

Honours/Minor Project research project opportunity



Development extender solution for short-term storage of Purple Grouper and Giant Grouper milt



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Other Supervisors: Associate Professor Leo Nankervis, Associate Professor Donna Rudd and others see <https://www.jcu.edu.au/arcsta/teams>

MSc Applicants can undertake this project as part of Special Topic or Master Thesis subjects at JCU. Honours Applicants should be familiar with the [Honours Student Research Requirements](#)

Project summary

Giant Grouper (*Epinephelus lanceolatus*) and Purple Grouper (*Epinephelus cyanopodus*) are both highly-valuable emerging aquaculture species, and these industries have a strong desire to implement selective breeding programs. To do so, breeding companies need greater control over breeding processes to ensure consistent and reliable production. Cryopreservation offers the potential to facilitate 1:1 crosses at different time intervals and enables the production of larval batches without relying on spawning broodstock. This project aims to undertake the first step towards this objective, by developing a species-specific solution for dilution and handling of grouper milt, and to extend the viability of grouper milt during short-term storage. This project will characterise the biochemical characteristics of each species milt and utilise advanced sperm analysis and cellular assays to optimise components of the diluent solution.

This project is embedded within both The ARC Industrial Transformation Research Hub for Supercharging Tropical Aquaculture through Genetic Solutions

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