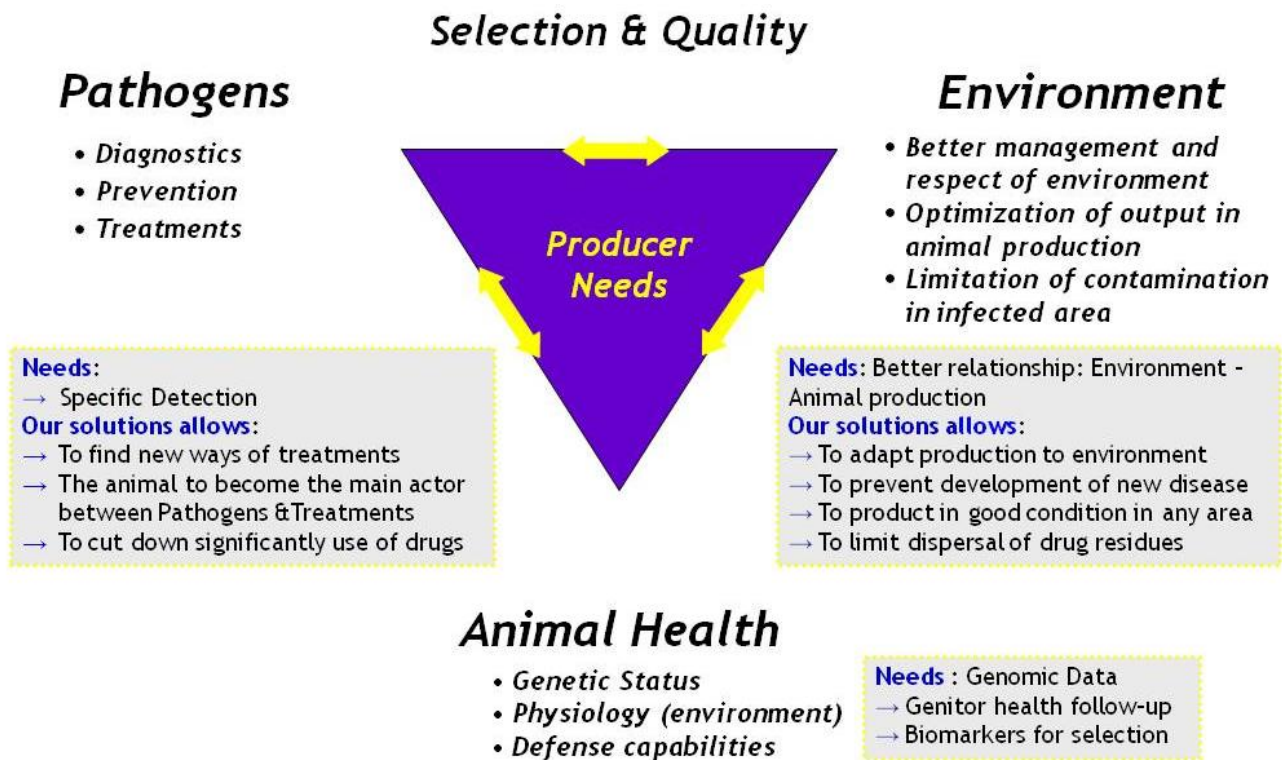


## Safety Follow-Up in Aquaculture

To develop alternative methodologies to follow-up safety and quality in farming and hatcheries

To follow-up specific markers for measuring the resistance to main diseases and for improving animal healthcare management



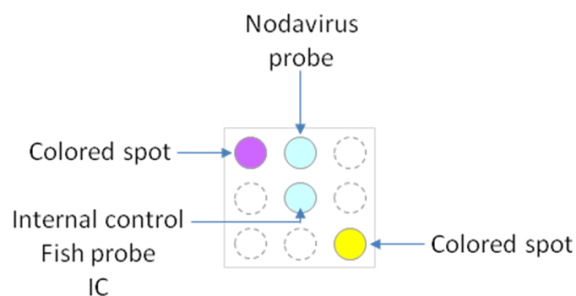
## Case study: Detection of virus in aquaculture species of interest

**Goal:** Nodavirus has been reported to cause high mortalities in more than 20 marine fish species worldwide. The present work report the use of a Mini-array, a proprietary DIAG4ZOO's tool, for detecting the virus in brains, ovarian biopsies and fins from *Dicentrarchus labrax*, *Sciaenops ocellatus*, *Rachycentron Canadum* and *Platax orbicularis* in different fisheries in tropical and Mediterranean seas.

**Mini-array:** The Mini-array detection kit was developed for multiple and ultra-sensitive pathogen diagnosis.

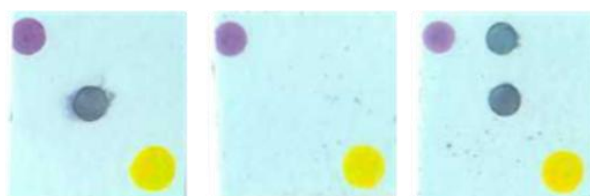
The Mini-array technology is based on detection combining an amplification of target nucleic acids by PCR and a specific hybridization through an antibody associated to an enzyme, which produces a blue mark on the nylon membrane. This detection system allows discarding gel electrophoresis apparatus and increases detection sensibility.

Nodavirus detection limit of the assay is  $\sim 20$  viral copies. $\mu\text{l}^{-1}$  cDNA.



The interpretation of the results visualized on the membrane is simple; it can be done without any material at the naked eye. An internal control is added and allows checking the validity of the experience. Colored spots give the right orientation of the membrane.

This diagnosis tool is based on the combination of a specific Polymerase Chain Reaction (PCR) and hybridization. This technology is an easy to use method dedicated to be disseminated where well-equipped laboratories and well-trained technicians are not available.



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## DIAG4ZOO References

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