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Mucosal immune parameters, immune and antioxidant defence related genes expression and growth performance of zebrafish (*Danio rerio*) fed on *Gracilaria gracilis* powder

Seyed Hossein Hoseinifar, Samira Yousefi, Gioele Capillo, Hamed Paknejad, Mohsen Khalili, Alijan Tabarraei, Hien Van Doan, Nunziacarla Spanò, Caterina Faggio

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**Mucosal immune parameters, immune and antioxidant defence related genes expression and growth performance of zebrafish (*Danio rerio*) fed on *Gracilaria gracilis* powder**

**Running head:** *Gracilaria gracilis* effects on zebrafish immunity

Seyed Hossein Hoseinifar<sup>1§</sup>, Samira Yousefi<sup>1</sup>, Gioele Capillo<sup>2§</sup>, Hamed Paknejad<sup>1</sup>, Mohsen Khalili<sup>3</sup>, Alijan Tabarraei<sup>3</sup>, Hien Van Doan<sup>4</sup>, Nunziacarla Spanò<sup>2</sup>, Caterina Faggio<sup>2\*</sup>

<sup>1</sup> Department of Fisheries, Faculty of Fisheries and Environmental Sciences, Gorgan University of Agricultural Sciences and Natural Resources, Gorgan, Iran

<sup>2</sup> Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Italy

<sup>3</sup> Medical Cellular & Molecular Research Center, Golestan University of Medical Sciences, Gorgan, Iran

<sup>4</sup> Department of Animal and Aquatic Sciences, Faculty of Agriculture, Chiang Mai University, Chiang Mai 50200, Thailand

<sup>§</sup>These authors contributed equally to this work

**\* Corresponding author: Prof. Caterina Faggio Department of Chemical, Biological, Pharmaceutical and Environmental Sciences. University of Messina Viale Ferdinando Stagno d'Alcontres, 31 -98166 S.Agata-Messina, Italy Tel. +39 090 6765213 E-mail: cfaggio@unime.it**

**Abstract:**

In the present study zebrafish (*Danio rerio*) has been used as model organism to establish the effects of dietary supplementation of *Gracilaria gracilis* powder (GP) on mucosal and innate immune parameters, antioxidant enzymes, and growth. In order to establish these features, zebrafish were fed for eight weeks with experimental diets containing different levels of Red algae, 0.25, 0.5

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