

MASTER RESEARCH PROJECT PROPOSAL

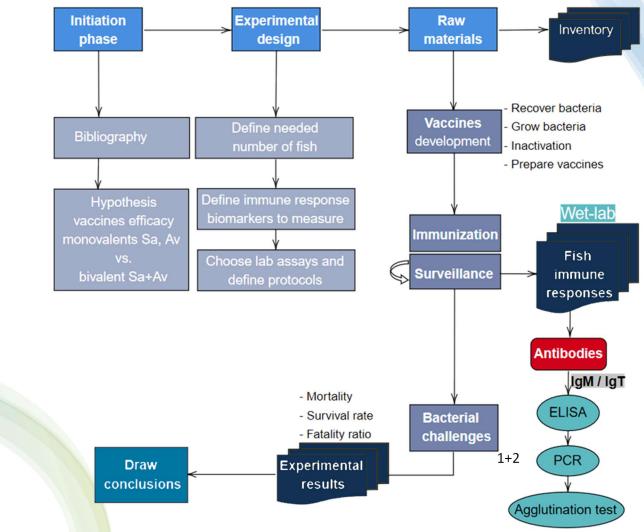
Systemic and mucosal immune responses of Nile tilapia to monovalent and bivalent vaccines against bacteria *Streptococcus agalactiae* and *Aeromonas veronii*.

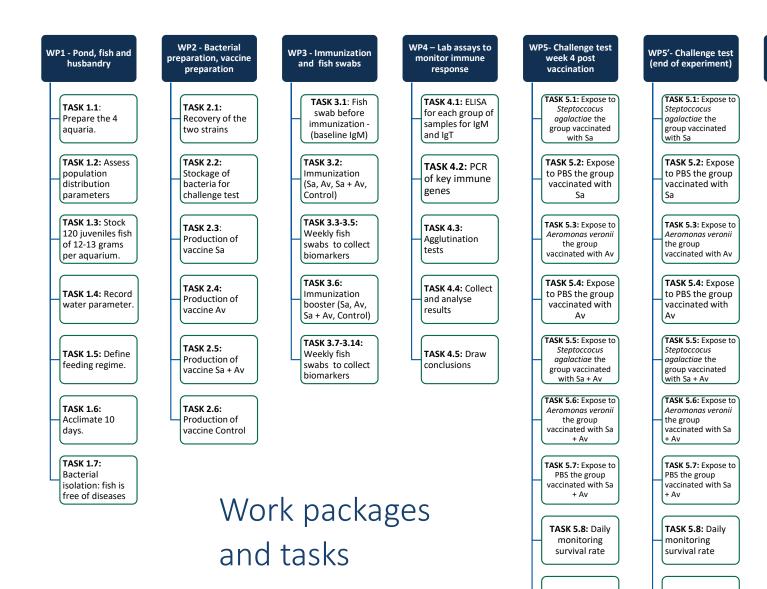


Quentin ANDRES
MSc. Aquaculture and Aquatic Resources Management @Asian Institute of Technology, Pathum Thani, Thailand September 2021

Conceptual framework

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





TASK 5.9: Draw

conclusions

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conclusions

WP6 - Ethics requirements STARTED

TASK 6.1: Approve

use of fish for the

study by Animal

Care and Use

Committee

TASK 6.2: Ensure

experimentation

animal welfare

during

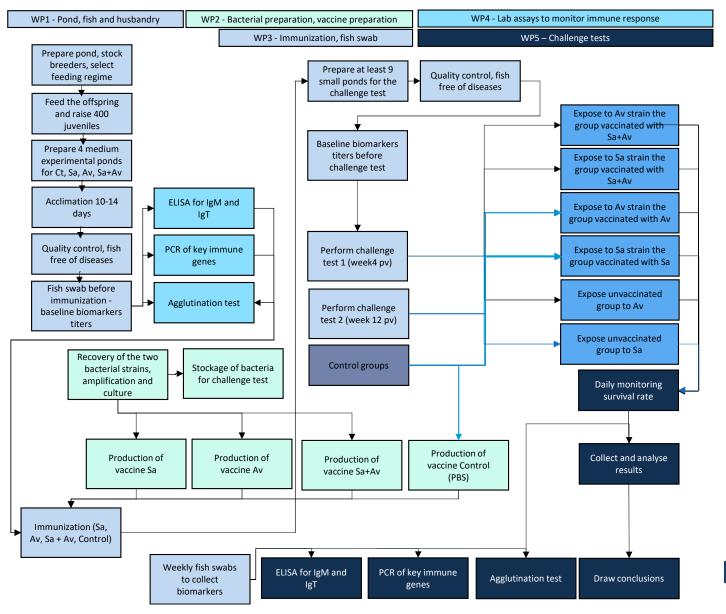
ON-GOING

COMPLETED

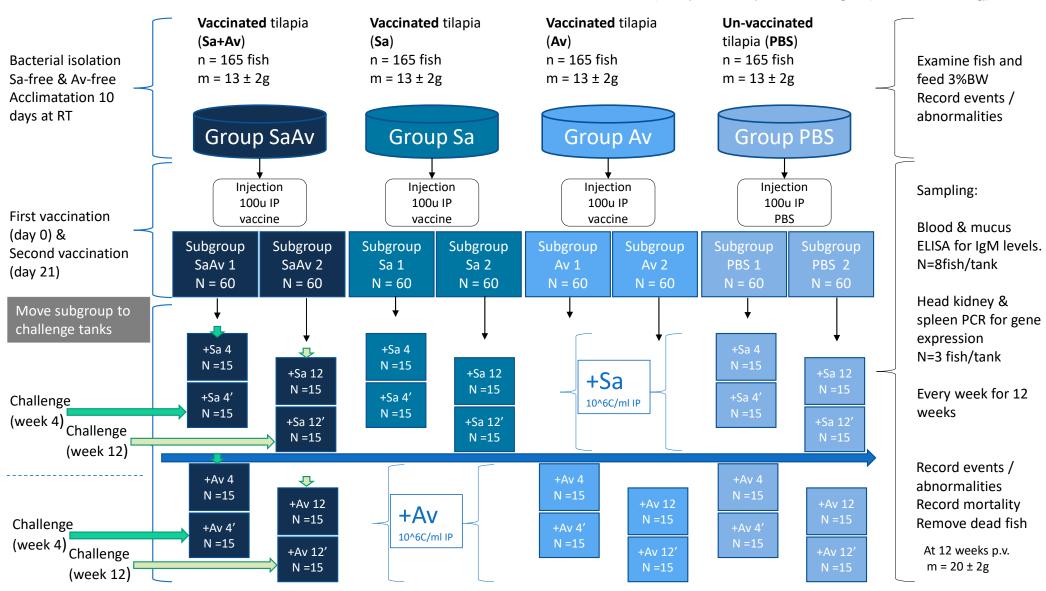
AT RISK

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

Workflow and work packages



Experimental design ->

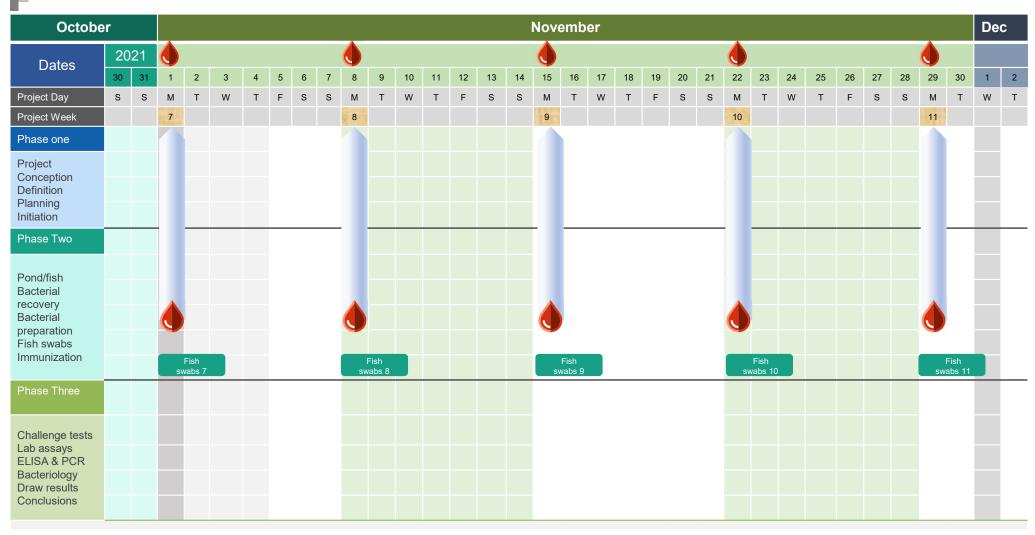


Quentin ANDRES, MSc. Aquaculture and Aquatic Resources Management, Asian Institute of Technology, Pathum Thani Project Planning Timeline Today Oct **August** September 2021 **Dates** 10 16 17 18 22 23 29 30 5 11 12 13 14 15 21 24 25 26 27 28 Project Day S W S S S S S Т F S W M W Т W Project Week S T 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 1 Phase Three Bacterial isolation Challenge tests Lab assays ELISA & PCR Bacteriology Draw results Conclusions

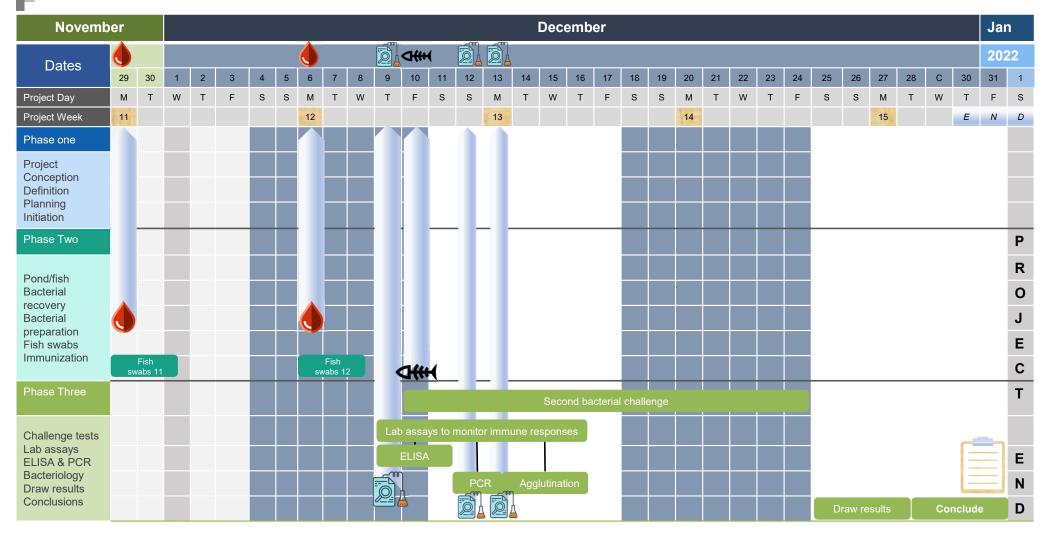
Project Planning Timeline

Septeml		October															No	Nov																
Dates	2021													♦ △ ₩ +																				
	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1
Project Day	W	Т	F	S	S	М	Т	W	Т	F	s	S	М	Т	W	Т	F	S	S	М	Т	W	Т	F	S	S	М	Т	W	Т	F	S	S	М
Project Week						3							4							5							6							7
Phase one																																		
Project Conception Definition Planning Initiation																																		
Phase Two																																		
Pond/fish Bacterial recovery Bacterial preparation Fish swabs Immunization							Fish swabs :	3					Boo	munizat ester of o	day 21						Fish wabs 5							Fish vabs 6						F
Phase Three																				•	4	+(
Challenge tests Lab assays ELISA & PCR Bacteriology Draw results Conclusions																										First t	pacter	ial chal	lenge					

Project Planning Timeline



Project Planning Timeline



Thank you!