

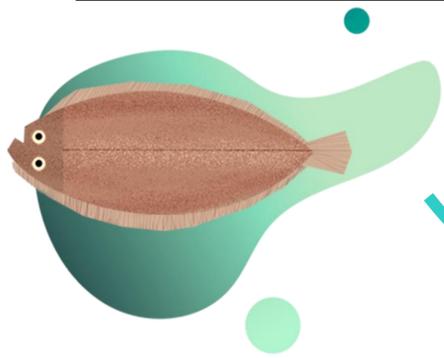


Integrative Genomic Approaches to Improve Disease Resistance in Senegalese Sole: Insights from the BETTERFLAT Project

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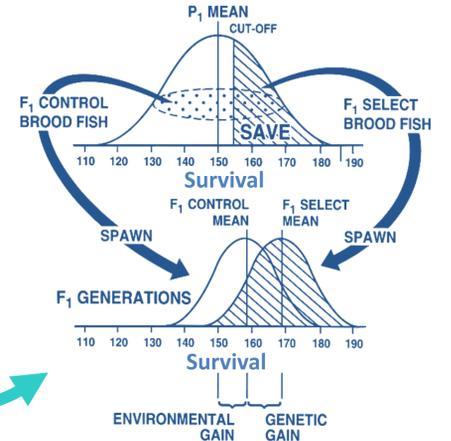
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Senegalese sole (*Solea senegalensis*) has become one of Europe's most promising marine species, valued for its **quality**, **market appeal**, and contribution to **production diversification**.

Selective breeding programs



BetterFLAT PROJECT

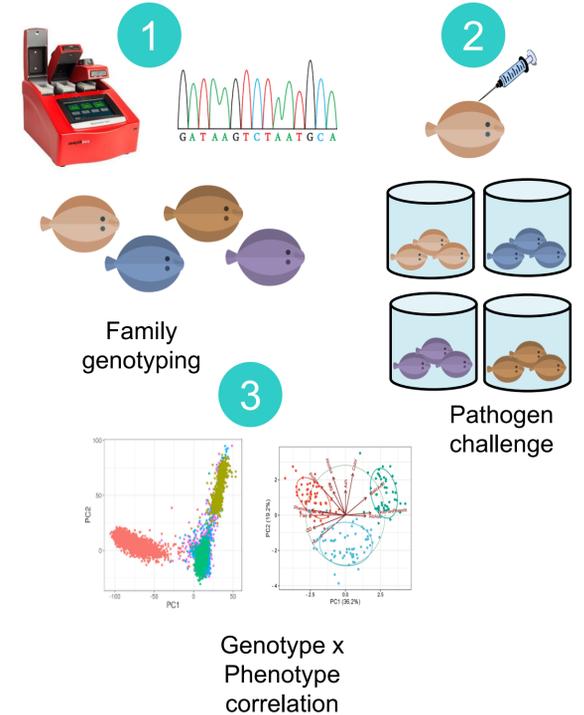
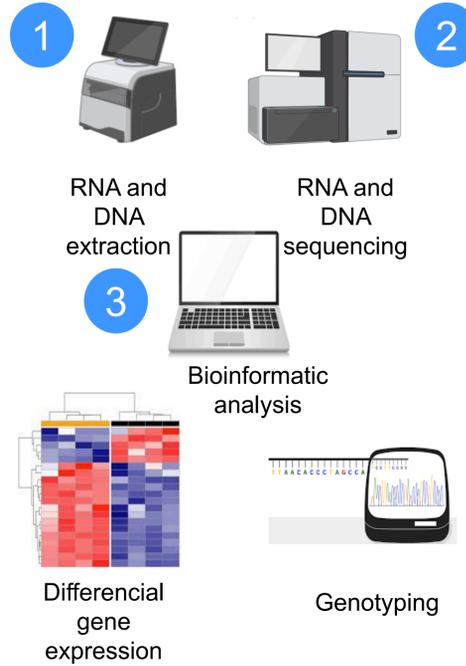
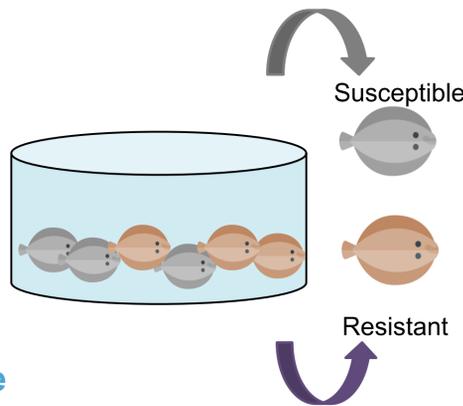
1. Sorting susceptible and resistant fish

2. Transcriptomic and genomic analysis

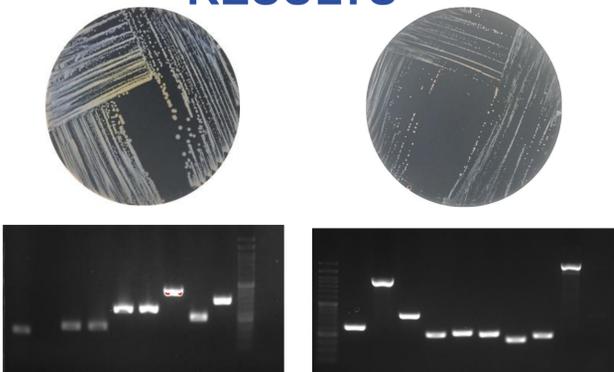
3. Validation of resistance biomarkers



Innovative tool to support selective breeding for more robust *Senegalese sole*



PRELIMINARY RESULTS

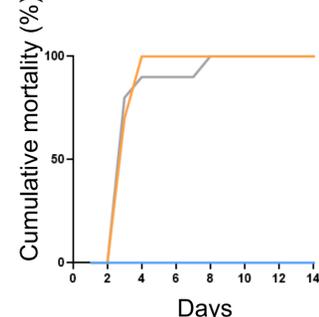


Virulence genes

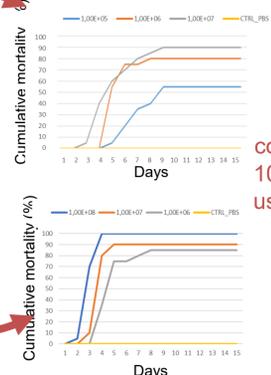
Analysis of virulence genes shows that both bacteria express virulence genes relevant for bacteria pathogenicity.

To be used in a bacterial challenge

Determination of the LD75



Bacteria A213 was selected



A bacterial concentration of 10^5 - 10^6 was used to get 75% mortality

FUTURE PERSPECTIVES

Bacterial challenge is going to be performed to sort resistant vs susceptible descendance using the concentration determined in the pre-challenge. RNA and DNA is going to be extracted from target tissues for RNA-Seq and DNA-Seq analysis.

