



**Create high-value nutraceuticals
and cosmeceuticals
using our lipid expertise**

Our expertise is focused on the analysis and modification of lipids to develop high value products for the nutraceutical, functional food and cosmeceutical industries.

Industrial Research Limited (IRL) has experience in developing processes for production of high value products such as complex lipids and polyunsaturated fatty acids.

The application of lipids and lipid derivatives as potential drug candidates is also a rapidly emerging research area.

This is largely due to the demonstrated or potential benefits these compounds have against a wide range of conditions and diseases — including rheumatoid arthritis, cancer, dermatitis and CNS disorders such as Alzheimer's disease and multiple sclerosis.

IRL has NZ's leading research group in advanced lipid chemistry. We also have expertise in related areas such as supercritical fluid processing, enzymatic processing, and fermentation. By forging partnerships and collaborations with leading research organisations, our strategy is to become a leader in bioactive lipid research and development.

Key capabilities

- ▶ World-class chemical and biochemical scientific expertise
- ▶ Extensive experience in lipid analysis, extraction, purification and modifications of lipids from a variety of sources (dairy, meat, marine, plant, bacterial etc)
- ▶ Integrated in-house processing and analytical facilities
- ▶ Expertise in the analysis of lipids: ³¹P NMR profiling of phospholipids, GC analysis of fatty acids, quantitative analysis of lipid classes, advanced lipid analysis, structural elucidation (QToF-MS, LC-MS, GC-MS, NMR, IR, UV).

Demonstrated ability

- ▶ Scientists from IRL have been involved in the design of plants and processes for production of complex lipids and polyunsaturated fatty acids (PUFAs, e.g. Omega-3 fatty acids)
- ▶ IRL also holds several patents in the area of supercritical extraction of lipids and lipophilic compounds
- ▶ IRL has developed a lipid-rich product with demonstrated biological activity from shark flesh.

Business background

IRL is a commercial R&D company with the New Zealand Government as the sole shareholder. We conduct both collaborative and contract R&D with the aim of commercialising technology and working with key business partners to establish high value industries. Our lipid focus is part of IRL's bioprocessing work that includes identifying, extracting, processing and modifying natural materials to create innovative new products and processes.

For all enquiries please contact the Industry Engagement team on 0508 CALL IRL (0508 225 5475). If calling from overseas phone +64 4 931 3000 or visit the *Contact Us* page on our website.

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