*Experimental Results*

Title: Investigating salinity fluctuations and pathogen infection patterns between natural and restored subtropical oyster reefs

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**Supplementary Information**

Supplementary Table S1. Primer sequences specific to *Vibrio vulnificus* used for isolate confirmation.

|  |  |
| --- | --- |
| Primers | Genomic sequence |
| *vvhA*-1303R | 5’ -CCG CGG TAC AGG TTG GCG CA- 3’ |
| *vvhA*-785F | 5’ -CGC CAC CCA CTT TCG GGC C- 3’ |

Supplementary Table S2. PCR thermal cycler conditions used to quantify 519 bp *vvhA* amplicon specific to *Vibrio vulnificus*.

|  |  |  |  |
| --- | --- | --- | --- |
| Step | Temp (oC) | Time (min) | Number of Cycles |
| Enzyme activation (denature) | 94 | 10 | 1 |
| Denaturation | 94 | 1 | 25 |
| Annealing | 62 | 1 | 25 |
| Extension | 72 | 1 | 25 |
| Final Extension | 72 | 10 | 25 |
| Signal Stabilization | 8 | indefinite | 1 |

Supplementary Table S3. Complete record of the *vvhA* PCR results, showing the provenance of the 120 presumptive *V. vulnificus* isolates: oyster and isolate number from either St. Charles Bay (SCB) or Shellbank Reef (SHR) with detection of the 519 bp gene marker noted as present (1) or absent (0).

|  |  |  |
| --- | --- | --- |
| **Location** | **Isolate** | ***vvhA*** |
| SCB | Oyster 10: Isolate 1 | 1 |
| SCB | Oyster 10: Isolate 2 | 1 |
| SCB | Oyster 10: Isolate 3 | 0 |
| SCB | Oyster 10: Isolate 4 | 0 |
| SCB | Oyster 10: Isolate 5 | 1 |
| SCB | Oyster 11: Isolate 1 | 1 |
| SCB | Oyster 11: Isolate 2 | 1 |
| SCB | Oyster 11: Isolate 3 | 1 |
| SCB | Oyster 11: Isolate 4 | 0 |
| SCB | Oyster 11: Isolate 5 | 1 |
| SCB | Oyster 12 : Isolate 1 | 0 |
| SCB | Oyster 12 : Isolate 2 | 0 |
| SCB | Oyster 12 : Isolate 3 | 1 |
| SCB | Oyster 12 : Isolate 4 | 0 |
| SCB | Oyster 12 : Isolate 5 | 1 |
| SHR | Oyster 13 : Isolate 1 | 0 |
| SHR | Oyster 13 : Isolate 2 | 1 |
| SHR | Oyster 13 : Isolate 3 | 1 |
| SHR | Oyster 13 : Isolate 4 | 1 |
| SHR | Oyster 13 : Isolate 5 | 1 |
| SHR | Oyster 14 : Isolate 1 | 1 |
| SHR | Oyster 14 : Isolate 2 | 1 |
| SHR | Oyster 14 : Isolate 3 | 0 |
| SHR | Oyster 14 : Isolate 4 | 1 |
| SHR | Oyster 14 : Isolate 5 | 1 |
| SHR | Oyster 15 : Isolate 1 | 1 |
| SHR | Oyster 15 : Isolate 2 | 1 |
| SHR | Oyster 15 : Isolate 3 | 0 |
| SHR | Oyster 15 : Isolate 4 | 1 |
| SHR | Oyster 15 : Isolate 5 | 0 |
| SHR | Oyster 16 : Isolate 1 | 1 |
| SHR | Oyster 16 : Isolate 2 | 1 |
| SHR | Oyster 16 : Isolate 3 | 1 |
| SHR | Oyster 16 : Isolate 4 | 1 |
| SHR | Oyster 16 : Isolate 5 | 1 |
| SCB | Oyster 2: Isolate 1 | 0 |
| SCB | Oyster 2: Isolate 2 | 0 |
| SCB | Oyster 2: Isolate 3 | 0 |
| SCB | Oyster 2: Isolate 4 | 0 |
| SCB | Oyster 2: Isolate 5 | 1 |
| SCB | Oyster 25: Isolate 1 | 0 |
| SCB | Oyster 25: Isolate 2 | 0 |
| SCB | Oyster 26: Isolate 1 | 0 |
| SCB | Oyster 26: Isolate 2 | 0 |
| SCB | Oyster 26: Isolate 3 | 0 |
| SCB | Oyster 26: Isolate 4 | 1 |
| SCB | Oyster 26: Isolate 5 | 1 |
| SCB | Oyster 27: Isolate 1 | 1 |
| SCB | Oyster 27: Isolate 2 | 0 |
| SCB | Oyster 27: Isolate 3 | 1 |
| SCB | Oyster 27: Isolate 4 | 0 |
| SCB | Oyster 27: Isolate 5 | 1 |
| SCB | Oyster 28: Isolate 1 | 1 |
| SCB | Oyster 28: Isolate 2 | 1 |
| SCB | Oyster 28: Isolate 3 | 1 |
| SCB | Oyster 28: Isolate 4 | 0 |
| SCB | Oyster 28: Isolate 5 | 1 |
| SHR | Oyster 29: Isolate 1 | 1 |
| SHR | Oyster 29: Isolate 2 | 1 |
| SHR | Oyster 29: Isolate 3 | 1 |
| SHR | Oyster 29: Isolate 4 | 0 |
| SHR | Oyster 29: Isolate 5 | 0 |
| SHR | Oyster 30: Isolate 1 | 0 |
| SHR | Oyster 30: Isolate 2 | 0 |
| SHR | Oyster 30: Isolate 3 | 0 |
| SHR | Oyster 30: Isolate 4 | 0 |
| SHR | Oyster 30: Isolate 5 | 0 |
| SHR | Oyster 31: Isolate 1 | 1 |
| SHR | Oyster 31: Isolate 2 | 1 |
| SHR | Oyster 31: Isolate 3 | 1 |
| SHR | Oyster 31: Isolate 4 | 1 |
| SHR | Oyster 31: Isolate 5 | 1 |
| SHR | Oyster 32: Isolate 1 | 1 |
| SHR | Oyster 32: Isolate 2 | 1 |
| SCB | Oyster 33: Isolate 1 | 0 |
| SCB | Oyster 33: Isolate 2 | 0 |
| SCB | Oyster 33: Isolate 3 | 0 |
| SCB | Oyster 33: Isolate 4 | 0 |
| SCB | Oyster 33: Isolate 5 | 0 |
| SCB | Oyster 34: Isolate 1 | 0 |
| SCB | Oyster 34: Isolate 2 | 0 |
| SCB | Oyster 34: Isolate 3 | 0 |
| SCB | Oyster 34: Isolate 4 | 0 |
| SCB | Oyster 34: Isolate 5 | 0 |
| SCB | Oyster 35: Isolate 1 | 0 |
| SCB | Oyster 35: Isolate 2 | 0 |
| SCB | Oyster 35: Isolate 3 | 0 |
| SCB | Oyster 35: Isolate 4 | 0 |
| SCB | Oyster 35: Isolate 5 | 0 |
| SCB | Oyster 36: Isolate 1 | 0 |
| SCB | Oyster 36: Isolate 2 | 0 |
| SCB | Oyster 36: Isolate 3 | 1 |
| SCB | Oyster 36: Isolate 4 | 1 |
| SCB | Oyster 36: Isolate 5 | 1 |
| SHR | Oyster 37: Isolate 1 | 0 |
| SHR | Oyster 37: Isolate 2 | 1 |
| SHR | Oyster 37: Isolate 3 | 1 |
| SHR | Oyster 38: Isolate 1 | 0 |
| SHR | Oyster 39: Isolate 1 | 0 |
| SHR | Oyster 39: Isolate 2 | 0 |
| SHR | Oyster 39: Isolate 3 | 0 |
| SHR | Oyster 39: Isolate 4 | 0 |
| SHR | Oyster 39: Isolate 5 | 0 |
| SCB | Oyster 4: Isolate 1 | 0 |
| SCB | Oyster 4: Isolate 2 | 0 |
| SHR | Oyster 40: Isolate 1 | 0 |
| SHR | Oyster 40: Isolate 2 | 0 |
| SHR | Oyster 40: Isolate 3 | 0 |
| SHR | Oyster 40: Isolate 4 | 1 |
| SHR | Oyster 40: Isolate 5 | 0 |
| SHR | Oyster 8: Isolate 1 | 0 |
| SHR | Oyster 8: Isolate 2 | 0 |
| SHR | Oyster 8: Isolate 3 | 0 |
| SHR | Oyster 8: Isolate 4 | 0 |
| SHR | Oyster 8: Isolate 5 | 0 |
| SCB | Oyster 9: Isolate 1 | 1 |
| SCB | Oyster 9: Isolate 2 | 1 |
| SCB | Oyster 9: Isolate 3 | 0 |
| SCB | Oyster 9: Isolate 4 | 0 |
| SCB | Oyster 9: Isolate 5 | 1 |

Supplementary Table S4. Analytical precisions and accuracies for stable isotope analyses conducted at the University of California Davis Stable Isotope Facility. Instrumental precision and accuracy were assessed by reference material replicate analysis. Sample precision was assessed by repeated measurements of oyster shell samples

|  |  |  |
| --- | --- | --- |
|  | δ18O (‰) | δ13C (‰) |
| Instrumental precision | 0.10 | 0.10 |
| Instrumental accuracy | 0.01 | 0.05 |
| Sample precision | 0.49 | 0.19 |