

# SHAUN BOCHOW

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**BSc (hons) 2011 to 2012**

**School of Veterinary and Biomedical  
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**AIMS@JCU Project funds**

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## **The role of viral endogenous genetic element in the crustacean interfering RNA pathway**

Shaun completed a Bachelor of Science majoring in Aquaculture. From this, he became interested in pathogens and subsequently pursued an honours project studying aquaculture disease.

Aquaculture is increasingly important in providing fish for a human population growing in size and wealth that have fully or over exploited most global wild stocks. However closed systems and dense stocking rates can make disease prevalent. In order to increase production yields, it is important to investigate ways to control bacterial disease in aquaculture systems. One way is the use of bacteriophage as a biocontrol agents against virbrio disease. This is limited by the lysogenic lifecycle of bacteriophages, however gene knock out could potentially be use to turn to a lysogenic lifecycle to a lytic lifecycle.

The study identified adenine methyltransferase gene (DAM) as a potential candidate gene for controlling the switch between the lytic and lysogenic lifestyle. This study also highlighted the potential role that nutrients may have on the function of this gene. Using funding from the AIMS@JCU scholarship, Shaun was able to establish a transformation protocol that will facilitate future studies including gene knock outs of the DAM gene.

Shaun graduated from Honours with First Class and is now on an APA scholarship studying crustacean virology and immunology and the School of Veterinary and Biomedical Sciences.

