

An assessment of the viral biosecurity risk of polychaetes as feed for prawn broodstock

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Sandworms
(polychaetes)
grown in
**Polychaete-Assisted
Sand Filters (PASF)**
described by Palmer (2010)

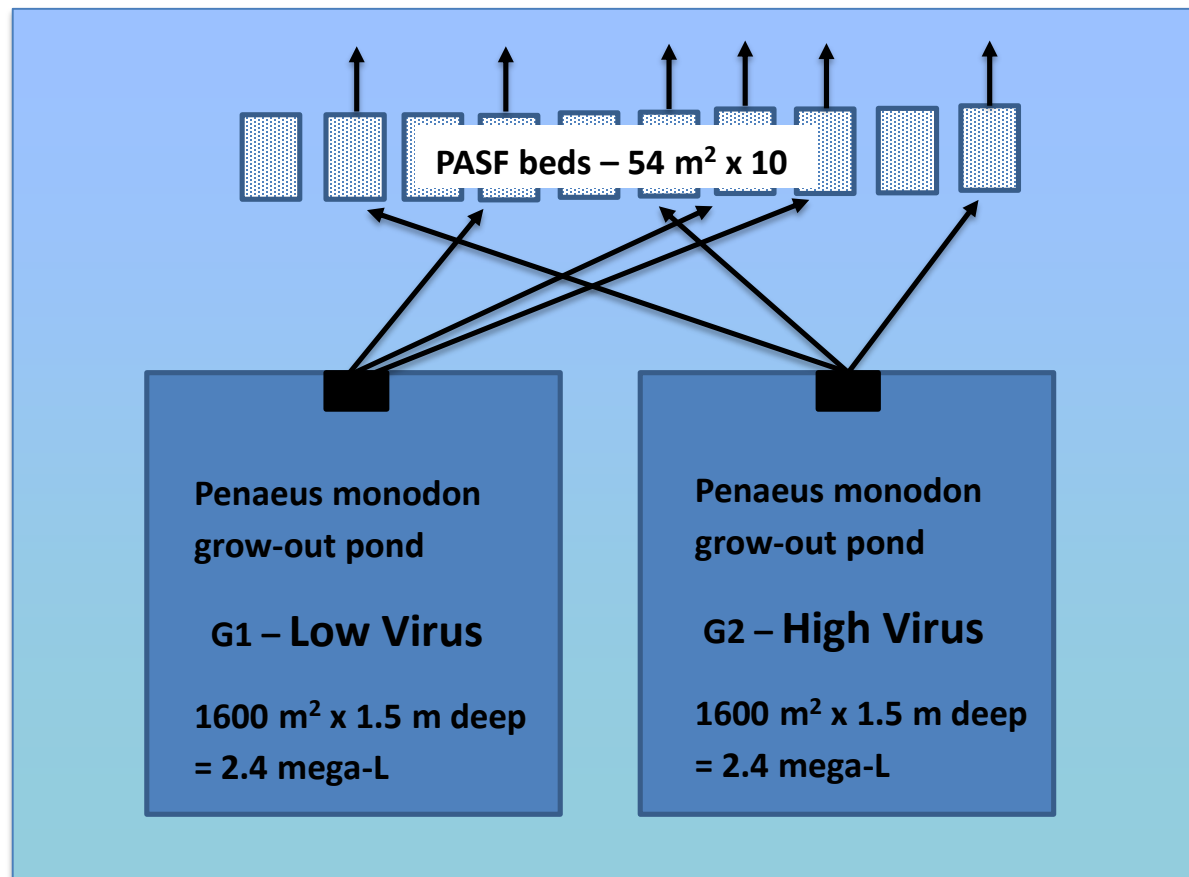




Perinereis helleri



Bribie Island Research Centre experimental PASF system



<https://www.daf.qld.gov.au/business-priorities/fisheries/research/research-projects/commercial-application-of-polychaete-sand-filters>

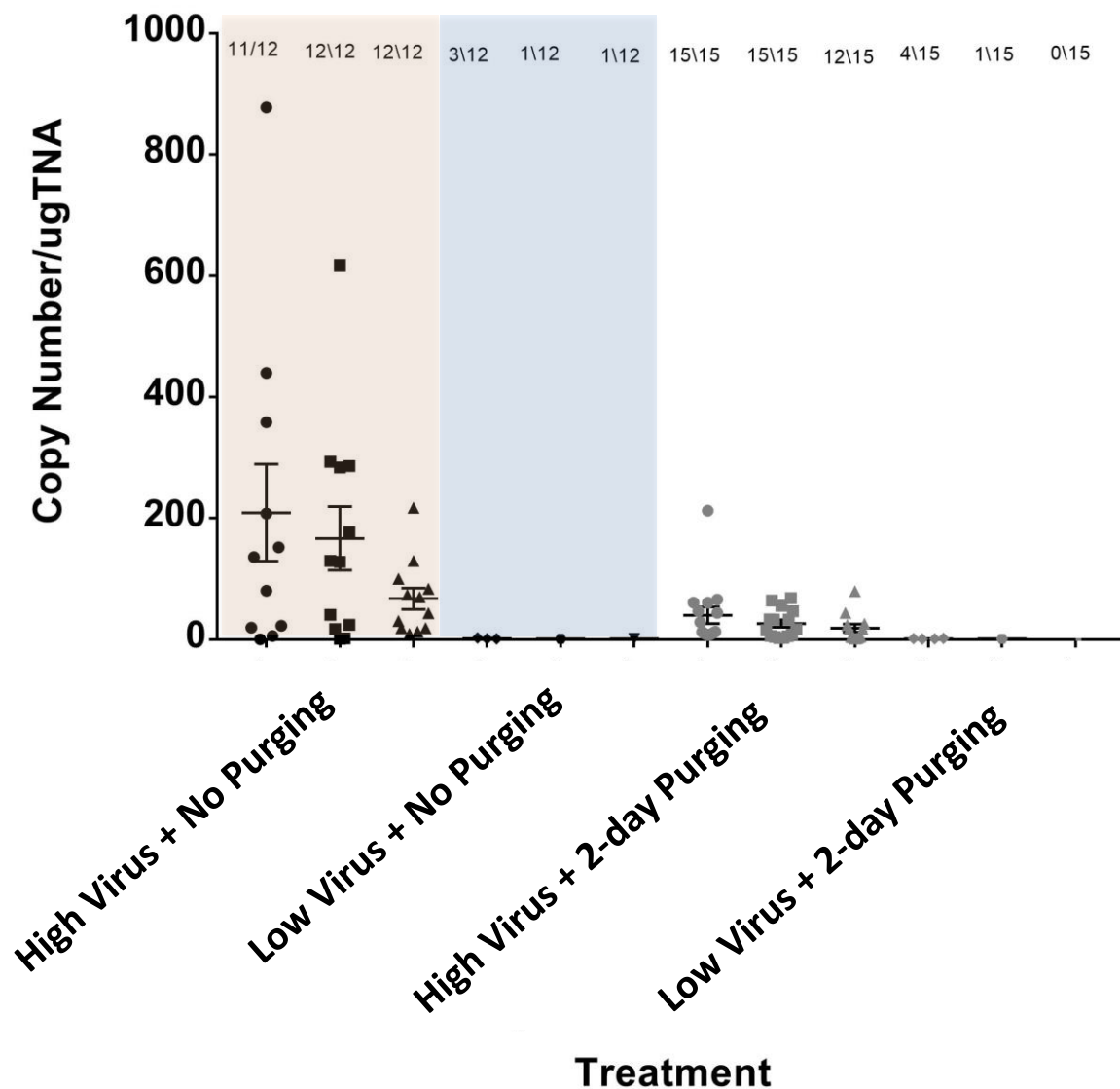
Research Questions

1. Do the levels of prawn virus (IHHNV) present in the culture environment affect the levels of virus in worms harvested from PASF?
2. Can IHHNV be cleared from harvested worms by purging them in clean seawater for 2 days?
3. Can IHHNV be reduced in PASF with operations before harvest using clean seawater as the water supply to PASF after growing in a wastewater treatment environment?

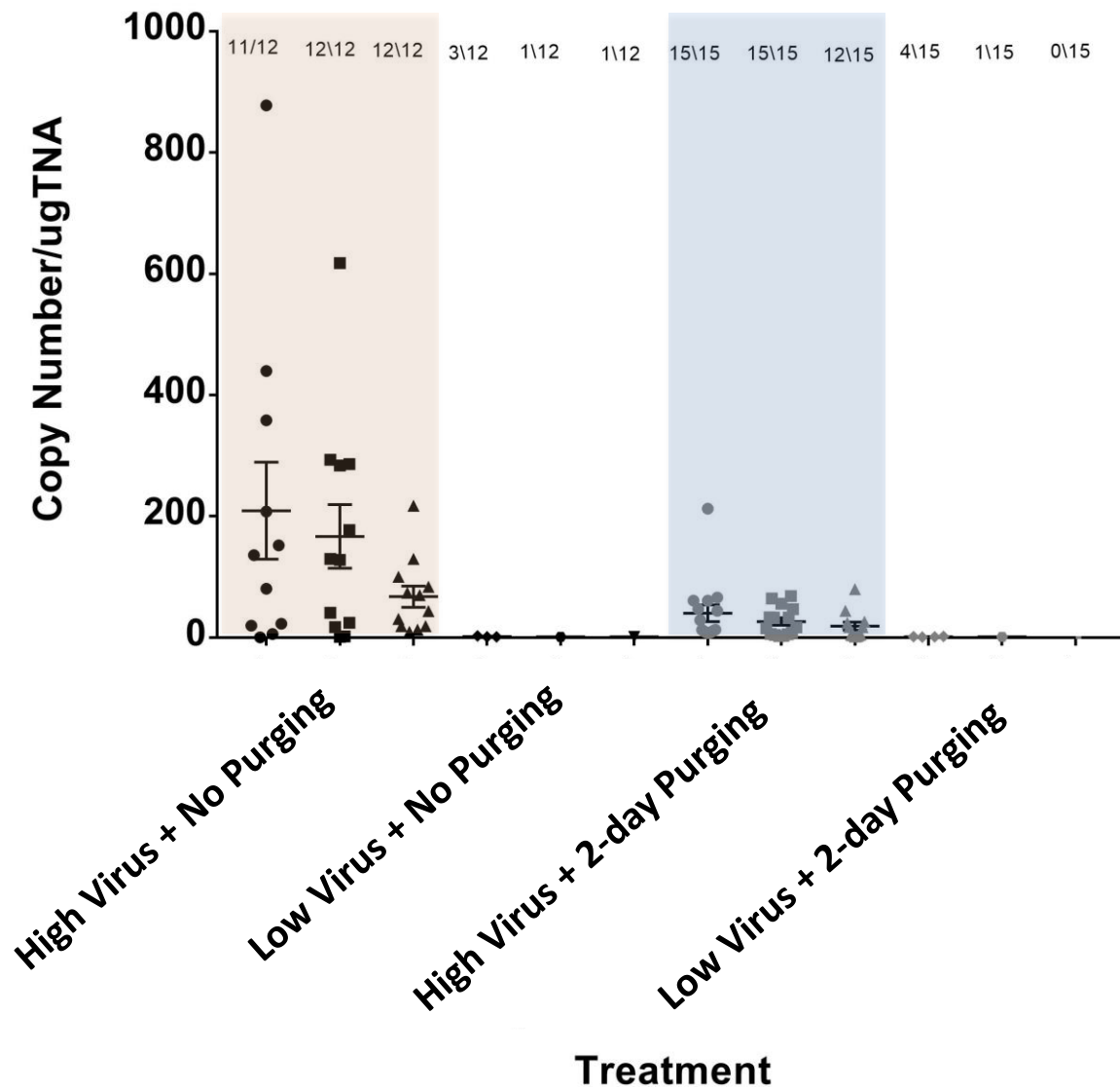
Methods

1. Grow worms in PASF under standardised replicated conditions.
2. Sample / harvest the worms and purge them in clean seawater.
3. Preserve the worms and test them with qPCR.

Prevalence and mean (\pm se) loading of IHNV in *Perinereis helleri* grown in wastewater from prawn ponds with low or high IHNV levels, and with or without 2-day purging in clean seawater.



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Prevalence and mean (\pm se) loading of IHNV in *Perinereis helleri* grown in wastewater from prawn ponds with high IHNV levels, and operated for 6 weeks with clean seawater before harvest.

