

## JCU helping produce world's most efficiently and sustainably farmed prawn

James Cook University research will help establish the world's largest black tiger prawn farm, and develop genetically superior seafood for international markets.

The Federal Government announced today that JCU has been successful for the first time under the Australian Research Council's (ARC) Industrial Transformation Research Program (ITRP), which started in 2012.

The project, *Unleashing the tiger - advanced breeding to transform prawn aquaculture*, will receive almost \$5 million over five years. It will fund research and development that will lead to the most advanced selective breeding program for this important aquaculture species globally.

It also involves participants from the University of Sydney, CSIRO, Australian Genome Research Facility (AGRF), Vlaams Instituut voor Biotechnologie (Ghent), and the prawn farming company Seafarm Group Ltd.

The project's Chief Investigator, Professor Dean Jerry is Head of Aquaculture and Deputy Director of the Centre for Sustainable Tropical Fisheries and Aquaculture at JCU's School of Marine and Tropical Biology.

*Unleashing the Tiger* will develop and implement advanced genetic animal breeding technologies to produce prawns that grow faster, are tolerant to disease and that are more attractive to buyers.

It is the first time world-leading experts in aquaculture genetics, genomics, prawn husbandry and diseases, and terrestrial animal breeders, along with Australia's biggest genome sequence provider, the AGRF, have come together to identify prawns with elite characteristics using information within the prawn genome that will revolutionise the farmed black prawn sector.

Professor Jerry said Australian black tiger prawn (*Penaeus monodon*) aquaculture was at a critical juncture in the industry's development.

"There have been decades of struggling to expand in an exceedingly regulated and high-cost economy and reach the critical mass where the industry can support an efficient industrial-scale selective breeding program," he said.

"*Unleashing the tiger*, in association with plans to develop the world's largest prawn farm in northern Australia, will dramatically transform the aquaculture landscape and significantly contribute to Australia's food security and export earnings."

“In essence, *Unleashing the tiger* will produce a farmed prawn that will be the most efficient and sustainable to farm globally, while producing a product with quality attributes that the whole world will want to buy and consume.”

Professor Jerry said profitability of modern livestock and plant production industries had been transformed by genetic breeding practices and were now further benefiting from the integration of new knowledge arising out of the genomic revolution.

Integration of genomics to improve aquaculture species, however, has lagged behind these land-based production systems, he said.

“This ARC ITRH will in one effort bring the Australian black tiger prawn aquaculture industry to the same knowledge base of many terrestrial livestock species, by defining the genetic architecture of the black tiger prawn genome and linking the genome to commercially important growth, disease and physiological traits.”

While there are no details yet as to where the farm will be located, a current farm in Cardwell is already the biggest in Australia.

Professor Chris Cocklin, Senior Deputy Vice-Chancellor of Research at JCU, congratulated Professor Jerry and his research team on the funding announcement.

“This grant is just reward for a group of researchers with an outstanding record in undertaking collaborative research with industry, and highlights the importance of industry linkages to our developing research profile,” he said.

The ARC ITRP provides funding schemes for both university-based researchers and industries.

There are two schemes within the ITRP program: Industrial Transformation Research Hubs and Industrial Transformation Training Centres. The JCU grant is for a research hub.

These research hubs will encourage R&D projects that have the potential to help solve the big problems facing industries today.

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*Note for media: photos of farmed black tiger prawns – images courtesy CSIRO*

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