

### From Digestive Health to Microbiome Modulation: Learnings from Lactulose / Galactofructose

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Firstly identified as a “bifidogenic factor”, then developed as an ingredient active on the intestinal transit regulation, lactulose or galactofructose is a diversified substance with a unique history. In our research at Groupe Solactis, we have firstly focused on intestinal transit effects, as a food ingredient, and defined limits vs pharmaceutical effects. A regular intestinal transit time may be difficult to define, and galactofructose (or lactulose) is an efficient bowel regulatory ingredient for food applications, which enables to deepen the knowledge on transit time regulation.

In a second step, we have gathered every scientific evidences of the impact of lactulose galactofructose on the microbiota. This molecule cannot be used by small bowel enzymes and reaches the colon intact. There, “good bacteria” as *Lactobacillus* and *Bifidobacterium* can utilize galactofructose lactulose and grow selectively.

We have also studied the data on *in-vitro* interaction with probiotic bacteria. Comparing the results open a key line of research: chicken or eggs, what comes first between intestinal transit regulation, and control of microbiota bacterial population and balance?

This unique combination opens very powerful new food ingredients, active both on intestinal transit regulation and microbiota modulation. Galactofructose is the pioneer, and other molecules are joining. Finally, this approach adapted to animal feed industries paves the way for some reliable key innovations in this second industry.

Science is making huge steps on microbiota - making it accessible to food and feed industries is the target.

#### Biography:

Since 2013, Pascal RONFARD has positioned Groupe SOLACTIS as a leader of food and feed ingredients, active on the microbiota. This positioning has been rewarded by highly sought regulatory recognitions: 2 European (EFSA) and 1 South Korean (MFDS) official health claims. In 2015, Groupe SOLACTIS has located its R&D center in the renowned Science Campus INRA, near Paris.