

PARTNERING OPPORTUNITIES

Large-scale microalgae cultivation

The Schenk Lab specialises in Algae Biotechnology and focusses on disruptive technology to enable low-cost, large-scale microalgae cultivation, harvesting and processing.

Microalgae are an easy to grow renewable source of fuel, feed and nutrition and can be farmed without competing for arable land or freshwater resources. Top applications of microalgae are:

- Nutrient-based supplements (e.g. omega-3)
- Protein-rich animal feed
- Valuable oils
- Biodiesel



Professor Peer Schenk

About microalgae

Growing algae is scalable: we culture, harvest and process microalgae all year round using minimal land.

We optimise microalgal strains that are efficient producers of lipids, crude protein and nutraceuticals using adaptive evolution and metabolic engineering – non-GM.

We specialise in the identification, cultivation, and storage of more than 200 strains of algae to grow the most appropriate algae for a particular application.

We collect algae from both marine (salt water) and freshwater environments, culture and characterise them by microscopy and use DNA extraction / sequencing and metabolite analysis (including lipid accumulation profiles) to identify the best application for specific strains.

We use bioprocess engineering in facilities for algae cultivation and maximum lipid accumulation; scale up algae cultures; do extensive outdoor testing at pilot scale; and grow algae at large scale in our **Algae Energy Farm**.

Low-cost, farm-ready approach to business

We have carefully engineered new low-cost technologies for all steps of algae cultivation, harvesting & processing - with high economic efficiency



We have implemented low construction and production costs with minimal on-site energy requirements. Each of our algal production modules can be used for scale-up by linking hundreds of modules as required by the demand and growth conditions in local areas.

Partner with us

We are supporting partners with a need for microalgae technologies for a business outcome or who wish to be collaborators in our research.

Opportunities exist in:

- Algae strain characterisation and nutritional profiling
- Cultivation module licensing based on UQ's Algae Energy Farm model
- Expert consulting

Our expertise

We provide industry partners with cost effective algae products because we know about:

- Identification and isolation (pure cultures from mixed cultures)
- Harvesting and collection
- Extraction of high value products including biomass, omega-3 fatty acids, carotenoids and phytosterols
- Large scale cultivation
- Structural and operational design of low-cost, algae energy production modules

Industry and research alliances

The Algae Biotechnology Group is at The University of Queensland, a research-intensive university in a subtropical environment and ranked in the world's top 10 in Agriculture.

We work closely with industry partners across the board to commercialise our technologies. Our partners range from global companies to peak industry bodies.

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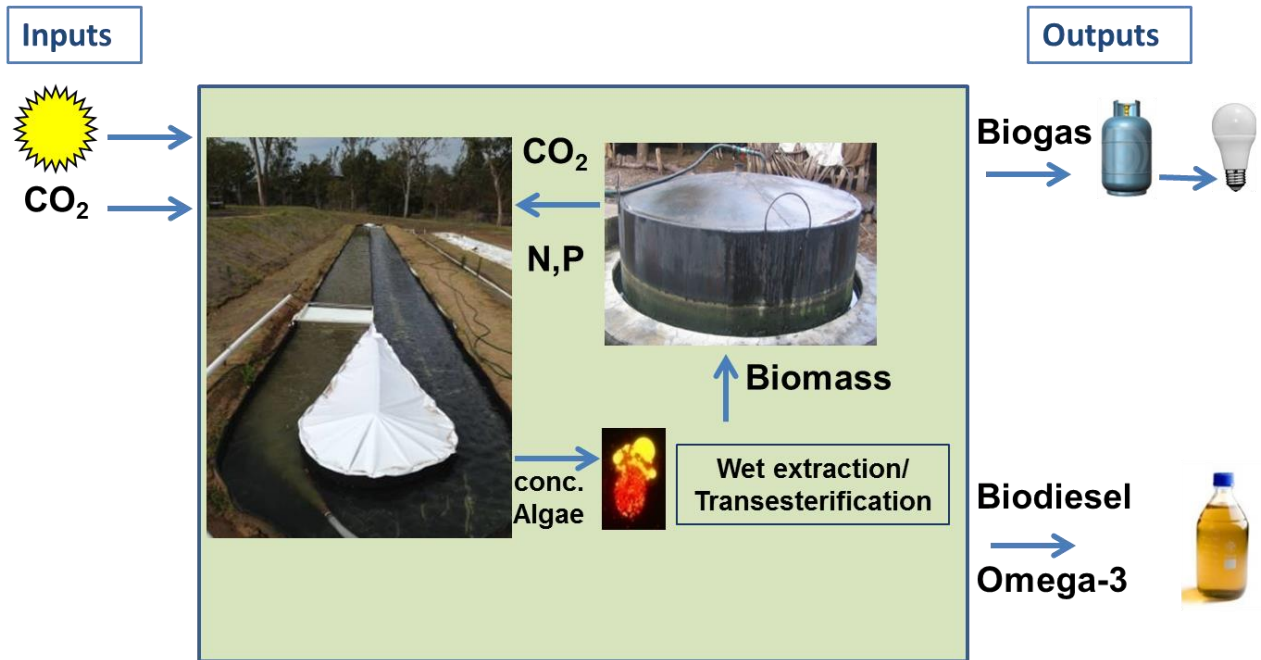
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UQ Algae Energy Farm

A Solar Power Plant Producing Oil



Nutrient recycling

Algae Farm Modules



Microalgae cultivation does not need to compete for agricultural land or biodiverse landscapes and can grow in any type of water (fresh, brackish, saline or wastewater)

Products: Food, feed, biodiesel and nutraceuticals

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