In vitro inhibition of *B. hyodysenteriae* by *M. multacida*: a probiotic strategy for swine dysentery

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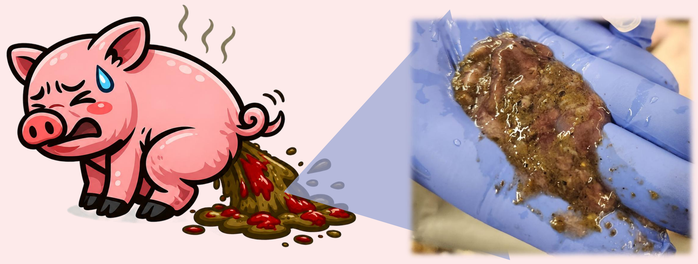
1 Problem:

Swine dysentery

B. Hyodysenteriae (BHYO)

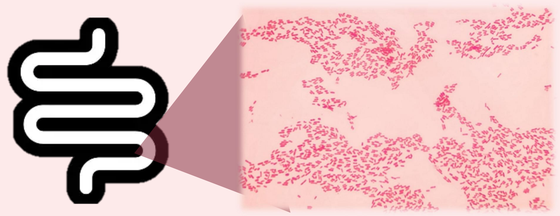


Bloody diarrhea = Economic losses

2 Solution:

Probiotic

M. Multacida (MM)



Gram-negative bacilli naturally found in the pig intestine

3 Growth patterns:

	BHYO	MM
Colonies	✗	✓
Hemolysis	Complete	Partial

4 Groups:

Monocultures (n = 9)
BHYO
Live MM (LMM)
Heat-killed MM (KMM)

Co-cultures (n = 9)
BHYO + LMM
BHYO + KMM

5 Co-culture in Brain Heart Infusion (BHI) broth:

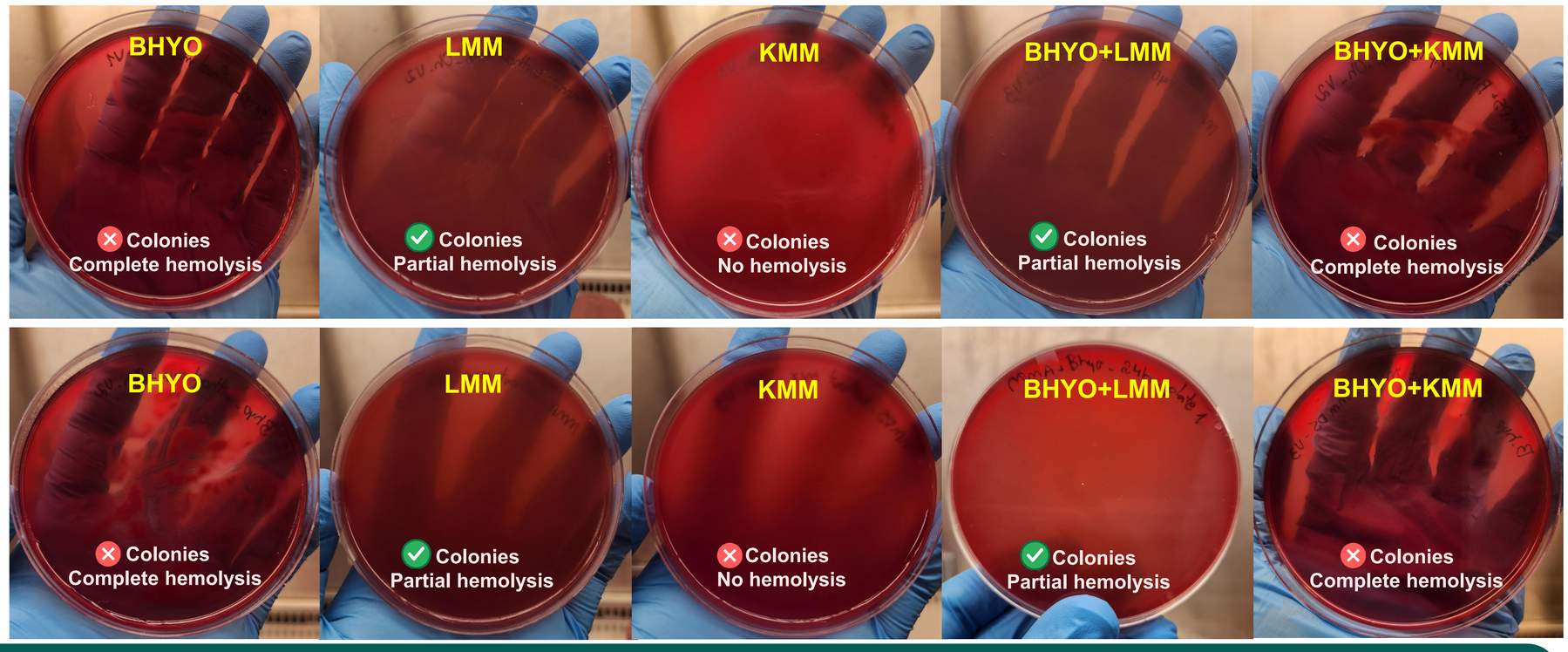
37°C under constant agitation

Anaerobic conditions

At 0 and 24 hours

Culture of each treatment was collected and plated on TSA plates supplemented with 5% sheep blood.

Evaluation of colony growth and hemolysis presence after 5 days



Live *Mitsuokella multacida* (LMM) inhibits *Brachyspira hyodysenteriae* growth in vitro.

Next step:
Validation *in vivo*.