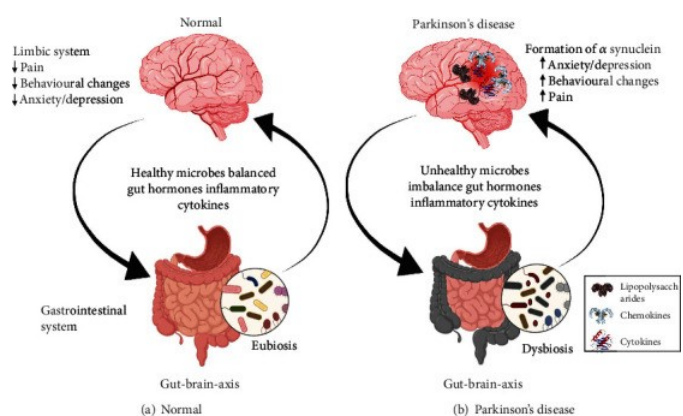
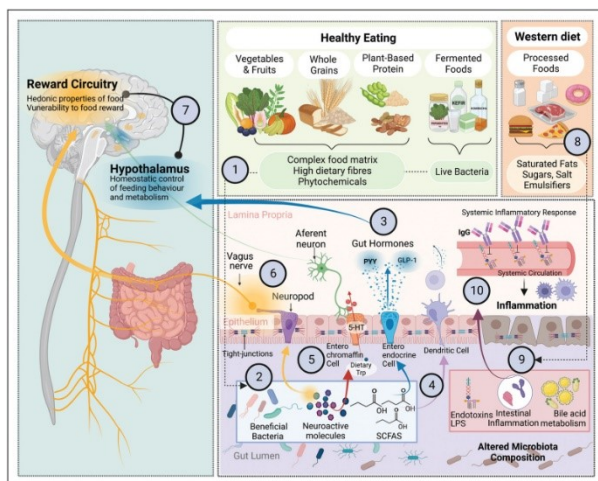


I am still working on my paper regarding carbohydrates in human and pet nutrition, but carbohydrates are not just contributing to the body's energy it is much more. More I read more interesting it get! I am still writing about human and animal milk oligosaccharides, but in my search for more information I stumbled into a study by a young Finnish researcher at University of Helsinki, Sofie Schubert, about short chain fatty acids (SCFA) and their function as energy source, signalling molecule and gene regulating factor.

Unfortunately, I have only found this publication in Swedish but I anyway I will include the link to a very interesting study, [Short chain fatty acids \(SCFA\) – energikälla, signalmolekyl och genreglerande faktor \(helsinki.fi\)](https://doi.org/10.1097/mco.0000000000000874).

In this study they discuss how SCFA influences the energy balance, gut-brain axis, blood-brain barrier, peripheral nervous system, and epithelial barriers. This inspired me to read more about SCFA because they are produced by bacteria in the colon and the microbiota in the colon is largely influenced by oligosaccharides in the diet. Oligosaccharides are for humans and small carnivore animals non-digestible, but they are digested in the colon by fermentation of specific bacteria producing SCFA.

I have also added two other publications linking to both oligosaccharides and SCFA. One is linking the diet to the microbiota and further to the gut-brain axis. <https://doi.org/10.1097/mco.0000000000000874>



The other one is linking the non-digestible oligosaccharides and SCFA as a inhibiting substance against enterotoxin- producing bacteria and their toxins. <https://doi.org/10.3390/toxins13030175>

Oligosaccharides are not only important in milk for the infant, but also during the rest of the individual's life. For example, in the Finnish study, they suggest that Parkinson's disease could be predicted in the gut-system much earlier and before one detects the characteristic symptoms in the brain, which was also mentioned in another study <https://doi.org/10.1155%2F2022%2F3300903> .

<https://doi.org/10.1039%2Fd2ra05053f> A recent study showed it is possible in-vitro to alter the abundance of probiotics and SCFA by modulating the gut microbiome.

However, even if oligosaccharides seems to be healthy, they are not healthy for individuals suffering from IBS (irritable bowel syndrome). They need to have a diet which is low FODMAP, and most oligosaccharides are not low FODMAP friendly. Many oligosaccharides, like inulin is often added to have a probiotic or prebiotic effect, but for individuals with IBS it may have the opposite desired effect. This could also be your dog or cat! Later, this will be one of my topics, because I am myself suffering from both ulcerative colitis and IBS.

Remember

“You are what you eat” and “all disease begins in the gut”