like*** | 1.03±0.07Aa | 0.72±0.05B | 0.88±0.05AB\* | 0.73±0.05B | 0.74±0.04B | 0.79±0.06b | 0.69±0.05b\* | 0.69±0.04b | 0.68±0.05b |
| ***il-6*** | 1.06±0.12 | 1.03±0.10 | 1.02±0.10 | 0.98±0.09\* | 0.89±0.07 | 0.91±0.10 | 1.13±0.15 | 0.75±0.05\* | 0.88±0.08 |
| ***tnfα*** | 1.06±0.11a | 1.15±0.20 | 1.13±0.10\* | 1.46±0.19\* | 1.03±0.08 | 1.16±0.17a | 0.65±0.13b\* | 0.86±0.12ab\* | 1.30±0.18a |