



National Research
FLAGSHIPS
Food Futures



Australian Seafood Cooperative Research Centre (CRC) Postgraduate Scholarship

2010

“Molecular assessment of spawning cues in temperate abalone”

In collaboration with Flinders University, CSIRO and the Australian Abalone Growers' Association, the Australian Seafood CRC invite applications for a PhD top-up scholarship to complete research on Molecular assessment of spawning cues in temperate abalone.

This scholarship will provide an indexed, tax-free, PhD top-up of \$6,242 pa for up to three years subject to satisfactory progress. If the successful applicant is an Australian or New Zealand citizen or Australian Permanent Resident they will receive a Research Training Scheme place, which provides an exemption from tuition fees. The scholarship has an additional operating budget of \$10 000 per year for 3 years and \$300 towards thesis binding in the 3rd year. A further \$1 000 per year is also available for defined mentor activities to be approved by the CRC. As a Seafood CRC student the successful candidate will be fully engaged in the CRC PhD program which will support the development of the student as a scientist in a number of innovative ways through annual workshops and mentoring programs (see www.seafoodcrc.com).

Project Description

The spawning of cultured abalone for Australia's expanding abalone industry is a 'numbers game' with hatcheries required to mature and induce more individuals than needed as gamete release is not under full control. While this is acceptable for commercial production the advent of selective breeding programs (SBPs) emerging across the industry means that increased spawning efficiency is crucial to provide for the spawning of highly valuable selected individuals on cue ensuring that the greatest genetic gains in production traits are realised. Greater control over spawning is key to ensuring maximum efficiency in the implementation of SBPs and also in producing the highly marketable interspecies hybrid between *Haliotis rubra* and *H. laevigata*.

The aim of this project is to unravel the signalling cues that regulate spawning and/or maturation processes in abalone. This will allow on farm interventional strategies to be developed. Peptide hormones are a complex set of messenger molecules controlling a wide diversity of regulatory functions including a multitude of physiological processes and behaviours within an organism.

The student will be enrolled at Flinders University, Adelaide, but the position will be based at CSIRO's laboratories in the Queensland Bioscience Precinct (Brisbane). The project will require some

travel to Kangaroo Island for the collection of samples and interaction with the supporting industry. The student will be co-supervised at Flinders by Dr James Harris and Dr Ian Menz, and Dr Mathew Cook and Ms Natasha Carr at CSIRO. External collaborators in the project include an industry mentor, Mr David Connell, of Kangaroo Island Abalone.

This scholarship will only be available to those who: are in receipt of or will be in receipt of a base rate scholarship at Flinders University such as an APA, FURS or FSERA; have completed at least four years of tertiary education studies at a high level of achievement and have an appropriate Honours 1 or high 2A (or equivalent) undergraduate degree; and are enrolled as full-time students in a PhD by **31 July 2010**.

Selection of Candidate

Selection criteria – essential

1. An Honours (1ST or 2A) degree, Master's degree (Distinction average) or equivalent in a relevant discipline (e.g., Biological Sciences, Cell and Molecular Biology, Fisheries and Aquaculture).
2. Ability and experience in working both independently and as part of an interdisciplinary team.
3. Strong written and oral communication skills, including an ability to publish and present results of scientific research and to communicate effectively in a variety of scientific and non-scientific forums.
4. Knowledge, understanding and commitment to Equal Employment Opportunity, Occupational Health and Safety including biosafety, Workplace Diversity and Employee Participation.

Selection criteria – desirable

5. A commitment to applied research and an interest in supporting the development of Australia's seafood industry.
6. Ability to conduct independent research into literature and other sources of information on existing research on molecular signalling mechanisms

The final decision on the award of this scholarship will be based on an assessment of the requirements of the total Selection Criteria. The decision will be final but feedback may be given to unsuccessful candidates as to how to improve their future applications. For further information regarding this scholarship, organisational environment and other aspects of pursuing a PhD at Flinders University and with the Australian Seafood CRC, please contact:

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Intending applicants should enclose with their application, a covering letter indicating that they wish to be considered for this scholarship.

Further information

For information on how to apply, see the following link: http://www.flinders.edu.au/scholarships-system/main-display-scholarship-details.cfm?scholarship_id=3091 . Applications for APA or equivalent scholarships are available at: <http://www.flinders.edu.au/scholarships/postgrad-scholarships.cfm> . International applicants must meet the English language requirement - see <http://www.flinders.edu.au/international-students/>