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**PhD project: Optimization of the intensive culture of the grooved carpet shell, *Ruditapes decussatus*, in hatchery**

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**Summary:** The grooved carpet shell (*Ruditapes decussatus*) is the most appreciated species of native clam in Galicia. From the beginning, the development of their culture has been mainly related to the abundance of seed recruitment in the natural environment, but the overexploitation to which the natural banks have been subjected, the entry of other competing foreign species of bivalve by the habitat, as well as different pathologies such as infection by the parasite *Perkinsus sp.*, resulted in the practical disappearance of some of them, which meant a significant reduction in catches. Despite all the technical and economic efforts made to optimize the production of seed of this species in the hatcheries, the production figures are still very small, mainly due to episodes of massive mortalities that end up with all production in a few days. The aim of this manuscript is to describe and develop important points of biology and culture of this species, in order to optimize their intensive production in hatchery. To do this, three basic aspects will be studied: embryology and larval development; larval feeding and the search for optimal diets during their culture; and finally, the microbiota associated with gonadal development during broodstock conditioning.

