

HUMORAL IMMUNITY: LECTINS, COMPLEMENT AND ANTIMICROBIAL PEPTIDES

(T-11) Identification of antimicrobial peptides in the gonad of European sea bass males and females

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Abstracts:

In vertebrates, the gonad is considered an immunologically privileged site as it triggers lower immune responses aiming to avoid germ cell damage. In fish, several studies reported that leucocytes show conditioned immune response and modulate some reproductive functions, allowing the pathogen to establish chronic and latent infections into reproductive organs. In mammals, antimicrobial peptides (AMPs) have recently been recognised as important effectors in male reproductive tract immunity. In fish, AMPs are increasingly recognized as a critical first line of defence against many pathogens as bacteria, fungi, virus, protozoa and even tumour cells. We have recently determined that the European sea bass (*Dicentrarchus labrax*) gonad showed antimicrobial activity and constitutively expressed different AMPs genes previously characterized in the immune response. However, it is possible that gonadal specific AMPs play an important role in gonad immune responses, as occurs in mammals. The present study is an attempt to identify and characterize molecules having antimicrobial activity against bacteria and fungi, from the gonad of mature European sea bass males and females. Our results show a very different profile of active AMPs between sexes, suggesting the existence of different AMPs in males and females. However, further characterization of isolated peptides is needed to fully characterize the molecules and determine their role upon infection.

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