

MEDIA RELEASE

CAWTHRON INSTITUTE

Clinical Greenshell Mussel™ research to study human health benefits announced at the NZ Aquaculture conference

Funding for Cawthron Institute-led research to advance knowledge of the potential human health benefits from consuming New Zealand Greenshell™ mussels was announced at the 2019 New Zealand Aquaculture Conference today.

Scientists and industry welcomed the announcement of High-Value Nutrition (HVN) National Science Challenge funding for this exciting phase of research titled “Musselling Up 2.0”.

This research will build on outcomes from an earlier HVN research programme, during which scientists demonstrated the protective power of Greenshell™ mussel for knee joint health in a pre-clinical setting. “Musselling Up 2.0” progresses this research, with scientists set to study the role of Greenshell™ mussels in reducing inflammation typically seen in human osteoarthritis and delayed onset muscle soreness.

Research Lead, Cawthron Analytical Science Scientist Dr Matt Miller said the nutritional goodness that New Zealand Greenshell™ mussels provide is currently underestimated and that the research may greatly enhance the perceived value of the shellfish.

“The end goal of this research is to provide validated Greenshell™ mussel health claims that can add value to exports. In previous studies we observed the protective effect Greenshell™ mussels can have on animal cartilage, and we hope to see similar results in the “Musselling Up 2.0” human trials.

“We know Greenshell™ mussel products can reduce inflammation and through this research programme we seek to provide evidence using a systems nutrition approach; identifying novel biomarkers and signatures of inflammation reduction in human plasma,” said Dr Miller.

Seafood company Sanford Ltd are backing the research with funding and supplying product to be used in the trials.

“Working closely with industry is vital for ensuring the real world-application of our research outcomes, so it’s fantastic to have Sanford supporting this programme,” said Dr Miller.

“Sanford’s General Manager of Innovation Andrew Stanley believes this research will help realise the company’s vision for Greenshell™ mussels to be valued for their bioactive content.

“Historically as an industry we’ve been focused on scaling up food production, but in recent years we have expanded our focus and we’re intent on seeing Greenshell™ mussels recognised internationally for their bioactive and nutritional value.

“We want to take a new Greenshell™ mussel story to markets around the world, promoting their intrinsic health qualities, and using this higher-value proposition to grow our industry for the benefit of our communities. Science is the vehicle to get us there,” said Mr Stanley.

Clinical Trials

Musselling Up 2.0 includes two distinct human health trials. The first focuses on the effect of Greenshell™ mussels on inflammation caused by high stress, repetitive exercise and the second on chronic pain reduction and metabolic health. The trials will be conducted by Plant & Food Research and Massey University respectively.

Plant & Food Research Biochemist Dr Roger Hurst said he's interested in the potential for Greenshell™ Mussels to improve inflammation management and muscle recovery in healthy young men. "In a controlled environment, research participants aged between 18-40 will experience exercise-induced muscle damage, similar to the sort of acute inflammation you get from walking downhill when you haven't exercised in a while. We'll study the effects of Greenshell™ mussel consumption on their muscle soreness, damage, and inflammation," said Dr Hurst.

Massey University Professor of Nutritional Physiology Marlena Kruger is overseeing the chronic pain trial. "Following encouraging pre-clinical trials, we're well-placed to look at how Greenshell™ mussels might improve chronic inflammation in humans. For this study we'll be recruiting middle aged women with a BMI higher than 25 to take part in a 12-week trial to see how GSM affects inflammation, joint cartilage degradation, metabolic health, and joint pain," said Prof. Kruger.

Cawthron and AgResearch scientists will support the clinical trials by developing modern analytical techniques to help elucidate mechanism, assisting in discovering how Greenshell™ mussel works.

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HIGH-VALUE NUTRITION NATIONAL SCIENCE CHALLENGE FUNDING INFO

The mission of the High-Value Nutrition (HVN) Challenge is to develop high-value foods with validated health benefits to drive economic growth. The Cawthron-led programme announced today is receiving funding from the HVN National Science Challenge Tranche 2 Contestable Fund. This fund is designed to bring new research ideas and teams into the Challenge that will leverage HVN Capabilities developed during Tranche 1 (2014 – 2019) to deliver excellent, high-impact science across four Priority Health Areas of Metabolic, Digestive, Immune and Infant Health.

HVN website: www.highvaluenutrition.co.nz

ORGANISATION INFO

Cawthron Institute: www.cawthron.org.nz

Sanford Ltd: www.sanford.co.nz

Plant & Food Research: www.plantandfood.co.nz

Massey University: www.massey.ac.nz

AgResearch: www.agresearch.co.nz