**Table S1.** Characteristicsof the five sampling stations: latitude, longitude, salinity, grain-size median (µm), silt & clay content (% of dry weight sediment), organic matter content (% of dry weight sediment), tidal level (m).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Site | Latitude | Longitude | Salinity | Grain size median | Silt & clay content | Organic matter content | Tidal level |
| Andernos1 | 44°42'31"N | 1°8'11"W | 29.9 | 163 | 14.54 | 3.33 | 2.11 |
| Gujan1 | 44°39'59" N | 1°5'29" W | 29.9 | 69 | 47.17 | 5.63 | 1.46 |
| IAO1 | 44°41'60" N | 1°10'1" W | 32.8 | 97 | 42.45 | 13.05 | 2.63 |
| Lanton1 | 44°41'31" N | 1°4'48" W | 29.9 | 78 | 40.99 | 10.09 | 1.89 |
| Piquey2 | 44°41'11" N | 1°12'55" W | 32.8 | 112 | 32.62 | 6.65 | 1.45 |

1 Dang et al, 2010b (except salinity2)

2 Binias et al. 2014 and personal data

**Table S2.** Concordance, discordance and Cohen's Kappa (κ) coefficient between RFTM and qPCR assays on gill tissue samples.

|  |  |  |  |
| --- | --- | --- | --- |
| Station | Discordance (%) | Concordance (%) | κ |
| IAO | 14 | 86 | 0.41 |
| Andernos | 24 | 76 | 0.35 |
| Gujan | 24 | 76 | 0,42 |
| Lanton | 14 | 86 | 0.62 |
| Piquey | 16 | 84 | 0.17 |

**Table S3.** Mean infection intensities of single-*P. olseni* (PO single), single-*P. chesapeaki* (PC single) infections and co-infection (Co-infection) in whole clam body evaluated by qPCR assays from five sampling station. Means and standard-deviation (sd) are in number of copies per gram of wet tissue samples (Mean ± sd). n in bracket correspond to the number of clam infected for each condition.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Whole Body mean infection intensities  (nb. of copies.g-1 of wet tissue) | | |
|  | PO single-infection | PC single-infection | Co-infection |
| IAO | 3,06x108 ± 3,91x108 (n=32) | 3,06x108 (n=1) | 4,65x107 ± 6,32x107 (n=15) |
| Gujan | 1,76x107 ± 2,82x107 (n=23) | 7,92x103 ± 5,07x103 (n=7) | 2,37x107 ± 4,35x107 (n=11) |
| Lanton | 6,28x107 ± 1,79x108 (n=35) | 0 | 3,21x107 ± 3,53x107 (n=6) |
| Piquey | 7,98x107 ± 2,20x108 (n=27) | 0 | 1,06x107 ± 1,76x107 (n=27) |
| Andernos | 2,60x108 ± 9,10x108 (n=42) | 0 | 0 |

**Table S4.** Prevalence of *Perkinsus* spp., single-*P. olseni* (PO single), single-*P. chesapeaki* (PC single) infections and co-infection (Co-infection) in whole clam body evaluated by qPCR assays from five sampling station in November 2018 in Arcachon Bay. Prevalences are in '%'.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | *Perkinsus* spp. | PO single | PC single | Co-infection |
| IAO | 96 | 64 | 2 | 30 |
| Gujan | 82 | 46 | 14 | 22 |
| Lanton | 82 | 70 | 0 | 12 |
| Piquey | 90 | 54 | 0 | 36 |
| Andernos | 84 | 84 | 0 | 0 |