

A Massive Gene Duplication of Hepcidin Family in a Mediterranean Bony Fish (*Sparus aurata*)

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At the present, infectious diseases limit the raise of European aquaculture and antibiotics are not allowed due to the many environmental and antimicrobial resistance problems arose due to their uncontrolled use in the past. To face with this challenge, antimicrobial peptides (AMPs) are postulated as a sustainable and safe therapeutic alternative to antibiotics for farmed fish. Hepcidins are a very widespread family of AMPs among vertebrates and very diverse in teleosts. It has delved into the identification of new hepcidins in gilthead seabream (*Sparus aurata*), a Mediterranean farmed fish. Gene sequence identification strategies, which are based on hidden Markov models (HMM) and *ab initio* gene predictions supported with ESTs, have been used to find new *hamp* genes in gilthead seabream genome. Results reveal a massively *hamp* duplicated genes. Fourteen *hamp2*-like gene copies and single *hamp1* gene are located on chromosome 17 and they are supported with number copies quantification using qPCR in gDNA. All these new gilthead seabream hepcidins may have several biotechnological applications. Besides, we could speak now about a new world of hepcidins in perciform fish.

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Biography:

Jhon Alberto Serna Duque graduate in Biotechnology degree and in Master of Molecular Biology and Biotechnology of University in Murcia. He is the first year of PhD after getting a National grant (FPU) for four years of doctorate and received an award for the Best Innovative Project on the field of *disruptive technology*.