



CERTIFICATE OF ATTENDANCE

This is to certify that Marina Paolucci

Presented Oral the entitled: Phytochemicals in aquaculture: the potential of polyphenols

has participated to

“3rd INTERNATIONAL CONGRESS ON FISHERIES and AQUATIC RESEARCH”

organized by Karadeniz Technical University, Munzur University, Isparta University of Applied Sciences and Anatolia Science Academy in İstanbul, TURKEY on 28-30 August , 2019

Prof. Dr. Mehmet KOCABAŞ
Head of Congress

Dr. Aliakbar HEDAYATI
Head of Organizing Comitte

Phytochemicals in aquaculture: the potential of polyphenols

Marina PAOLUCCI¹, Seyed Hossein HOSEINIFAR², Omid SAFARI³, Katrin KALDRE⁴, Ruth CHRISNASARI⁵, Hien VAN DOAN⁶

¹Department of Science and Technologies, University of Sannio, Institute of Food Sciences-CNR, Italy

²Department of Fisheries Science, Gorgan University of Agricultural Sciences and Natural Resources, Gorgān, Iran

³Faculty of Natural Resources and Environment, Ferdowsi University of Mashhad (FUM), Mashhad, Iran

⁴Department of Aquaculture, Estonian University of Life Sciences, Tartu, Estonia

⁵Faculty of Biotechnology, Universitas Surabaya, Surabaya, Indonesia.

⁶Department of Animal and Aquatic Sciences, Chiang Mai University, Chiang Mai, Thailand.

Aquaculture is a flourishing industry sector, growing at a high pace each year. To meet the increasing demand of aquatic products for human consumption, intensive aquaculture practice becomes necessary. However, intensive aquaculture causes great stress in the species raised as a result of the high density and poor quality of the water. To prevent the spread of diseases, facilitated by the high density, huge quantities of medicines are used. The growing concern about the use of chemicals, such as antibiotics, in aquaculture, has prompted the scientific world to find more sustainable solutions to meet the criticisms of the intensive practices. The use of phytochemicals is increasingly widespread in aquaculture. They act as growth promoters, immunostimulants and disease protectors. Although they cannot completely replace the medicines, they can partially substitute them. Polyphenols are one major category of phytochemicals, showing a vast array of actions, not only antioxidant, but also anti-inflammatory, immunostimulant, and antibacterial. Although polyphenols seem to be good candidates for aquaculture application, their employment is still in its infancy. The presentation will focus on the studies carried out by the Department of Science and Technologies, in collaboration to the Department of Fisheries Science (Gorgan University, Iran), Faculty of Natural Resources and Environment (Ferdowsi University of Mashhad (FUM), Iran), Department of Aquaculture (Estonian University of Life Sciences, Estonia), Faculty of Biotechnology, (Universitas Surabaya, Indonesia), Department of Animal and Aquatic Science (Chiang Mai University, Thailand), showing promising effects of polyphenol administration to aquatic species, on growth, survival, immune response, as well as metabolism.

Keywords: aquaculture, phytochemicals, polyphenols.