The **Ingredient Innovation** theme, led by Professor Bhesh Bhandari from the University of Queensland, focusses on using innovative processing technologies to create dairy ingredients with new and enhanced functionalities. Nano-emulsion and micro-emulsion technologies will be used, in conjunction with milk fat fractionation, to develop new types of dairy lipids and emulsions with highly specified physical functionality, designed to outperform traditional dairy fats in high-value applications. Novel processes show promise to modulate the crystallisation behaviour and emulsion stability of dairy fats and fat fractions. This theme will also develop higher-value ingredient applications of fractionated dairy proteins, including casein and whey protein fractions derived from both centrifugation and membrane filtration. Studies will be extended to manufacturer sites. To complement research in the **Process Innovation** theme, the chemical or biochemical treatment of acid whey will be also be evaluated.

**Key Collaborations with other Hub projects**

The UQ Ingredient Innovation team will closely collaborate with DIAL and its industry partners, with the UQ Tribology and sensory projects and later with the UoM team.

**Contact**

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