Functional Foods

Next-generation green neutraceuticals & functional foods from algae products











Centre for Solar Biotechnology







The initiative

Microalgae are rich in proteins, omega-3 oils, and micronutrients that can be used for human nutrition.







Top: Green superfood juices and smoothies. **Middle:** Health supplement powders including Chlorella and Spirulina. **Bottom:** New culinary algae-based foods include seaweed salad.

VISION

The Functional Foods and Nutraceuticals initiative is focused on the delivery of advanced microalgae systems and products to enhance human nutrition options for the food and health industries.

Microalgae can deliver superfoods rich in proteins, omega-3 oils and potent phytonutrients including super antioxidants.

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Microalgae are already commercially produced for niche human health markets. In Australia these are largely dominated by tablets and powders of three species: *Spirulina, Chlorella,* and *Dunaliella*.

The Functional Foods and Nutraceuticals initiative is designed to cost-effectively scale up production and increase the quality, efficacy and range of microalgae products. This will open up significant new market opportunities in emerging food and nutraceutical sectors.

Microalgae strains providing high quality protein, high levels of omega-3 oils and potent phytonutrients will be selected and refined to maximise their health benefits. Productivity and quality will be enhanced through the optimisation of production conditions at our advanced facilities as well as refinements in downstream processing. The development of functional food products will be supported through innovations in product efficacy, food taste and programmes in consumer awareness.

The Centre for Solar Biotechnology provides extensive skills and over 50 person years of experience in the optimisation of algae production and links with extensive expertise of the UQ School of Agriculture and Food Science in food product development.

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