

Grain Health Platform

Grain Foods CRC Ltd headquartered in Sydney, Australia was set up to improve the value and competitiveness of the grains industry through the delivery of unique, higher value functional foods. The company develops technologies that meet market needs in terms of cost, health and nutrition using a combination of genetic and processing technologies that enable the commercialisation of differentiated grain based ingredients.

The Grain Health Platform supports improvements in the health and nutritional benefits of grain based foods. Health concerns being addressed are weight management, diabetes, cardiovascular disease, cancer, muscular function, age related diseases and improved nutrition. Technologies approaching commercialisation include low allergy foods, lupin tempeh, ACE Inhibitors, Dietary Fibres and novel germplasm.

Lo Allergy Ingredients:

A patented processing method has been developed that enables the cost effective treatment of pulses to remove the beany flavour often associated with legumes. The first commercial application of this technology has been the development of a high nutrition, low allergy ingredient (vs. soy, gluten, nuts, lactose etc) with a pleasant nutty flavour that is suitable for a wide variety of “free-from” foods. Of particular interest is the use of this ingredient to replace peanuts. The “free-from” food market is expected to show strong growth over the next ten years. This patented technology has entered National Phase in several jurisdictions.

Lupin Tempeh:

A patented processing method has been developed for the partial substitution of soy with Australian lupins in fermented Asian foods such as tempeh. By comparison to the existing soy product, lupin derived tempeh is lower in cost and has improved health and nutritional characteristics. Appearance, taste and texture are comparable as determined by evaluation panels within Indonesia. Further development of this technology into a wide range of fermented Asian foods is underway. This technology is protected by an International Patent Application.

ACE Inhibitors:

Hypertension is a major health problem that is treated with pharmaceuticals that inhibit the angiotensin converting enzymes (ACE). Inhibition of ACE leads to decreased systemic arteriolar resistance and mean diastolic and systolic blood pressure. Evidence suggests that in the long term it is undesirable to use strong pharmaceutical inhibitors and research has shifted to focus on weaker natural inhibitors which are present in foods (particularly food protein hydrolysates). Grain Foods has identified the most appropriate source of ACE inhibitors from grains and its effective utilisation in baked food products. This technology is currently protected as a trade secret.

Dietary Fibres:

Dietary fibre is associated with a range of positive health benefits such as a reduced risk of cardiovascular disease (through cholesterol lowering), non insulin dependent diabetes (through blood glucose control) and a reduction in the prevalence of some cancers. In addition dietary fibre has beneficial effects on gut health and weight management. Although there are many fibre products available there has been little emphasis in establishing the optimum combination of fibre types to achieve specific health targets. Grain Foods is developing fibre combinations and processing methods to derive such products. This technology is currently protected as a trade secret.

Grain Germplasm:

Pulses and barley are an underutilised source of healthy ingredients. Although a reasonable range of varietal germplasm and diversity of attributes is available to Western food processors and consumers, there is a vast range of desirable characteristics in the untapped germplasm of developing nations. Grain Foods has targeted the identification of pulse and barley germplasm for the delivery of foods with desirable health, taste and nutritional benefits. New varieties of barley are under development together with the identification of pulse germplasm that has naturally low levels of beany flavours. This technology is protected as a trade secret.

For more information on these and other grain technologies and how your business can benefit from a partnership with Grain Foods please contact:

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