



### **VIVALDI - Preventing and mitigating farmed bivalve diseases**

The overarching goal of VIVALDI is to increase the sustainability and competitiveness of the European shellfish industry by improving the understanding of bivalve diseases and by developing innovative solutions and tools for the prevention, control and mitigation of the major pathogens affecting the main European farmed shellfish species: Pacific oyster (*Crassostrea gigas*), mussels (*Mytilus edulis* and *M. galloprovincialis*), European flat oyster (*Ostrea edulis*), clams (*Venerupis philipinarum*) and scallops (*Pecten maximus*). The project addresses the most harmful pathogens affecting either one or more of these shellfish species: the virus OsHV-1, *Vibrio* species including *V. aestuarianus*, *V. splendidus*, *V. harveyi* and *V. tapetis*, as well as the parasite *Bonamia ostreae*. The project is committed to provide practical solutions based on the most advanced knowledge.

VIVALDI will dissect the disease mechanisms associated with pathogen virulence and pathogenesis and host immune responses, develop *in vivo* and *in vitro* models, and apply “omic” approaches that will help the development of diagnostic tools and drugs against pathogen targets, and breeding programmes in a collaborative effort with industrial partners. The proposal will include a global shellfish health approach, recognising that cultured bivalves are often exposed to several pathogens simultaneously, and that disease outbreaks can be due to the combined effect of two or more pathogens. The proposal will also investigate advantages and risks of the used of disease-resistant selected animals in order to improve consumer confidence and safety.

VIVALDI will be both multi- and trans-disciplinary. In order to cover both basic and applied levels from molecules to farm, the proposal will integrate partners with a broad range of complementary expertises in pathology and animal health, epidemiology, immunology, molecular biology, genetics, genomics and food safety.

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**Find out more:** <http://www.vivaldi-project.eu/>