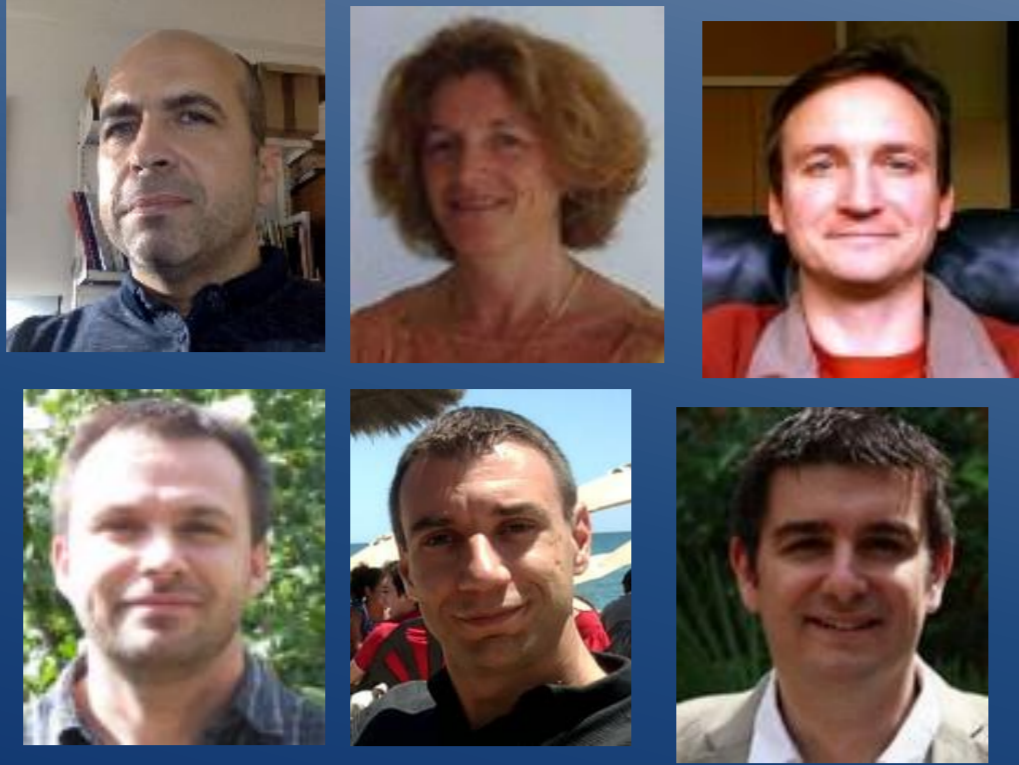
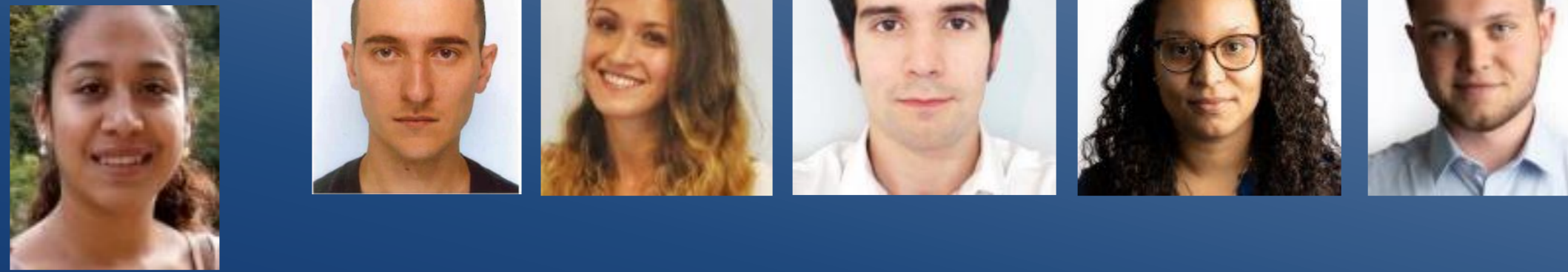


Molecular mechanisms of Adaptation and Plasticity

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 Viviane Boulo (IFREMER)
 David Duval (UPVD)
 Richard Galinier (CNRS)
 Christoph Grunau (UPVD)
 Emmanuel Vignal (UM)



The team 2MAP is composed of researchers having complementary expertise with a track record showing their ability of combining their technical and theoretical backgrounds to answer complex and integrative scientific questions.



Post-doc : Nélia Luviano

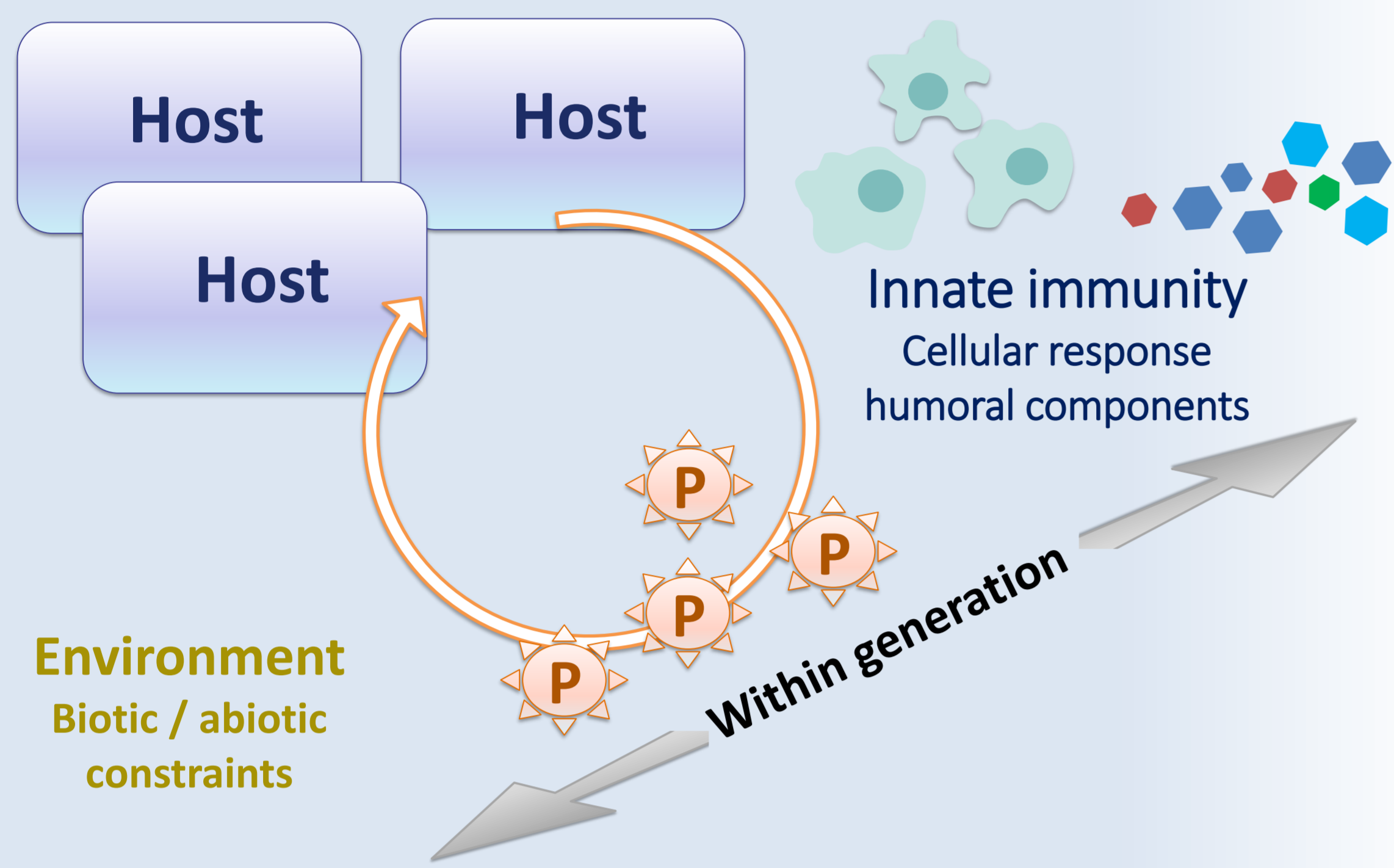
PhD students : Rémi Pichon, Carolane Giraud, Pierre Poteaux, Elodie Simphor, Sébastien de la Forest, Divonne



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Scientific goals and questions

Objectives : Studying the molecular support of host adaptation to complex communities of potential pathogens or micro-organisms under biotic and abiotic environmental constraints.



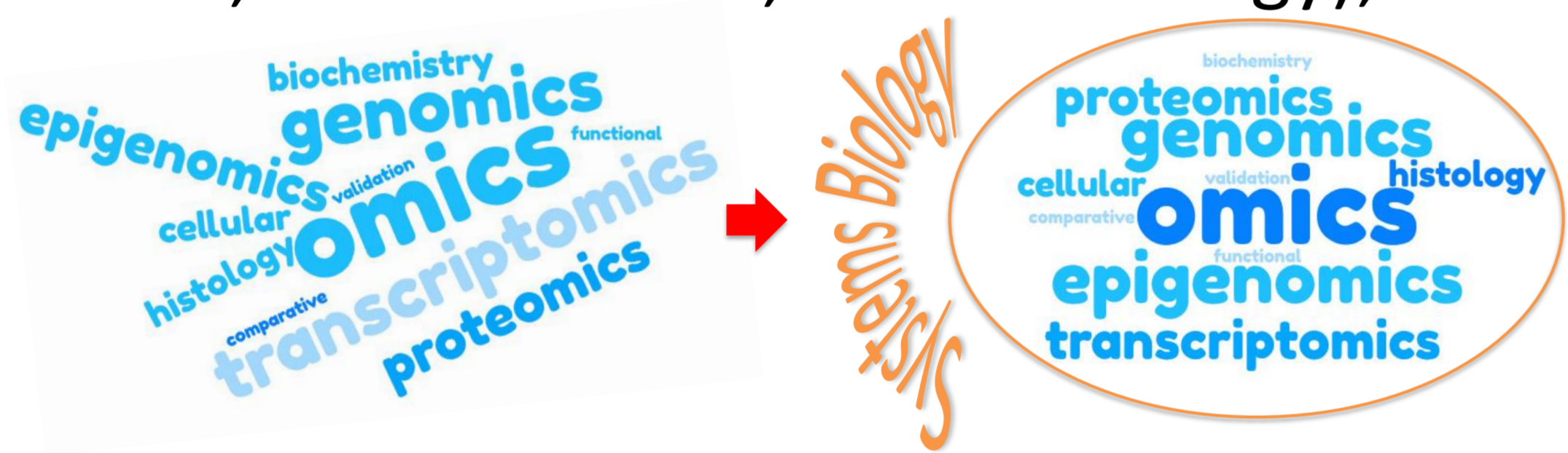
• Cellular and molecular characterization of host / symbiont / pathogen interactions.

• Adaptation and plasticity of host immune system toward biotic and abiotic constraints.

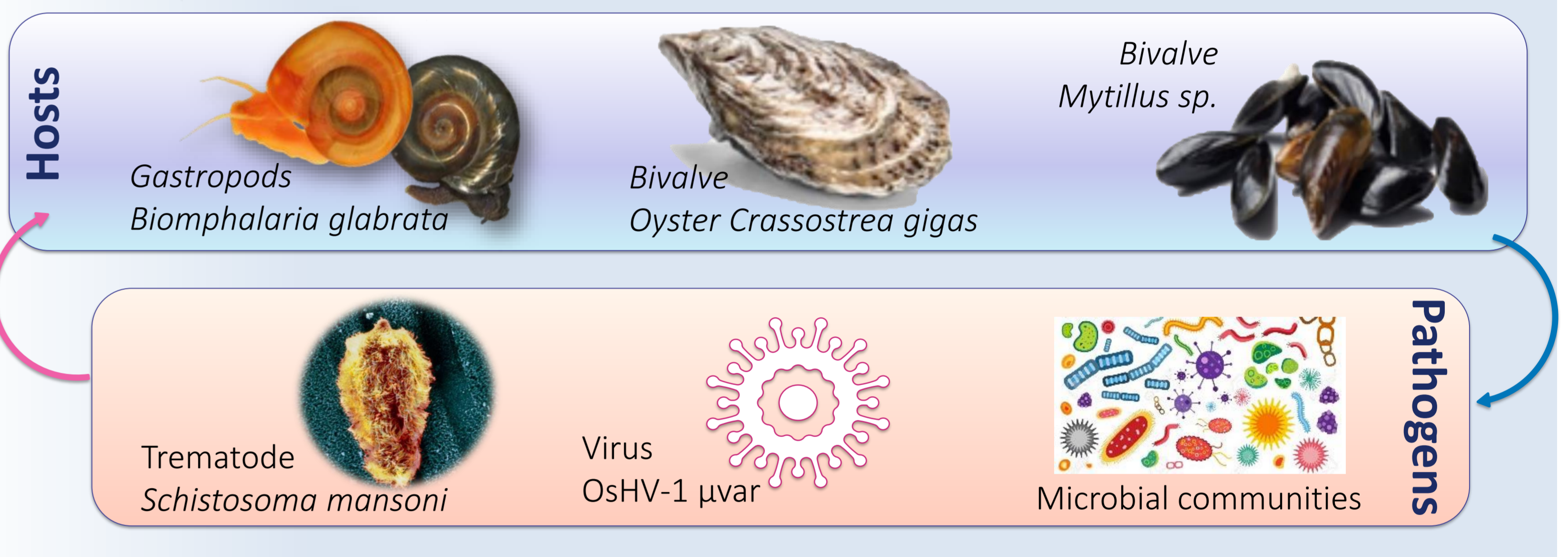
• Experimental simplified animal systems with contrasting phenotypes.

A variety of biological models

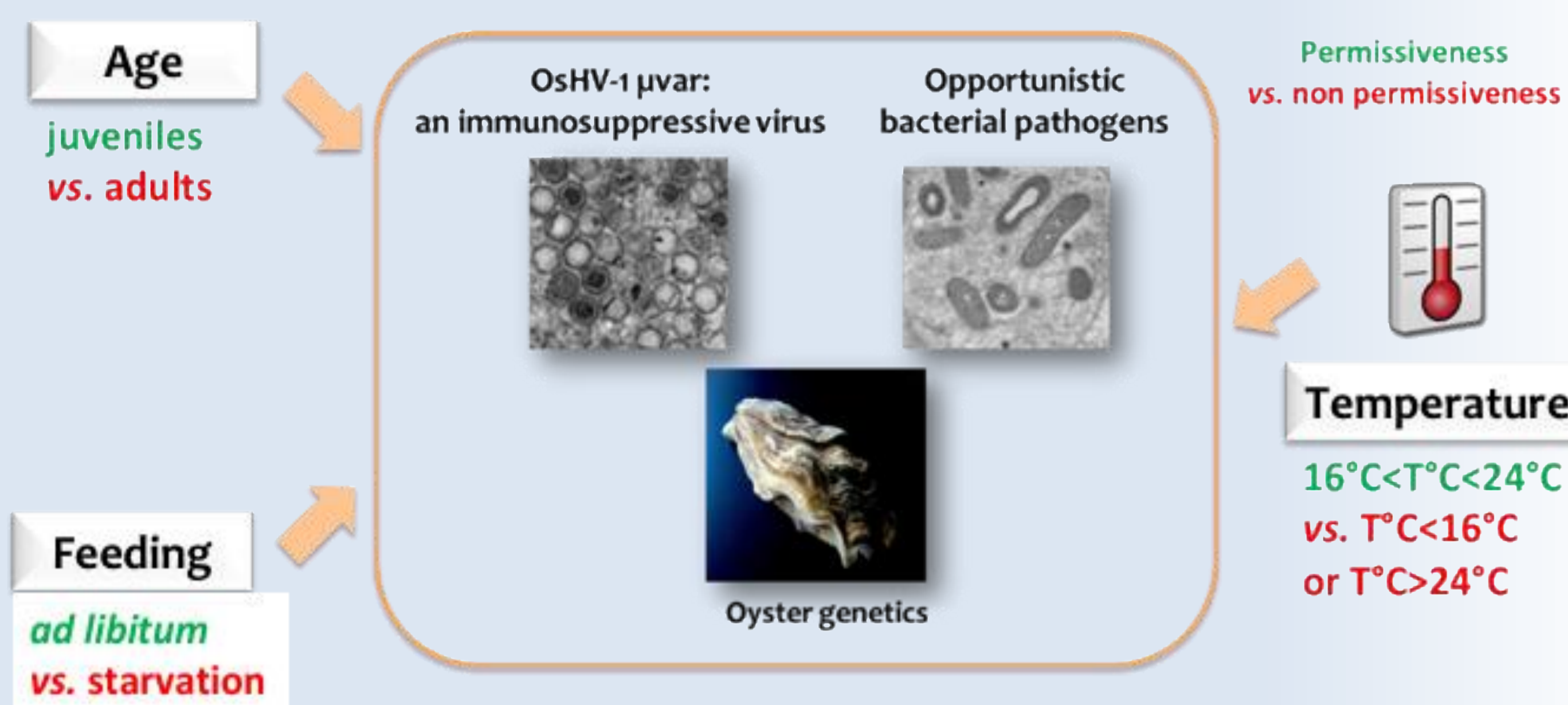
Investigating the complex etiology of invertebrate diseases using state-of-the-art comparative “omics” technologies (genomics, transcriptomics, epigenomics, proteomics, metabolomics, cellular biology);



Experimental models of fundamental, economical or human/animal health interests



The Pacific Oyster Mortality Syndrome (POMS): a polymicrobial and multifactorial disease



→ Identification of candidate genes of the permissiveness

Characterizing the mechanisms by which these factors influence the disease
 Metagenomics, (Meta)transcriptomics, epigenetics
 Metabolomics

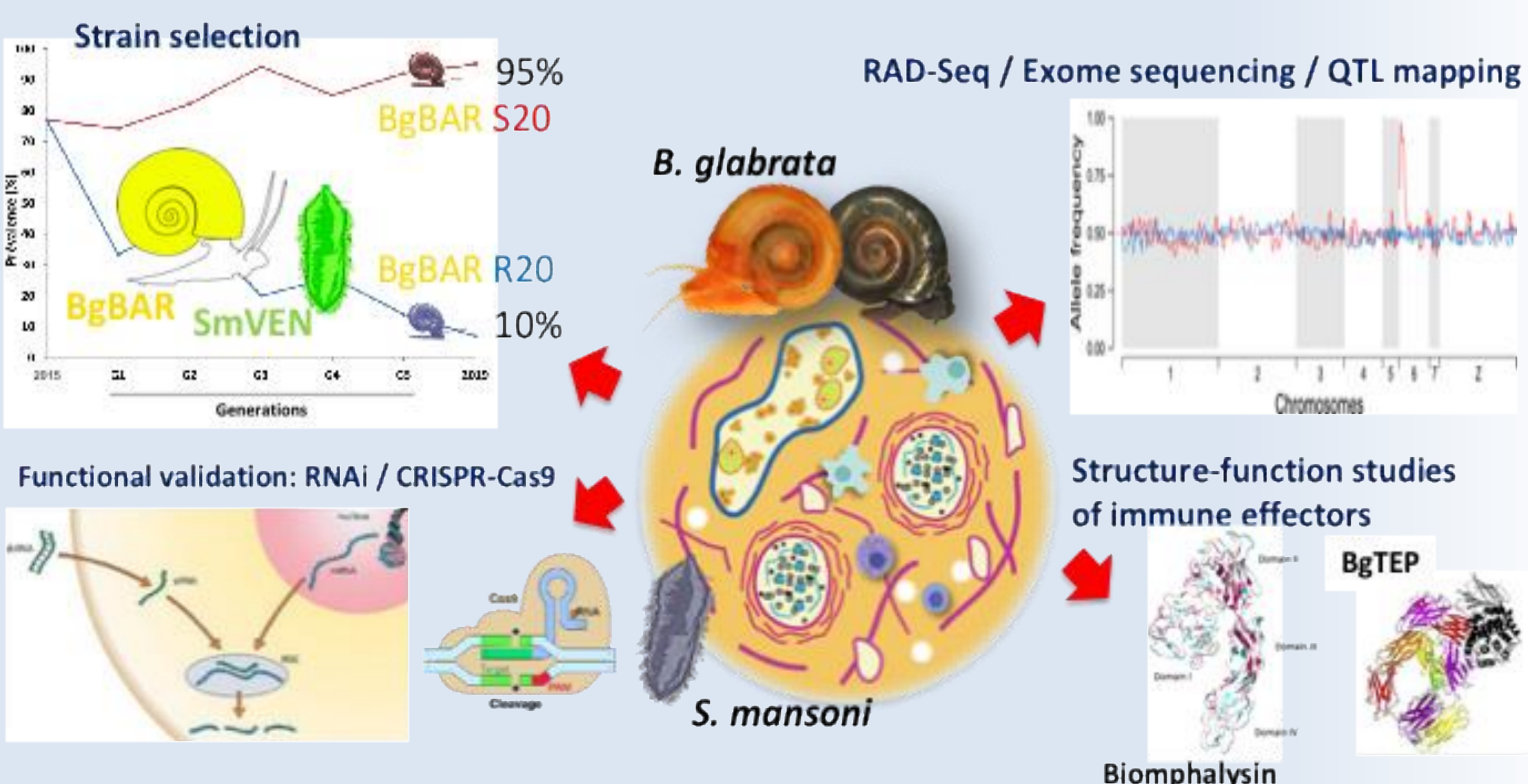
Validating the mechanisms in real farming conditions and the relative weight of these factors in the disease expression

Modeling the disease to predict the epidemiological risk



Immune system plasticity, host adaptation and environmental pressures

The molecular support of compatibility polymorphism



Cellular support of Innate Immune Memory

