Background
It is known that our diet can alter the gut microbiota composition. It is also known that the gut microflora can affect our health. For instance, previous research has revealed that subjects with improved glucose metabolism after a certain food supplementation have an increase a certain cluster of gut microbiota\(^1\). However, more knowledge is needed to understand these phenomena in detail.

Aim
To investigate the probiotic potential of strains existing in the human gut and their association with the metabolic mechanisms. The project will first aim to understand the metabolic response of the strains when exposed to well-defined substrates, and also optimization of growth and metabolic products formation by the strains by selecting different substrates. Furthermore food products containing different strains and/or components to promote their growth will be developed and health effects shall be investigated through a meal study.

Methodology
• Cultivation of anaerobes.
• Screening of the potential substrates promoting growth of the strains.
• Evaluation of the applicability of the strains present in certain products.
• Human clinical studies.
• Microbiota analysis.
• Analysis by e.g. HPLC and GC.

Reference: