



PROF JOACHIM LOO

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Aquaculture; Probiotics and Immuno-stimulants; Encapsulation and Oral Delivery; Disease Resilience; Artificial Intelligence

As an interdisciplinary researcher, my work in aquaculture focuses on developing advanced feed technologies and delivery systems that enhance fish health and reproduction, disease resilience, and growth performance. We apply macro- and micro-encapsulation techniques to create nutrient- and probiotic-rich fish feeds that improve survivability and reduce pathogen impacts in achieving sustainable aquaculture production. Patented technologies for the delivery of hormones and vaccines revolutionize the oral administration of labile proteins and peptides, enabling effective spawning induction and immune enhancement. With the integration of big data and artificial intelligence, my team models how farms can optimize feed efficiency, develop new strategies against emerging diseases, and address the impacts of climate change.

Potential Areas for Collaboration

- Vaccines
 - Spawning
 - Enhancing Growth Rates
 - Productivity
 - Data and AI Modelling
 - Commercialization and Licensing
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