

MASTER RESEARCH PROJECT PROPOSAL

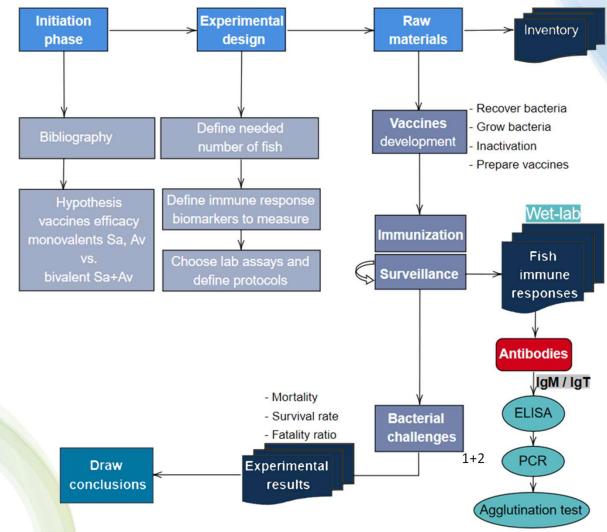
Systemic and mucosal immune responses of Nile tilapia to monovalent and bivalent vaccines against bacteria *Streptococcus agalactiae* and *Aeromonas veronii*.

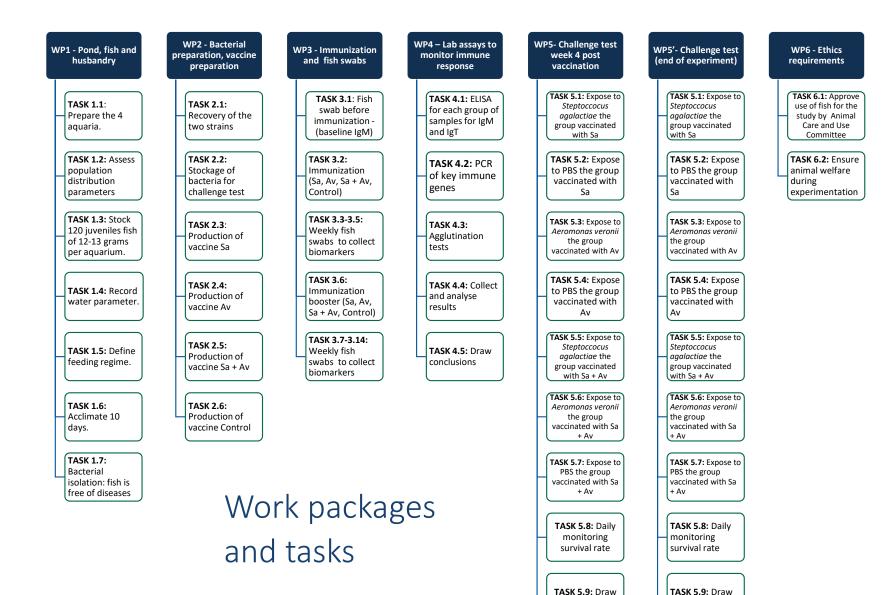


Quentin ANDRES
MSc. Aquaculture and Aquatic Resources Management @Asian Institute of Technology, Pathum Thani, Thailand September 2021

Conceptual framework

Quentin ANDRES, MSc. Aquaculture and Aquatic Resources Management, Asian Institute of Technology, Pathum Thani, September 21





Quentin ANDRES, MSc. Aquaculture and Aquatic Resources Management, Asian Institute of Technology, Pathum Thani, September 21

conclusions

conclusions

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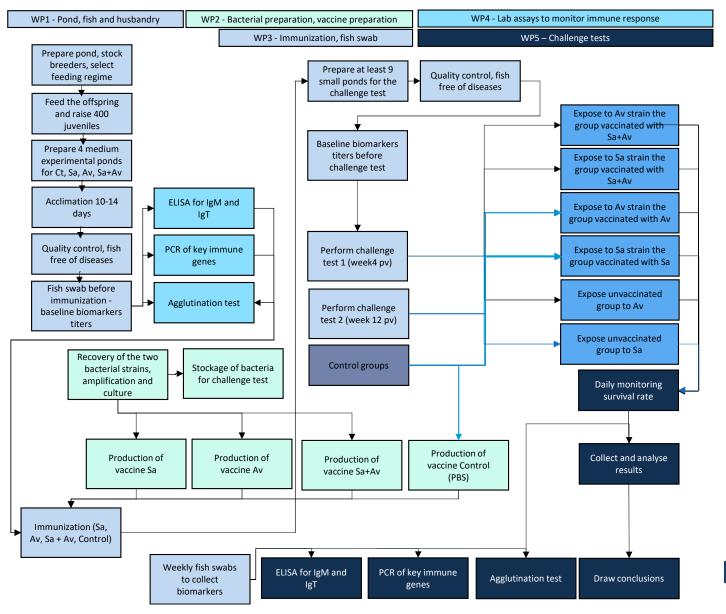
NOT

STARTED

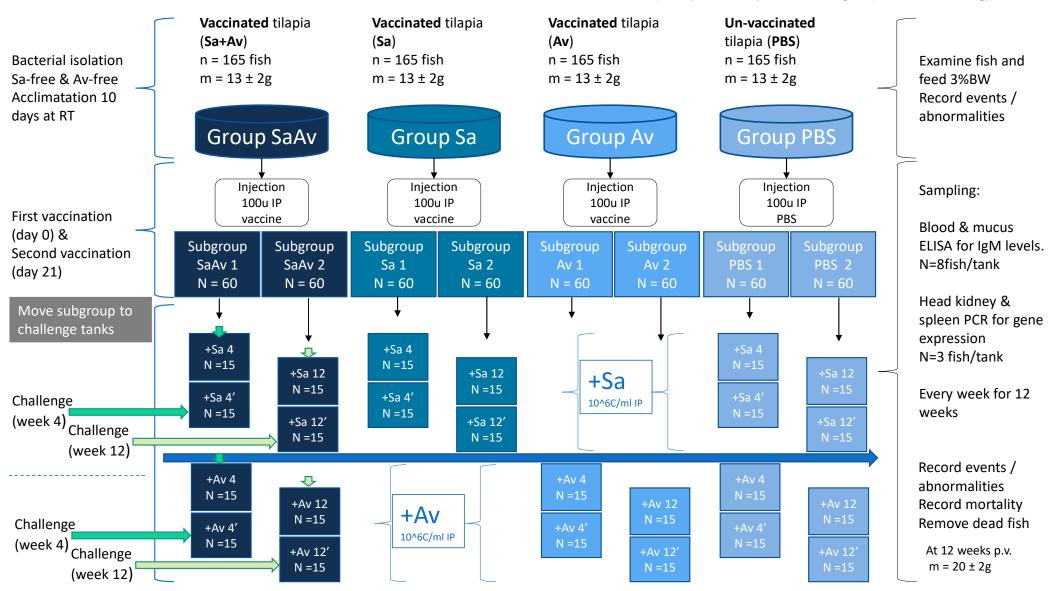
COMPLETED

AT RISK

Workflow and work packages



Experimental design ->



Quentin ANDRES, MSc. Aquaculture and Aquatic Resources Management, Asian Institute of Technology, Pathum Thani Project Planning Timeline Today Oct **August** September 2021 **Dates** 10 16 17 18 22 23 29 30 5 11 12 13 14 15 19 20 21 24 25 26 27 28 Project Day S W S S S S S Т F W S W M W Т W Project Week S T A R 3 Phase one Main Review Project Conception Scope and Goal Setting Work Bkdwn Structure Definition **Planning** Initiation Initiation Phase Two Prepare ponds and acclimate 7 days Recover the two bacterial strains 1 day Pond/fish Bacterial Culture bacteria recovery Bacterial Produce vaccine preparation Immunization 1 Fish swabs **Immunization** swabs 2 swabs 1 Phase Three Bacterial isolation Challenge tests Lab assays ELISA & PCR Bacteriology Draw results Conclusions

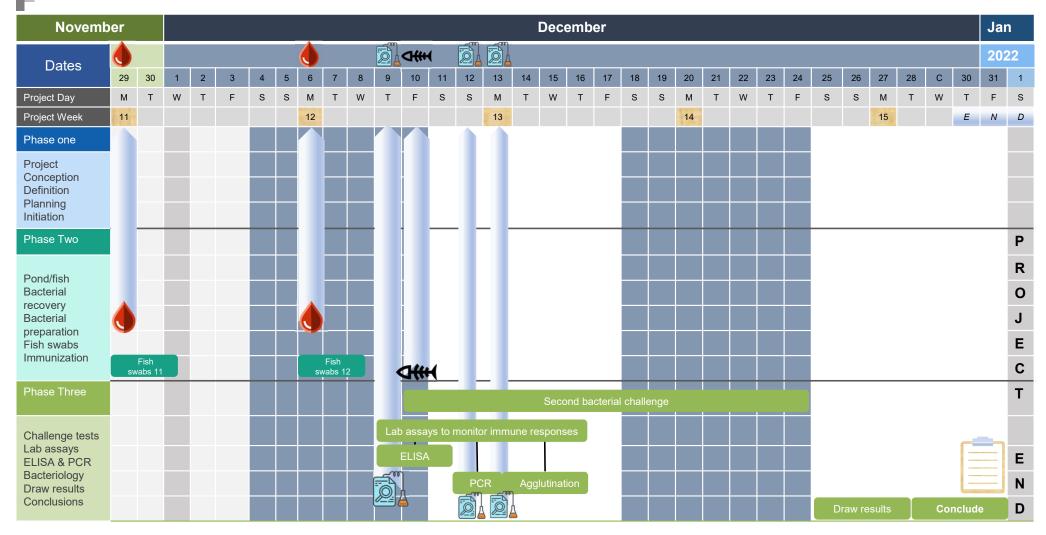
Project Planning Timeline

September			October															Nov															
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Project Planning Timeline

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Phase Three																																	
Challenge tests Lab assays ELISA & PCR Bacteriology Draw results Conclusions																																	

Project Planning Timeline



Thank you!