



PROEUHEALTH

## Optimal food for the good bacteria in our gut

It is crucial to optimise the beneficial bacteria in our intestine. **Synbiotics** are products that include beneficial **probiotic** microbes together with selective **prebiotics** that promote the growth and well being of the living organisms in the human body. Scientists in an EU-funded EU&MICROFUNCTION project have tested new synbiotic combinations to find optimal combinations for gut health, including inhibition of harmful bacteria. A series of laboratory experiments have been completed and a human study will begin shortly in Estonia.

To develop more effective synbiotics, five different **bifidobacteria** and 13 different **carbohydrates** (sugars) were tested to find suitable synbiotic pairs. In conditions simulating those of human colon, *Bifidobacterium adolescentis* with IMO (isomalto-oligosaccharides; a kind of sugar) increased the growth of beneficial bifidobacteria in the gut. This combination could therefore be favourable for gut health. Safety assessments of probiotics and synbiotics isolated from various sources is also being carried out.

Gut bacteria growing on **mucus** were used in these studies to examine this interaction between the host (human) and mucus utilizing microbes. Mucus provides an important protective layer on the surface of intestine, and it also provides a place to live and food for microbes in the intestine.

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