



Understanding final oocyte maturation and ovulation in barramundi – a pathway to enhanced animal breeding



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(<https://scholar.google.com.au/citations?user=m9LLU8AAAAAJ&hl=en>)

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PhD (International/Domestic). PhD scholarship is available as part of project. Applicants should be familiar with the [Higher Degree by Research Requirements](#).

Project summary

Reproductive control is a fundamental requirement for the successful commercial production of an aquaculture species and is necessary to reduce operational risk of broodstock facilities. Furthermore, methods to directly control the pairing of superior performing individuals are required for the efficient and effective operation of any genetic improvement program. This project will explore the environmental, physiological and genetic processes underlying final oocyte maturation and ovulation of precocious female barramundi to improve reliability and predictability of access to eggs of elite lines. By doing so, the techniques for obtaining the commercial quantities of fully mature oocytes needed in artificial fertilisation procedures will be developed. The outcomes of this project will allow the rapid integration of precocious female barramundi into ongoing industry breeding programs, helping to increase the rate of genetic gain achieved.

This PhD project is embedded within both The ARC Industrial Transformation Research Hub for Supercharging Tropical Aquaculture through Genetic Solutions, and the ARC Early Career Industry Fellowship - Novel reproductive approaches to de-risk and transform barramundi breeding.

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