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Emilie Cardona, Denis Saulnier, Bénédicte Lorgeoux, Liet Chim, Yannick Gueguen

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Rearing effect of biofloc on antioxidant and antimicrobial transcriptional response in *Litopenaeus stylirostris* shrimp facing an experimental sub-lethal hydrogen peroxide stress

Emilie Cardona[1,2], Denis Saulnier[1], Bénédicte Lorgeoux[1], Liet Chim[2], Yannick Gueguen[1,3].

[1]Ifremer, Centre Océanologique du Pacifique, Unité de recherche Resources Marines, B.P 7004, 98719 Taravao, French Polynesia
[2]Ifremer, Unité de recherche Lagons, Ecosystèmes et Aquaculture Durable en Nouvelle Calédonie B.P. 2059, 98846 Nouméa, New Caledonia.
[3]Ifremer, UMR 5244 IHPE, UPVD, CNRS, Université de Montpellier, F-34095 Montpellier, France.

*Corresponding author: Emilie Cardona e-mail : emiliecardona2@gmail.com

Tables and captions

Table 1: PCR primers (F: Forward, R: Reverse) used to amplify antimicrobial peptides (Pen3, Pen2, Lyso, Cru), antioxidant enzymes (GPX, SOD, GSHT, CAT) and house-keeping genes (GADPH, EF) of the shrimp *Litopenaeus stylirostris* in a real-time PCR procedure.

Figure 1: Expression profiles of genes coding for the antioxidant enzymes Super oxide dismutase (SOD), Catalase (CAT), Glutathione peroxidase (GPX) and Glutathione transferase (GSHT) in animals under both conditions both before (BS) and after stress (AS).

Figure 2: Expression profiles of genes coding for AMPs, Lysozyme (Lyso), Peneaidin 2 and 3 (Pen 2 and Pen 3) and Crustin (Cru) in animals from both conditions both before (BS) and after stress (AS).

Abstract

This study compares the antioxidant and antimicrobial transcriptional expression of blue shrimps reared according to two different systems, BioFloc Technology (BFT) and Clear sea Water (CW) and their differential responses when facing an experimental sublethal hydrogen peroxide stress. After 30 days of rearing, juvenile shrimps were exposed to H_2O_2 stress at a concentration of 30 ppm during 6 hours. The oxidative stress caused by H_2O_2 was examined in the digestive glands of the shrimp, in which antioxidant enzyme (AOE) and antimicrobial