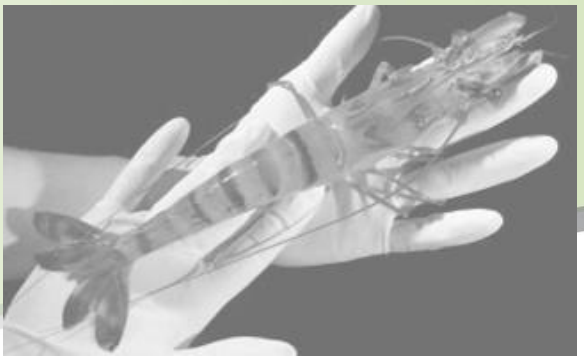

SCIENCE AND INDUSTRY ENDOWMENT FUND

SIEF supports RNAi treatment of broodstock to reduce disease impacts in farmed prawns (Prawn RNAi)

the challenge Pathogens such as viruses are responsible for economic losses of US $6 billion per annum within the global prawn industry. Novel antivirals take advantage of a natural biological mechanism in prawns called RNA interference (RNAi), and go some way to mitigating these losses. Although not yet commercially available, these antivirals have been experimentally demonstrated to protect prawns from disease and mortality for all viruses of commercial concern.

the response Antiviral therapeutics have been developed to protect prawns against viral infections and do not impact the fertility of broodstock. The SIEF Experimental Development Program (EDP) supported continued development of this technology in pre-commercialisation experiments to improve the health, survival, and growth of prawns.

the collaboration An expert team from CSIRO conducted antiviral field trials, and the Australian Prawn Farmers Association made a significant cash co-investment in the study, indicating the immediate commercial relevance of this project. Through this project, the CSIRO team have built close relationships with key APFA and industry personnel in hatcheries, farms and a major aqua-feed company.

projected impact The outcomes of this project give commercial prawn farmers the confidence to take up novel RNAi therapeutics across the prawn industry, with projected impacts including:

- substantial improvements in prawn growth, performance and survival
- Adding $2.2 million to the $80 million AUD annual Australian prawn industry, improving production efficiency, increasing job growth, and boosting the profitability and international competitiveness of Australian seafood businesses.
- Reducing the US$6 billion disease loss burden on the international prawn farming industry by applying antiviral therapeutics that decrease viral infection loads in up to 500,000 eggs per spawn. The therapeutics would be a source of domestic and international investment, delivering economic value to Australian R&D.
- Producing a consistent, sustainable, high-yield prawn product to secure supplies of a source of healthy protein.

Contact us

For further information
SIEF
Dr Melissa Straffon
Manager
t +61 3 95457952
e sief@sief.org.au
www.sief.org.au

What is SIEF?

Spanning a history of over 85 years, the Science and Industry Endowment Fund (SIEF) provides grants to science and scientists for the purposes of assisting Australian industry, furthering the interests of the Australian community and contributing to the achievement of Australian national objectives. In 2009 this unique and esteemed funding arrangement was rejuvenated by a gift from CSIRO, made possible due to the commercial success of CSIRO's fast WLAN, or WI-FI technology. Thus past accomplishments are reinvested into new science and innovation for the nation.