Accepted Manuscript

Temperature modulate disease susceptibility of the Pacific oyster *Crassostrea gigas* and virulence of the Ostreid herpesvirus type 1

Lizenn Delisle, Bruno Petton, Jean François Burguin, Benjamin Morga, Charlotte Corporeau, Fabrice Pernet

PII: S1050-4648(18)30326-7

DOI: 10.1016/j.fsi.2018.05.056

Reference: YFSIM 5337

To appear in: Fish and Shellfish Immunology

Received Date: 29 March 2018

Revised Date: 24 May 2018

Accepted Date: 29 May 2018

Please cite this article as: Delisle L, Petton B, Burguin JeanFranç, Morga B, Corporeau C, Pernet F, Temperature modulate disease susceptibility of the Pacific oyster *Crassostrea gigas* and virulence of the Ostreid herpesvirus type 1, *Fish and Shellfish Immunology* (2018), doi: 10.1016/j.fsi.2018.05.056.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



ACCEPTED MANUSCRIPT

1	Temperature modulate disease susceptibility of the Pacific oyster Crassostrea gigas and
2	virulence of the Ostreid herpesvirus type 1
3	Lizenn Delisle ¹ , Bruno Petton ² , Jean François Burguin ¹ , Benjamin Morga ³ , Charlotte Corporeau ¹ ,
4	Fabrice Pernet ^{1*}
5	¹ Ifremer/LEMAR UMR 6539, Technopole de Brest-Iroise, 29280 Plouzané, France
6	² Ifremer/LEMAR UMR 6539, Presqu'île du vivier, 29840 Argenton, France
7	³ Ifremer/Laboratoire de génétique et Pathologie des Mollusques Marins (LGPMM), avenue de
8	Mus de Loup, 17390 La Tremblade, France
9	Correspondence: fabrice.pernet@ifremer.fr
10	Running title: Temperature and disease susceptibility of oysters
11	Summary: Temperature triggers marine diseases by changing host susceptibility and pathogen
12	virulence. Oyster mortalities associated with the Ostreid herpesvirus type 1 (OsHV-1) have
13	occurred seasonally in Europe when the seawater temperature range reaches 16-24°C. Here we
14	assess how temperature modulates oyster susceptibility to OsHV-1 and pathogen virulence.
15	Oysters were injected with OsHV-1 suspension incubated at 21°C, 26°C and 29°C and were
16	placed in cohabitation with healthy oysters (recipients) at these three temperatures according to a
17	fractional factorial design. Survival was followed for 14 d and recipients were sampled for
18	OsHV-1 DNA quantification and viral gene expression. The oysters were all subsequently placed
19	at 21°C to evaluate the potential for virus reactivation, before being transferred to oyster farms to
20	evaluate their long-term susceptibility to the disease. Survival of recipients at 29°C (86%) was
21	higher than at 21°C (52%) and 26°C (43%). High temperature (29°C) decreased the susceptibility

Download English Version:

https://daneshyari.com/en/article/8498192

Download Persian Version:

https://daneshyari.com/article/8498192

Daneshyari.com