

SUSCEPTIBILITY OF JUVENILE EUROPEAN SEA BASS (*DICENTRARCHUS LABRAX*) TO DIFFERENT VIRAL NERVOUS NECROSIS VIRUS (VNNV) ISOLATES

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Viral Nervous Necrosis (VNN) is a neurological disease caused by the Viral Nervous Necrosis Virus (VNNV), a member of the *Betanodavirus* genus, *Nodaviridae* family, with a genome composed of two single-stranded positive-sense RNA molecules (RNA1 and RNA2). This virus causes high mortalities in cultured European sea bass (*Dicentrarchus labrax*), especially during larval and juvenile stages. In this study, the susceptibility of 5-g juvenile European sea bass was evaluated by intramuscular injection (10^5 TCID₅₀/g) using isolates belonging to the RGNNV and SJNNV genotypes as well as a reassortant isolate (RGNNV RNA1/SJNNV RNA2) obtained from Senegalese sole (*Solea senegalensis*). In these experimental infections, the cumulative mortality was determined. Furthermore, quantification of viral genome, by absolute real time PCR, and infective viral particles, by virus titration, was performed from brains of dead and survivor fish (30 days post-inoculation). In addition, anti-VNNV antibodies in sera from survivor animals were determined by indirect ELISA. Typical symptoms of VNN and mortality were only recorded in fish inoculated with the RGNNV (47% cumulative mortality) and the reassortant (33%) isolates. However, high levels of viral genome and infective viral particles were recorded in brain of survivor fish inoculated with the SJNNV isolate, although did not cause mortality or clinical signs. Specific antibody response, measured by indirect ELISA, was only observed in the VNNV-inoculated groups, with titres of 1/1024, 1/4096 and 1/8192 for RGNNV, SJNNV and reassortant inoculated animals, respectively.

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