

Diets enriched in red seaweed (*Pyropia columbina* and *Gracilaria chilensis*) cryo concentrates modulate the immune-relevant gene encoding the Mx antiviral protein in salmon (*Salmo salar*) white blood cells

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© 2018, Springer Nature B.V. Pharmacotherapy has long been used to control viral diseases.

However, its success is questionable because its use can negatively impact environmental and human health. An alternative solution is the use of functional foods and diets containing natural products, which tend to be more biodegradable than synthetic molecules and are less likely to generate resistance. Seaweed contains biologically active macronutrients and minerals that offer a natural alternative to synthetic molecules. Red seaweeds, in particular, are a rich source of anti-viral compounds. This study aimed to evaluate the effect of two edible red seaweeds, *Pyropia columbina* and *Gracilaria chilensis* cryo concentrates (RSCC), on the gene transcription levels in leukocyte proteins involved in antiviral response (INF γ , Mx, interleukin-6, cathelicidin, and lysozyme). The RSCCs were fed to fish (*Salmo salar* L.) at concentrations of 0.1, 1, or 10 g kg⁻¹ for 56 days, and blood samples were collected