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## DETERMINATION OF EXPERIMENTALLY INDUCED LACTOCOCCOSIS IN CULTURED EUROPEAN SEA BASS (*Dicentrarchus labrax* L.) BY SOME DIAGNOSTIC METHODS

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Lactococcosis is a septicemic disease observed in various fish species which is caused by *Lactococcus garvieae* and it was spread to many parts of the world and causes important economic losses in aquaculture. The aim of this study is to determine the pathogenesis of experimentally induced *L. garvieae* infection in cultured European sea bass (*Dicentrarchus labrax*) and the diagnosis of the disease by using haematologic and serologic methods.

In this study, 185 European sea bass samples (50-70 g) that were supplied from a commercial fish farm located in the Aegean region of Turkey and adapted to the laboratory conditions, were used in the 50-day experimental study. After the LD<sub>50</sub> dose was determined (10<sup>8</sup> CFU/ml) two *L. garvieae* strains were injected intraperitoneally to induce infection in experiment groups.

During experimental infection; externally, scoliosis and hemorrhages and internally pale liver with nodules, expansion of the heart and spleen and hemorrhages were observed (Fig.1). In the hematologic analyses, deflections on the blood cell morphology, decreases in blood parameters, erythrocyte-sedimentation rate and coagulation duration were detected. Diagnosis of the disease could be made by various serological methods (ELISA, slide and micro-well agglutination) beginning from the earlier stages and antibody level in the serum could be determined.

In conclusion, with this study it was determined that *L. garvieae* causes infections in sea bass with some significant clinical symptoms and this is the first report on the effects of this infection on the blood parameters of sea bass. It was also determined that ELISA is a more sensitive method for the diagnosis of this disease when compared to agglutination methods.



**Figure 1:** Nodule development and extension of the heart and spleen in sea bass experimentally infected with *L. garvieae*

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