

# Stakeholders' workshop

*Acting together to better prevent and  
mitigate farmed shellfish diseases*

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## Conclusive address

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## Key challenges

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Context of global change & world scale trade

Regulatory framework : One health

Early identify and control emerging diseases

Taking into account stakeholders ' perception

Work alltogether to design biosecurity plan



# Improve detection/identification of pathogens



## Diversity of known pathogens

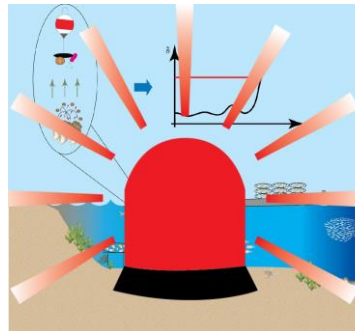


OsHV-1  
*V. aestuarianus*  
*Marteilia refringens*  
 ...

## Compartment/Reservoirs

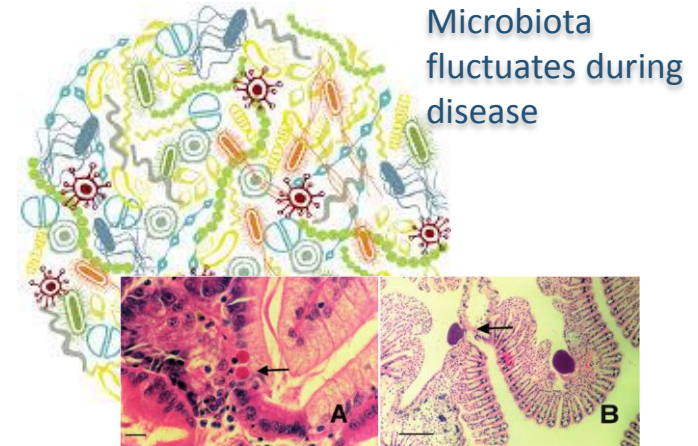
Pathogens can be found in sediment, water, plancton and other species...

## Early warning tools



Passive and biosensors allow successful detection of OsHV-1

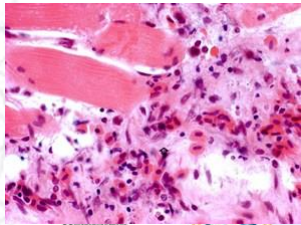
## Microbiota and pathogen characterization



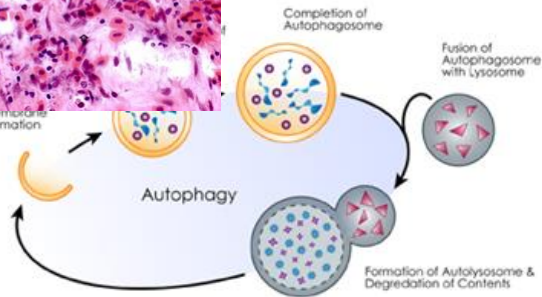
RLO possible threat for scallops

# Promote resistant shellfish

## Evaluate pathogen virulence

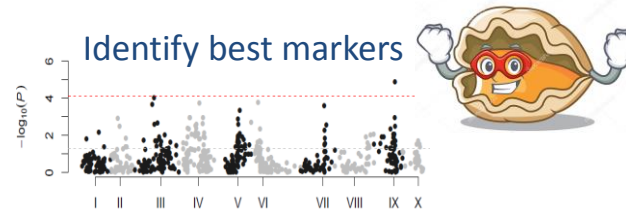


Ex: *Vibrio* pathogenesis



Ex: autophagy

## Measure defense mechanisms



## Identify markers associated with better survival

## Stimulate immunity



Exposing oysters to virus like particles protect against OsHV-1

## Optimization of selection programme

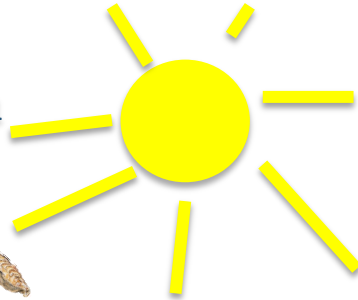


Impact of selection



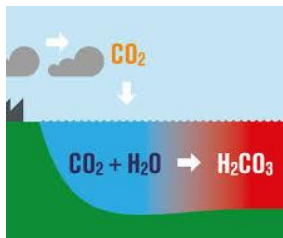
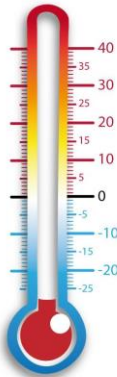
# Decrease risk of pathogen emergence and spread

UV-B radiation  
decreases OsHV-1  
load



Factors acting on  
transmission and mortality

Temperature  
impacts mortality  
associated with  
OsHV-1



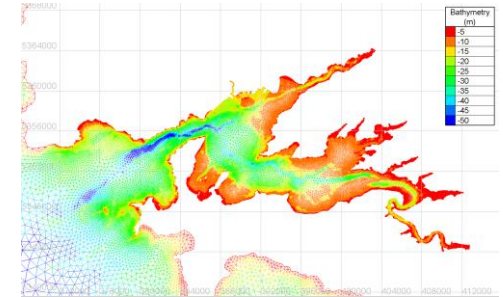
What about  
acidification?



Species diversity  
decreases mortality

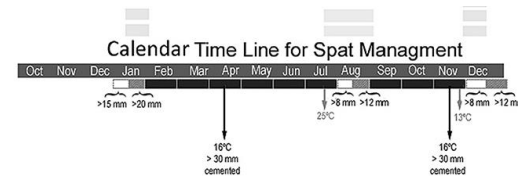
Disease transmission  
modelling

Allows predicting  
pathogen spread



Inactivate pathogens

Husbandry practices



Calendar allowing  
decreasing mortality



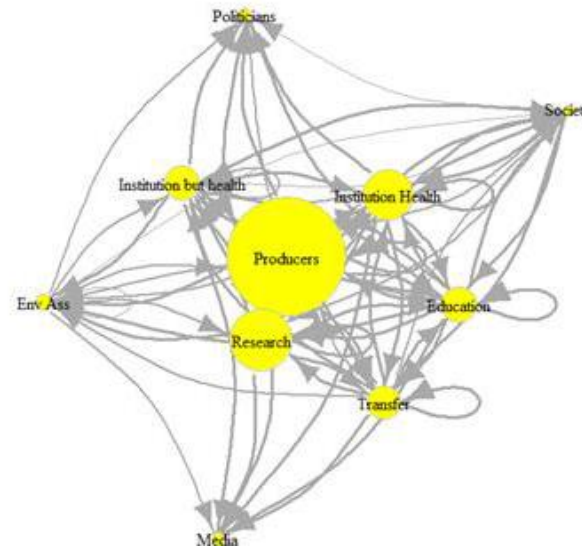
HOD system successfully  
inactivate OsHV-1 and  
Vibrio

# Sharing and disseminating results

## Stakeholders mapping



List of  
stakeholder  
categories



Stakeholders mapping  
and analysis



Risk perception



Interviews to evaluate risk  
perception regarding  
shellfish diseases



## Perspectives

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VIVALDI will end in March 2020

Next general objectives :

- Recommandations regarding disease management measures
- Manual of good practices
- Prepare the future of VIVALDI

End of 2019: a final meeting open to stakeholders in Brest

Build an international network on shellfish diseases





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